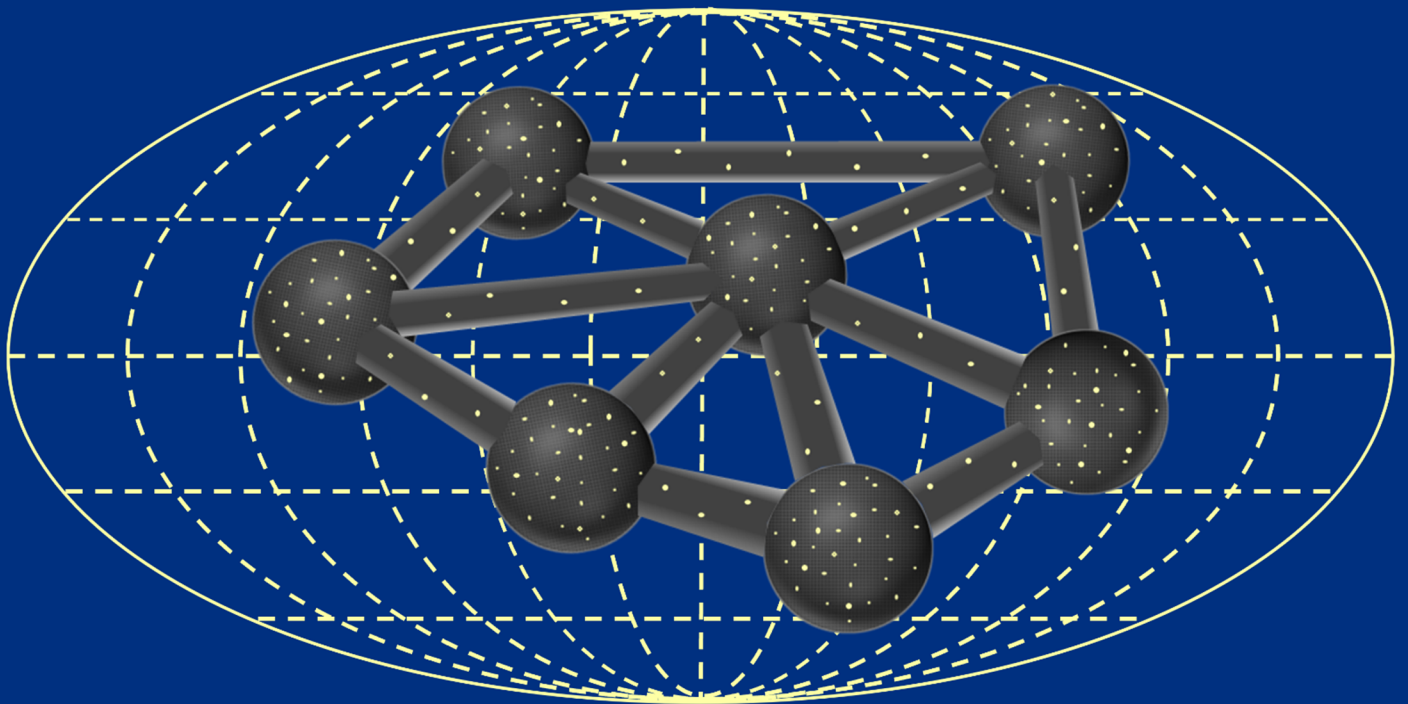


DESCENDANTS

Species Cousins



Aver Omadis

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by

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A·T·I·C·E

ATICE LLC, Albany NY

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Part I

The Skull

1

Their eyes were locked. Figuratively speaking. The eye-sockets of the ancient human skull Lucy held in her hands were of course empty. Those who did not know Lucy better might have thought the skull somehow had hypnotized her. To her colleagues in the team working on this far-inland excavation site this was, however, a familiar sight. They knew that Lucy just had one of her silent conversations with the fossil she held in her hands. Seeking to pry answers from the dead bones of a human being that must have been buried here a very long time ago. Nothing unusual. Just part of Lucy's archaeological routine of beginning a silent conversation with the remains of a human being. Every archeologist has her or his own way of doing so and that was hers. Bran certainly thought so and did not give the scene of Lucy somehow being captivated by the skull in her hands a second thought. Everyone who had worked with Lucy for some time knew that she looked at fossilized human remains in ways different from other archeologists. Lucy just had her own way of uncovering certain aspects of fossils and how they might relate to everything else discovered at a given fossil site. For that her colleagues respected Lucy and so did Bran who was not her colleague but the leader in charge of the expedition. As such his job was to ensure that all team members, nine scientists and a security detachment of eight highly trained soldiers, would return home safely. He had been on many such expeditions, the majority serving other science disciplines but every now and then also archeological expeditions. For several years, Lucy had been one of the scientists on almost every excavation he supervised. Bran had grown fond of her; she could have been his daughter.

In fact, when he thought about it, she somehow had become his daughter in more than one way. She had lived with him until she eventually moved into her research institute's dormitory. Hakan Kassius, Lucy's father, and Bran had been best friends since their childhood days. Only a few weeks before Hakan disappeared while preparing

an expedition to an unknown place far inland on what once was the continent of Africa, he had asked Bran to promise him that he would watch over his then teenage daughter as best he could in case anything ever happened to him. Bran gave this promise to his life-long friend without pondering too much about why Hakan asked him for it. He had promised there and then that he would take care of Lucy as best he could. Sometimes people have those thoughts about what may happen to their loved ones if suddenly they are not around anymore to take care of them. He had assumed that something like that must have been going through Hakan's mind at the time. But then Hakan left the city and never returned. Bran could not help but think that Hakan must have had some kind of premonition that whatever he was about to do could result in him never coming back to see his daughter again. Why else would he - just before leaving the city for the last time - have asked Bran to take care of Lucy in his stead?

Keeping his promise to Hakan was not too difficult for Bran. In oceanic societies, raising and educating children had always been a shared responsibility anyway. Dating back many thousands of years, nobody knew how far back, this was how their societies had assured that the next generation would be mentally and physically prepared to meet the challenges they would undoubtedly face given the special nature of their civilization. And once in charge, the next generation would accept the same responsibility for the generation following it. Of course, parents still held a special place in the lives of their children. But raising the young generation was a shared responsibility for a good reason. Nurturing and educating children to become the future caretakers of their society was a much too important responsibility for the survival of their societies as to leaving it to a child's parents alone.

From this perspective, Bran's promise to Lucy's father was nothing unusual and he could have told her about it at some point in time. However, during the many years she had lived with him he never found a way to tell her. He wanted to be a friend to Lucy just as much as he wanted to take care of her in her father's stead. For some reason, he believed that if he officially assumed the role of her father by telling her about this promise, their friendship might suffer. But then, he did not even tell her when she turned eighteen, had finished her basic studies, and hence had met the conditions to formerly

join the ranks of young adults. He had kept his promise to Hakan a secret through all these years. Sometimes he thought he did so because Lucy somehow knew about it without him telling her.

2

Like many of his fellow-citizens, Bran had no children of his own, at least not officially. Anyone aware of Bran and Lucy living in one flat for all those years, from the time Hakan had disappeared until Lucy became an adult, would have quite naturally assumed that she was his daughter. But that was not so. Lucy was a minor living with him for whom he was responsible, but he never was her legal parent. The only reason the city allowed this to continue was that the city's council chairman, a close friend of Hakan and Bran, had sanctioned it. Oceanic societies knew two kinds of parents. Parents who raised their biological offspring in their own household and adults who were part of a parental group which shared the responsibility for bringing up children who did not know their biological parents. Hence, there were also children who carried Bran's genes, children he did not know and children who did not know him. No mother or father ever knew the identity of the children of whom they were genetically but not legally father or mother. Like all other adult citizens, if chosen it would have been his shared responsibility to help bring up those children, their children of the sea. Bran never became a legal parent himself, raising a child other than Lucy in his household as his own offspring with all the responsibilities that entailed.

Since countless generations, no one could say for sure since exactly when, human embryos did not mature in the female womb anymore but in artificial biogenic wombs. In addition, the genetic materials provided by males and females alike were subject to screening and editing and so was the genome of the evolving embryo. Initially, a good part of that editing was done to screen for and eliminate potential genetic weaknesses. Then, over time, genome augmentation and engineering to better adapt human biology to a life in oceanic societies had become part of human embryo development. Oceanic societies differed quite a bit in how far they would go in genome engineering, some for example eventually adding the ability for selected embryos to breathe through gills. However, all

oceanic societies were careful in ensuring that none of these genome modifications would be passed on to the next generation in a hereditary way. Preservation and control of the human genome was of paramount importance to all oceanic societies. Each new embryo possessed initially the same core genome and any physiological or biological adaptations resulting from genome engineering were only adaptations for life, never passed on to a new generation.

Sometimes Bran wondered what human life must have been before the *Great Cataclysm*. From what their best anthropologists, archeologists and historians could still discern about the human way of life before the *Great Cataclysm*, human societies and families must have worked quite differently back then. Most of what was known about this ancient human way of life came from the first few thousand years after the *Great Cataclysm*. During this period, many referred to it as the *Period of False Hopes*, humans sought to reestablish their broken societies by trying to preserve traditional societal values as best they could. Maybe hoping that this would help them to recover from what had been nothing less than a complete unraveling of civilization on all levels, everywhere on the planet. The only thing humans back then were spared was an all-out war over ever diminishing resources. At least that was what every student learned at an early age in their oceanic city schools. But Bran had always wondered if that really could have been so given the human proclivity for violence which so prominently had shaped the history of these long-gone land-based civilizations. For sure, there seemed to have been many skirmishes, larger ones and smaller ones. That much they had learned from some of the records humans back then used to upload to satellite databases. When these societies, or what was left of them, eventually lost their ability and interest to venture into space, even into near-by space, these records continued to survive in outer space. Not all of them of course. Satellites in low orbits would eventually burn up in the planet's atmosphere. Higher-flying satellites could have potentially orbited the planet forever but many of them fell prey to collisions with space debris, of which a huge amount had accumulated by the time of the *Great Cataclysm*. When long after the *Period of False Hopes* human societies eventually regained interest in space-faring, they first had to clean out much of that space debris. It was then that a few satellites were discovered which still carried

databases from around the time of the *Great Cataclysm* or the *Period of False Hopes* which had not been physically destroyed and from which stored data could partially be recovered. An even better source for such historical records became the databases of human outposts such as on Mars and on some of the Jupiter moons. These had already existed for a few thousand years when contact with them eventually was lost during the tumultuous millennia of the *Great Cataclysm*. Only once oceanic societies had redeveloped the required technological capabilities did it become possible again to reconnect with these human outposts in space.

3

While Bran thought about these things, the sun had almost set, and today's dig was over. They had been out here in this vast desert landscape now for almost five weeks and would head back home tomorrow. From a security perspective this dig site was easy to protect as one could see many kilometers in every direction. There was no way to approach their camp site without being detected hours before anyone trying to do so could possibly reach the camp site. Nevertheless, they remained vigilant even though there was no danger. That much they knew from extended aerial surveys which used drones capable of covering vast stretches of land. All the time they had been here, and that was now about five weeks, these drones had not detected any living being within a hundred-kilometer radius. In the open landscape of this desert these surveys could detect the whiskers of a desert mouse if there were still any venturing around which was unlikely. Life in this desert was an impossibility for biological organisms except for the very few hardy ones which held out at the desert's rim. There could be no doubt that within a one-hundred-kilometer radius they were the only human beings and most certainly the only living beings. They were surrounded by dead things, the artifacts the archeologists were excavating at the dig site and an unforgiving landscape devoid of life extending to the far horizon in every direction. Day-time temperatures in this area could approach sixty degrees Celsius. With the sun setting, the temperature was now dropping quickly. Unforgiving dry heat was somehow much firmer associated with how most thought about deserts than their freezing cold nights. Bran knew all too well that the latter could be

just as deadly as the scorching heat of the desert. But they were well equipped, and their climate boxes always kept a pleasant temperature and humidity day and night. Tomorrow the transport crew would fly in, pick everything up and nothing would be left behind. Only their footprints in the dirt and a few holes in the ground could for some time alert anyone seeing them to their former presence. That is until the desert winds covered all these traces under sand, making everything look as if their expedition had never been here at all.

But that was tomorrow. Today they would once more enjoy the twilight of an early evening desert when for a couple of hours, it would be neither too hot nor too cold, allowing them to sit together outside for one last time, sharing a simple meal and as usual a lively conversation. First to arrive at the outside seating area were members of the security team currently off duty. They, with Gil first among them, took pride in making the most for every one of the provisions they had available. While the members of the archeological team were still cleaning themselves up, Gil and his colleagues prepared the food and set the table as if they oversaw a dinner table reservation at a fine dining restaurant. Over the five weeks they had been out here, members of the security team and the archeological team had gotten to know and like each other. It always amazed Bran how quickly people coming from so diverse backgrounds would within no time not only get to know each other well but develop real friendships. Sure, there were also rivalries among the scientists, which was to be expected. However, such rivalries were more like friendly jests and never became adversarial. The eight soldiers on the security team knew each other well as they had already served together on several missions before this one. The interesting part of their joint meals was how scientists and security soldiers got along. As they sat down for their last dinner on this mission a lively conversation amongst the various members began to fill the air. Bran thought that anyone looking at the expedition members enjoying their meals and each other's company must believe that these people knew each other for a much longer time and not just for the five weeks of their shared mission. He was also quite sure that some of the relationships developed during this mission had a good chance of lasting for a long time and may become more than friendship. The way Sue-Ming and Gil looked at each other, Bran was confident that

they would continue to see each other once they were back in the city. Gil had already asked him about a transfer that would allow him to stay closer to where Sue-Ming worked and lived.

4

Towards the end of the dinner, dessert in hand, groups of twos and threes began to leave the table to sit together and continue their conversations for a while longer. Lucy strolled away with her two colleagues, Manu and Ives, deeply engaged in a work-related conversation. After they sat down, Bran watched them talk for a while and then he walked up to them.

»Do you mind me joining you for a moment?«

Lucy looked at Manu and Ives and the three of them looked towards Bran and nodded with a smile. Lucy knew Bran of course well, for her he was like family. Manu and Ives had first met Bran on this mission and over the past five weeks both had come to like him quite a bit. He had something about him that was hard to resist. One just had to like him. Not only was Bran good-looking, more than six feet tall and of athletic build. In his early fifties he was physically and mentally fit in ways that spoke to anyone who saw him move around or had the chance to talk to him. When he sat down Bran brought himself into their conversation jokingly.

»Please, I did not want to interrupt your conversation. Why don't you go on with it and just let me listen a bit?«

Lucy smiled. She liked this about Bran, his openness, his way of engaging with others, always respectful, inviting and at eye level. She told him that they were discussing the skull she had dug up today and that there was something unusual about it. Bran looked at the three questioningly. After getting nods from Manu and Ives, Lucy began to explain.

»You see, Bran, first there is the fact that we find a skull here at all. Given the geology around us we did not expect this. Finding the bones of small animals in this layer would have been no surprise but digging up a human skull certainly is. The upper layers of the sediment we are digging in here are of a recent origin. We have not dated

them yet precisely, but we would be surprised if they were deposited more than some twenty thousand years ago.«

Here Ives chimed in as he was a geologist as well as an archeologist.

»Yes, Lucy is right. From all that we have looked at in the past five weeks I would be surprised if the upper layers of the sediment here are even twenty thousand years old, they could well be more recent, could have been deposited only ten or fifteen thousand years ago.«

Bran looked down on the ground for a moment, thinking. How could a human skull be found in a geological layer of such a recent age? Lucy looked at Bran with a knowing smile as her words reached his ears.

»Yes, Bran, you are correct to ask yourself that question. How could a human skull have been buried here some ten to fifteen thousand years ago?«

Bran looked at Lucy thinking how well she knew him. Certainly, well enough to know what was now going through his mind. Nobody else could read his mind just like her, not even his closest friends. Up till today, the expedition has been successful, he thought. Successful in the sense that they had found what they were looking for. Mostly the bones of small animals and only a few larger animal bones buried in the deeper layers. Over the course of many thousands of years, this desert has forced the animals to shrink in size and eventually expelled most of them completely. All of that provided just another confirmation of what their scientists had believed for a long time and what every other archaeological expedition, going back generations, had confirmed. While human life on the planet continued in its seas, it had ceased to exist on land a long time ago. Human populations suffered immensely during the millennia of the *Great Cataclysm* and then over the thousands of years of the *Period of False Hopes*. Nevertheless, human life had persisted on land until the final catastrophe befell it, which for a change was not human caused but a natural catastrophe. Some eighty thousand years ago, volcanic activity in the northern hemisphere had begun to increase, eventually reaching a level where vast areas of the northern landmass in Eurasia and North America were covered with red hot lava flows. That itself was bad enough as much formerly fertile land was lost. However, even worse was the volcanic ash which began to fill the atmosphere. After a few years, the

skies were not blue anymore but had turned first light gray and then dark gray, ringing in what later would be referred to as the so-called *Dark Sky Period*. With volcanic ash blocking ever more of the sunlight from reaching the planet's surface a long winter began, turning eventually into a short but intense ice age. This development surely must have convinced any human population still surviving on land that life on land had become an impossibility and that joining their fellow humans who already had made the oceans their home was the only solution. Those who stayed back did not survive. This is what their societal memories told them, and this is what science had proven as a fact. No human skeleton had ever been found on land dating from after this brief but intense ice age. A few thousand years after the beginning of this ice age, the skies began to clear. However, when the skies had turned blue again the sun was shining on continents bare of most life which once had thrived there and as their historical records told them, most certainly bare of humans. But if this skull was only some fifteen thousand years old, how this be true?

»Could the skull have ended up in this young geological layer by accident?«

Bran had addressed his question primarily to Ives because he was their geology expert. But Ives shook his head.

»The geological layer this skull was buried in was completely undisturbed,« he said. »It is highly unlikely that the skull ended up in this layer by accident. The human to whom the skull belonged must have either died right here when this sediment layer was deposited, or the skull must have been transported somehow to this site around that time.«

»There is more...« said Lucy as she looked from Ives to Bran.

Bran looked at Manu, Ives and then at Lucy. He knew from the way Lucy had spoken these words that there must be an even bigger surprise than finding a human skull in a geological layer where it was not supposed to be buried.

»The jaw and cheek bones on the skull indicate a substantially more powerful jaw than what is typical for modern humans... - and then there is the size of the molars.«

»What about them?« asked Bran while he began to wonder what the reaction to

this clearly unusual find would be back home.

»Their size is more than two times the average size of molars in a modern human jaw.«

»But how can that be if this skull is from a human who lived just ten to fifteen thousand years ago?«

»That we do not know« said Manu, the evolutionary archeologist on the team.

»Clearly, molars do not just double in size in a few generations,« he added while looking at Bran. »There are just two possibilities for this to happen« he continued. »Biological evolution, which would have taken at least a few ten thousand years; and second, genetic engineering, which could accomplish this anytime provided a society had the technological skills to accomplish it – such as their own oceanic societies possessed them.«

5

During their conversation Bran had begun to lean forward in his chair and with his face close to the faces of Lucy, Manu and Ives, their conversation had become a whisper. Now he pulled away and fell quiet for a minute or more while staring at the circular sand area around which their chairs were placed. He was clearly thinking intensely about something. When he raised his head again, he looked at each of the three before asking:

»Is there anything else unusual about this skull? What about the rest of the skeleton?«

Lucy, Manu and Ives looked at each other and then shook their heads.

»We only found the skull, there were no other bones, no other artifacts - nothing else, for now... « said Lucy, »...however, once we can analyze the skull back at the institute and get the DNA results that may change.«

Bran had already thought about this himself. Lucy, Manu and Ives did not know that Bran was not only the leader in charge of this science expedition but that he also had clear instructions from the city council on how to proceed in the case of unusual findings, such as this skull clearly was. So, he now asked Lucy, Manu and Ives if anyone

else on the expedition knew about the peculiarities of this skull discovery. They told him that while everybody knew about the find nobody else but themselves knew anything yet about the age of the geological layer from which they had recovered the fossil. Most of the dig had occurred deeper, meaning in much older layers, where it would not have been unusual to recover a human skull. They, or rather Lucy, had stumbled on the skull more by accident than anything else when she had to remove some more of the upper layers on the side of the dig so they would not slide into the dig. Lucy then had asked Manu and Ives to help her recover the skull but no one else was present. And as for the peculiar jaw and cheekbones of the skull, nobody else but the three of them had seen those yet. Like most other scientists would have done in such a case, they had chosen not to share this information with their colleagues before they had more precise measurements which would allow them to understand how exceptional and significant those larger molars really were. Bran was satisfied with their answer and asked them to keep it this way and not to share anything about the skull discovery with anyone else but him.

»Not even with colleagues back at the institute?« wondered Lucy.

»Not even with anyone back at the institute,« confirmed Bran. »As it is, the three of you will continue to investigate this find but not back in your institute but at another place which will provide you with much more sophisticated equipment for such studies than your institute possesses. If any of you should choose not to continue working on the skull, that is your personal choice but if you do so you must not speak to any third party about this whole thing. Do you understand what I am asking of you?«

The three archeologists looked at each other and then looked back at Bran nodding their heads. They understood.

»Good« said Bran.

»Tomorrow when we arrive back home each of you will first go home, take care of anything that needs to be taken care of so that you can be absent from home for let's say the next two months. Within a couple of days, you will be notified about the time and location of your transport to the research site where you will be able to continue your studies of the skull.«

»What about the skull itself?« asked Lucy.

Bran told her to pack the skull and hand it to him the next morning. He would make sure that on landing back home the skull would go straight to the research facility where the three of them would arrive then a few days later. After that Bran wished them a good night and retired to his cube.

As he was lying on his bed he kept thinking about the skull and what he had just learned from the three archeologists. He knew that he had spoken to the three about what would happen next with more certainty in his voice than he possessed. He hoped that the process would play out just as he had pictured it to them. However, he had not told them that before anything else could happen he had to report back to the city council. The city council not only made the decisions on which expeditions would be approved, it also had the power to decide what would happen with the skull, whether the scientists would be allowed to analyze it further or whether it would be kept under lock and seal without any further investigation being possible. There were factions who had no interest whatsoever in new scientific evidence putting into question long-held beliefs. If the city council agreed with those sentiments the skull would vanish for a long time to come and the three archeologists would have to keep the secret about the skull, or they would be expelled from the city. Knowing the members of the city council well, Bran knew that this decision would be a close call.

6

By the wee hours of the morning the security soldiers had already pulled in from the three-kilometer protective perimeter which had been set up around the camp. Packing everything up and cleaning the surroundings from anything that could indicate their five-week presence in this area took only a few hours. When their transport arrived around noon, they were ready to go. Lucy had wrapped the skull in cloth and put it in a hard-shell box lined on the inside with protective foam. She handed the container to Bran just before they boarded. As they lifted off and left the ground on which they had spent the last five weeks, they looked forward to seeing their families and friends. It would be nice to enjoy the amenities of city life again after what had been an exciting and

interesting but also a frugal time. But not everyone thought about family and friends and returning to the comforts of city life. Such thoughts surfaced only briefly in Bran's mind before they quickly returned to the issue at hand with which he would have to deal soon enough. As for Lucy, Manu and Ives, they were also thinking about their last-evening conversation with Bran and what it could all mean for them and their future.

Within a couple of hours, they crossed the coastline. Along the shore they could see some of the large industrial complexes their societies had built along many shorelines all over the planet. In a few hours larger transport craft would start from somewhere in one of those complexes and pick up their climate boxes, hauling them back to the storage site where such equipment was being kept and maintained. These onshore industrial complexes stretched endlessly along the coastline in both directions, to the north as well as to the south. In principle, most oceanic societies could manufacture everything they required in their oceanic facilities. However, it was more cost-efficient to onshore some of the heavy industry and build certain things on land. The labor force in those onshore industrial complexes was usually on a monthly rotation schedule. For most that meant working for one month in onshore facilities followed by two months in oceanic facilities. For some of the more remote onshore facilities onshore-duty, as it was called, would often last two months, followed by four months back in oceanic facilities. While there were amenities making life onshore easier and there were certain benefits associated with onshore-duty, people usually would not stay on such rotation schedules for more than a few years. It was mostly younger people who felt up to the task or for whom the incentives were sufficiently attractive to sign up for onshore-duty. But once they had a family or a more attractive career-path opened to them they usually resigned from onshore-duty. A long time ago, when still in his twenties, Bran had also signed up for onshore-duty. Unlike many others he came to like working on land but not so much for the work itself, although it was interesting work, but because it was work on land. Somehow the planet's land areas had always fascinated Bran. Even though he understood that living on land had become an impossibility a long time ago, he enjoyed exploring it. For him, walking on land was quite different from walking through the streets of his native oceanic city. It just was not the same.

After three more hours over the open ocean, they had arrived above a landing site on the outskirts of their city. Slowly their aircraft descended vertically towards a platform which had risen above the surface. As they approached the platform its top opened, revealing a landing area inside. When they had touched down and the engines had stopped, the platform's top closed and with its enclosed cargo it then began slowly to retreat towards the top level of the underwater city. After some twenty minutes the platform itself had been lowered into a large, flooded hanger. Once that hanger's port had been closed the water was pumped out of it within less than an hour after which they could leave their transport. When they entered the terminal area many of the expedition members were greeted by family and friends whom they had notified about their return. All around him, Bran could see people embracing, kissing, some even shedding tears of joy. It all felt good even to those who had no one waiting to welcome them home. Before heading for his office, Bran handed the box with the skull inside to the terminal's security chief with instructions on what to do with it. Then he said a short good-bye to Lucy, Manu and Ives, not before reminding them about the conversation they had had the previous evening. The three archeologists also left the terminal and boarded a tube transport to their research institute which was located at the opposite end of the city where the three of them had their flats in the scientist's dormitory.

Back in the City

7

Like every other city, Bran's city dated the first human efforts to build a truly oceanic civilization back to the first millennium of the *Period of False Hopes*. That was common knowledge to all its citizens as it had been part of their educational curriculum. But these beginnings of a truly maritime human civilization merited only a few short sentences in their history books. Likewise, the many thousand years of the *Period of False Hopes* - some twenty-seven thousand years in total as their history books claimed - would normally not fill more than a few pages. However, some people knew more about those times in the early history of oceanic societies and these people also knew or at least had an idea as to why such information was kept from most other citizens. In his city, Bran was one of those. Lucy's father, Hakan Kassius, had also been one of them.

Moving human societies from living on land to living in the oceans was no trivial task and initially, there were many failures. For some time, it seemed as if humanity could not make up its mind whether to seek a future in the security of the oceans or to find a way to somehow survive on land. Hence, there were times at which it looked as if there was still some hope that there may possibly be a way for land-based human societies to continue to exist, if not prosper. But those hopes were dashed repeatedly. That is why the history books of oceanic societies referred to this period in human history as the *Period of False Hopes*. Every time people rekindled their hope for a future on land, most efforts to build a truly oceanic civilization lapsed. But then every time those hopes turned out to be nothing else but wishful thinking, efforts towards addressing the technological challenges posed by a life in the oceans were redoubled. With the onset of the *Dark Sky Period* it became clear to almost everyone that human societies must either become oceanic societies or perish.

Some had hoped that space colonization would provide the solution. Indeed, human space exploration had begun a long time before the time of the *Great Cataclysm*. By

that time, the first impact of what was to turn into the five thousand years of the *Great Cataclysm* became noticeable, countless space stations already existed throughout the inner solar system. Also, by then a considerable number of human space colonies had been established, some on the planet's moon, some on Mars as well as on some of the many moons of Jupiter. However, the human population in space colonies before the *Great Cataclysm* never amounted to more than several ten-thousand people. A substantial number of Moon and Mars colonies were not colonies at all but rather industrial outfits mining the riches which could be found in those places.

Space colonization could not be the solution because it could never have accommodated the still hundreds of millions of humans who eventually survived the *Period of False Hopes*. That much was clear unless the intention had been to save only a select number, so to say in a modern space-based version of Noah's ark. If anything like that had been tried it would have come to no good end. Clearly, due to its scale, such an effort could not have been kept a secret for long. As soon as the broader populace had learned about it many of its members would have rightly guessed that they were not to be selected to join a modern version of Noah's ark. Obviously, this would have put a quick end to any such enterprise. Hence, no such plans to save only part of humanity were ever put into action, which does not mean that such plans did not exist or that some did not try to save just a select few to enable a new beginning for humankind in the vastness of space. Regardless of such considerations, the technology developed for space exploration and colonization did eventually help solve some of the technological problems associated with colonizing the seas.

During the *Period of False Hopes* human space colonies initially regained some of the former importance they had held for human technology development prior to the *Great Cataclysm*. A few centuries into the *Period of False Hopes* the contact to human space outposts which had been lost sometime in the last millennium of the *Great Cataclysm* was reestablished and not too long after that space travel began to recover. With that, critical raw materials which were mined at such outposts became available again and could support the effort of converting land based to ocean-based human societies. In addition, as conditions on land worsened, the technology which had been developed for

mining in places like Mars became ever more important to keep mining activities on Earth going. Eventually, with living conditions on land degrading ever more, humans would mine minerals on Earth's continents not too much different from how they did this on Mars.

At times during these perilous five thousand years the *Great Cataclysm* had lasted, it looked as if humankind was destined to perish, or rather had set itself on a path seemingly heading towards the extinction of the human species. The calamities of those times, remembered in their civilization's history and culture, had become deeply engraved in the human species' memory. Just like humans of a distant and almost forgotten past once were born with an innate fear of certain animals, thereby remembering even more ancient times when encountering such animals often meant certain death, the human species surviving the *Great Cataclysm* evolved innate fears of being wiped from the Earth by its own doing. Essentially, such subconscious fears had become a part of the greater societal memory or rather more a part of what one could call the psyche of a society. Many had therefore come to see self-sustained human outposts as indispensable as they constituted an insurance policy which in the event of further planetary catastrophes challenging human life on the planet where it had evolved could ensure the survival of humankind, even if life in its home world would cease to exist. It was for this very reason that oceanic societies, once they had assured the near-term survival of the human species on its home planet, returned to space travel as soon as this could be accomplished.

When after more than a thousand years into the *Period of False Hopes*, the human species resumed space travel, it became quickly clear that with its space outposts humankind had not only taken out an insurance policy for its survival. Maybe not much less important than that, this measure also turned out to have saved much of humankind's historical records. During the roughly five thousand years of the *Great Cataclysm* much of humankind's cultural and scientific heritage had been lost, seemingly lost forever. While some of the younger history could be recovered from satellite databases early on during the *Period of False Hopes*, it was the much more extensive records which had survived on human space outposts on Mars and on some of the Jupiter moons which reconnected the human survivors on their home planet with humanities history. After all, what many had

feared had not happened. The human knowledge base, dating from the very beginning of when humans first began to make written records, had not been lost. But that did not mean that this recovered treasure became available to everybody. Looking back at the history of the centuries leading up to the *Great Cataclysm* and of this terrible period itself, oceanic societies were wary of making those records freely accessible. Who was to tell what impact it would have on their societies if the general population gained a better understanding of the true extent of the social upheaval, the subsequent destruction, and the ultimate collapse of human civilization during the *Great Cataclysm* than the selective and highly abbreviated historical account provided as part of civic education. Hence, to a varying degree, oceanic societies kept these records under lock and seal, only providing access to those few who could be trusted with this information.

8

Despite there being no other choice and while being accepted as an unavoidable necessity, for many, moving human life from land back into the oceans just felt the wrong thing to do. Wasn't it the case that about four hundred million years ago some lifeforms finally managed to leave the oceans and conquer land? Didn't intelligent life, which most would usually perceive as being identical with human life, evolve on land and not in the oceans? But then again, the oceans were the origin of life itself, and humans would not be the first to return from life on land to a life in the seas and certainly not the first mammals to do so. Whales had accomplished such a feat long before them. However, with whales it was biological evolution which turned a land mammal into a mammal living in the seas. For humans, it was technological evolution which enabled them to return to life in the oceans. Human biology would not change much even though eventually gene engineering would enable on occasion some specific adaptations for an easier life in the oceans. But always only for the lifetime of a single person and never as a hereditary adaptation to be passed on to future generations.

Moving whole societies from a life on land to a life in the oceans is quite a different kind of evolution than a species becoming ever more adapted to life in the oceans until

such a time when it would have become a fully marine animal species; like it had happened with whales. In essence, human culture had to evolve into an oceanic culture in all its facets. Humans had begun to farm the oceans long before the *Dark Sky Period*, but this food source never could provide for more than a small fraction of the planet's population. Long ago, long before the *Great Cataclysm*, there was a time when ocean fisheries sustained a large fraction of the human population, which even back then already numbered some eight billion. But centuries of overfishing, pollution and the warming of the ocean had decimated once rich fishing ground. Therefore, the vast majority of the twelve billion people living on the planet before the *Great Cataclysm* relied for their food security on traditional grain-based food staples. Over the five thousand years of the *Great Cataclysm* the planet's population shrank dramatically and then continued to decline during the *Period of False Hopes*. When the first food shortages caused by the *Dark Sky Period* were becoming noticeable, the planet's population was presumed to have shrunk to around one billion people or less. At that time, aquaculture could provide for the basic food needs of some ten percent of that population. Everybody else had to be provided for by what land-based agriculture could still deliver, which became less and less. Hence, the planet's human population continued to decline and some eight thousand years into the *Dark Sky Period*, with the planet's climate being shaped by an ice age again, the human population of Earth had dwindled to only a little more than a few million people, scattered over all parts of the continents not yet in the grip of expanding ice sheets. By then however, with new high yielding aquatic crops having been developed, the planet's population could easily be provided for without having to rely on terrestrial agriculture anymore.

Unlike with terrestrial agriculture, where always only a few regions could produce the food surplus required to feed the planet's population, aquatic agriculture could be spread out much more evenly as so to say the marine "soils", unlike arable soils on land, were of a much more balanced quality. With that, right from the beginning, every oceanic city was built in a food secure way, meaning it included or had close to it the marine farming facilities which could provide for all its citizens. Those cities also looked quite different from the cities humans had built over thousands of years on land starting with

the first city structures some one hundred thousand years ago. The size of an oceanic city was not just limited by its farming requirements, there were several other reasons why such cities never would grow to the size of cities on land. Any oceanic city structure had to withstand the water pressure at the depths at which it was submerged in the ocean. Each such city reflected a balance between protection, meaning the depth at which it was built, and the size of its buildings. The deeper in the ocean a city was put, the smaller its buildings had to be. Cities on land had always been dominated by rectangular shapes. However, for oceanic cities rectangular shapes were the exception as with comparable hull plating spherical shapes can withstand external pressure much better than rectangular shapes. Also, just like big ships, oceanic cities were compartmentalized, meaning that if there was a water leak in one given area, the space around this area could quickly be sealed off from adjacent parts of the city. Hence, oceanic cities often looked like large and complex molecules, with different sized atoms - the spherical building blocks of the city - connected by transport tubes which acted like bonds keeping the city-molecule together. Initially, these city-atoms, the individual spheres oceanic cities were assembled from, were quite small but over time as ocean-proof technology evolved those spheres became larger while still providing the same level of protection as smaller spheres had done before.

By the standards of terrestrial societies long gone by, oceanic cities would at best have qualified as small cities. It was rare that an oceanic city had more than twenty thousand citizens and many did not exceed ten thousand. Including public spaces and infrastructure such as educational or medical facilities plus several types of utility buildings, the number of "atoms" in an oceanic city-molecule was about one hundred with the biggest cities not exceeding three hundred. Industrial facilities like most aquaculture facilities were usually kept separate from the city-molecule itself. They could either be reached by subsurface or surface-based transport vehicles, which usually never took much longer than half an hour. These facilities included housing for their workers so that these usually spent several days in a row at their job before returning to their city-dwelling.

9

Over thousands of years, human ingenuity had developed the capabilities to manufacture whatever was required in ocean-based facilities, some of them floating on the ocean's surface, some of them at great depth or on the sea floor and many more of them somewhere in-between. However, for practical reasons the bulk of industry and manufacturing continued to be housed in onshore facilities or like with mining, often hundreds of kilometers inland on the continents. The ocean-based industries of their civilization served more of a back-up function than to supply oceanic cities with the materials, parts, machines, or other constructions they required daily to keep functioning. Rather, ocean-based facilities were usually operated at a very much reduced capacity, just enough to ensure their continued functioning so if the need arose, they could be quickly ramped up to full capacity and replace whatever onshore capacity may have been lost. Hence, most of the enormous dry docks required to manufacture city-atoms were located onshore. The number of floating dry docks built for manufacturing at sea was much smaller. Such floating dry docks had the advantage that they could be moved right to the construction site itself. Their number was kept at a sufficient level so that the capacity to manufacture replacement city-atoms on-site or to repair them to keep oceanic cities functioning was always available. However, new city construction usually took place in onshore facilities. Most oceanic cities had three layers. The lateral extension of the bottom-most layer being the greatest, that of the second layer being reduced and the lateral extension of the top-layer even more reduced. Viewed from the side, the shape of an oceanic city's envelope looked like a trapezoid. Occasionally some larger cities had an added fourth layer on the bottom, whose lateral extension was again greater than that of the layer above it. Looking at a three-layer oceanic city, the top-most layer contained the city's living area, the next layer down housed city facilities which provided air, water, and electricity but also waste management and sewage treatment. The bottom layer of an oceanic city included huge floatable tanks to adjust the height at which the city would find itself in the ocean column, but it also could be used to float the city towards the surface. In that way, the first layer of the city would become accessible from the surface if needed. However, even

an engineer like Bran, who knew the technological history of oceanic cities well, could not point towards a single instance where a city was floated towards the surface unless new modules were added or had to be removed or the city was destined to be scrapped, as had happened already to early generation cities. Nevertheless, adjusting the depth level at which a city floated in the water column using those floatable tanks was necessary from time to time. In addition, this bottom layer served another important function as it contained power facilities and engines which could, albeit quite slowly, move the city laterally, if that was required.

The first oceanic cities were small, housing only a few hundred people. At the time of their construction, all manufacturing was still land based and the individual parts of these cities were built in dry docks which previously had manufactured ocean liners or warships. Finished parts were then dragged to a near-by offshore assembly site where the city-molecule slowly began to grow and take shape. It took several decades to complete the first such city. Once all elements of the completed city had been evaluated multiple times over, the city was dragged out to sea, supported by its own limited propulsion capabilities, and moved to its destined location. There, its floatable tanks were opened and allowed to fill with water until the city had sunk to the desired level.

The biggest challenges engineers faced when developing the first oceanic cities all had to do with city utilities. Building underwater living quarters was not that difficult but keeping oceanic cities supplied with energy, air and fresh water while ensuring a closed cycle waste management was all but simple. Central to everything was the energy supply because once a plentiful and inexhaustible energy source was assured, other utility challenges an oceanic city posed would not be too difficult to solve. First, it seemed as if nuclear energy sources, like they had been used before the *Great Cataclysm* to keep warships at sea for indefinite times, would be the only option. However, there were just too many risks involved with this technology which on a warship might have been manageable but much less so for an ocean city. Self-sufficiency was a critical requirement for an oceanic city and that worked in two ways. First energy had to be produced in a self-sufficient way and second, any waste generated in producing this energy had to be disposed of in a self-sufficient way. During the *Great Cataclysm*, humankind suffered

the global consequences of its wasteful energy use which had lasted over many centuries. Nothing like that could ever be allowed to happen again. In the end, oceanic cities came to rely on several energy sources. Among them of course solar energy, water currents, water temperature differences, or salinity differences between salt and fresh water as well as a few others. In addition, gases produced in waste decomposition and sewage treatment facilities were captured and used to power turbines producing electricity.

10

The few first-generation oceanic cities, built many thousands of years ago, had long been scrapped. Only their depictions in history books reminded anyone interested in such things of how different and much more comfortable today's oceanic cities were. Bran's home city was nominally a twenty-seventh-generation city, but engineers had long given up counting the generations of oceanic cities which had been built. Bran, an engineer by training himself, had a good idea of what first-generation cities must have looked like. But given his interest in life on land and his decades of research into how people used to live in land-based cities, he also had a good idea about how different his city life was from the life people led back then in these much larger land-based cities of the past. Bran wondered about how it must have felt to walk on the city streets of such a land-based city, being able to walk all the way from a city's center to its perimeter and then on and on with nothing stopping one's walk. On land, the breathable atmosphere did not just end at a city's perimeter but continued in the rural areas around it, enveloping the whole planet. That was quite unlike walking the streets of an oceanic city, where the view was always limited by just how wide or tall a structure was and then in the tunnels connecting the city-atoms where the view was even more reduced. Also, once one reached an oceanic city's perimeter, there was of course no walking further, one could only walk back or as was the case in some cities, walk along the perimeter. Engineers and artists had been creative in engineering and shaping the internal structures and surfaces of oceanic cities such that they provided the illusion of walking somewhere on land or of moving around in buildings which were not actually submersed in the ocean but still located on land.

However, to Bran that was also a reminder of just how much more wondrous it must have been to be moving freely around in one of those ancient land-based cities during their golden years.

Bran frequently thought about those things, and often he wondered about how much he really knew, how much of what he thought to know about this long gone past was true. His mind pondering such things, he had almost automatically chosen to walk to city hall instead of using the tube transport or a transport vehicle. It was not a long walk from the transit building on the outskirts of the city where they had arrived, to city hall located in the center of the city where the city's council resided and where the mission chief had his office. Already back at the dig site he had sent a message to the office of the council chairman to set up a meeting for which he would be preparing in his office in city hall. There were still a few hours before he needed to start working in earnest on his material for the city council meeting and to begin lobbying council members for their support. He had plenty of time and Bran enjoyed walking, not only because it helped him to think things through but because it felt much better than sitting on the tube transport or in some other transport vehicle. Crossing the circular structure of the city from one end along its diameter to the other end would have taken him only a little more than an hour. But he walked slowly this time, thinking about the potential consequences of the skull find and carefully considering how best to present the whole thing to the city council so they would allow the three archeologists to continue studying the skull. It was in this state of mind that Bran ran into Ari.

»Hello Bran, what a surprise! I didn't know that you were already back!«

Ari's voice had startled Bran out of his pensive mood, but he quickly recovered his composure.

»What a nice surprise Ari, great to see you! How are you? How are things in the city?«

Ari moved his head as wanting to say "so-so" and then pointed across the street towards a small diner with a few tables outside.

»Do you have time for a chat, like in the bistro over there?«

»Sure, let's grab a bite. I am on my way to my office to prepare for a meeting with

the council. It would be great if you could tell me what has happened here over the past five weeks, so I am aware of any new developments before I report to the council.«

As they entered the outside seating area of the bistro, they were greeted by a young waiter who led them to a table and took their orders. Ari looked at Bran, who seemed to be tired.

»You did not get too much sleep lately, did you?« Ari ventured.

Bran nodded and looked directly at Ari thinking about how much he could share with him. After a brief pause of silence, Bran sat back and answered Ari's question.

»Yes, I slept little over the last few days and probably lay awake most of last night. You see, just before we left, on the very last day, we found an artifact on which I must now report back to the council.«

Ari gave him an inquisitive look. What was Bran talking about? He waited for Bran to continue, which he did after another short pause.

»Ari, the thing is, what we found is one of those artifacts which usually make the council nervous, and I would like the three archeologists who found it to be able to continue their investigations. In a secure facility of course and with the council having the final say in what becomes public and what doesn't.«

Ari nodded, dealing with the council regarding such things was never easy, often difficult and sometimes even dangerous. Not so much for one's health but certainly for one's career. He had frequently experienced that first-hand. Bran did not know yet that things had gotten worse.

»Bran,« Ari began, »that may be more difficult than you might expect.«

»Why?«

»The newly elected members of our city council were sworn in a couple of weeks ago« continued Ari. »I hate to break it to you, but they are rather more conservative regarding those things you just mentioned than what usually is the case.« Looking directly at Bran to judge his reaction, he added, »Eireen Sawarov is now again one of them.«

Bran knew that Ari was looking for his reaction. After a moment, without his facial expression changing at all and without the slightest change in tone Bran responded calmly.

»Well, then I will have to maneuver around her.«

»But you know Bran,« replied Ari, »she now has a much greater number of followers, many more than when she sat on the council the last time.«

Bran knew that the number of Eireen Sawarov's followers had grown significantly. And he knew that her messages did not only appeal to ordinary citizens but also to some of the other council members. He thought to himself that it may be best to first talk to Peer Aksun, the council chairman, and delay reporting before the council until he had a better understanding of how he could gain their support. All he needed was a simple majority of council members supporting him. Peer could help with that. They had known each other for a long time and Bran knew that Peer would be sympathetic towards a continued investigation of the skull.

»Well, Ari, I guess I will have to take my chances.« And to change topics Bran asked him after a short pause: »How is your family doing, Ari?«

Ari understood that Bran wanted to switch topics, and he went along with it. They sat and talked for some fifteen more minutes, paid and then parted company. But not before Bran agreed to join Ari and his family for dinner in a couple of days.

11

Having said good-bye to Ari, Bran arrived at city hall some twenty minutes later. On entering he greeted the soldiers on guard-duty outside and the receptionist at the registration counter. He asked the receptionist if council chairman Peer Aksun was in the building which was not the case. But he learned that the council chairman would return to his office from a meeting with the utility council around mid-afternoon. As he climbed the stairs to the first floor and walked to his office at the back of the building, he noticed the new name plate on one of the offices he passed: Eireen Sawarov. He was glad that he did not run into her right now by accident. Meeting her would be unavoidable, now that she served on the council, but he would rather delay their encounter as much as possible. For as long as he knew her – and that was some twenty plus years - Bran held a deep disdain for pretty much everything this woman stood for. Their disdain was

mutual. Any chance Eireen Sawarov got she would throw a wrench into whatever Bran was involved in.

As he sat down and began to work through the pile of mail which had accumulated in his mailbox over the past five weeks, the thought of Eireen Sawarov now having an office in the same building faded from his mind. Everyone who knew Bran a little also knew that he never would check his mail unless it was a matter of life or death. Similarly, he would only answer calls which he thought could really be important. Since mail and voice connections traveled with a citizen to wherever that citizen wanted to go, it took some effort to not respond to everything as it came in. But to Bran, disconnecting in this way from the rest of the city and exclusively keeping his focus on the tasks of a mission, this had become second nature. The price he paid for that was many hours of work, digging through the accumulated correspondence once he had returned from a mission. Sometimes this price Bran paid for not staying current with what flooded his mail and voice accounts also included that he was surprised by some developments which could have a direct impact on his work. Such was the case now with the newly elected council members, foremost among them Eireen Sawarov.

From the messages he had received he could tell that since the new council members had been sworn in, the council woman and her cohorts had lost no time in making his life more difficult. Jointly, the new council members had already submitted several motions, which were to be voted on by the full council in the up-coming weeks. Prominent among them were motions to restrict access to certain information which in their judgments posed a real and present danger. Bran was not surprised. If it were up to people such as Eireen Sawarov and her followers, citizen education would be cut back significantly, foremost in history, philosophy and the arts because they believed that young people must only be taught the professional skills they would need for their future jobs. Of a more direct impact to Bran's work as the city's mission chief were other motions the council woman and her followers had launched which were seeking to significantly curtail the number and extent of future exploration missions the city should fund and equip. Again, Bran was not surprised. Might Eireen Sawarov and her ilk not try to completely isolate the city and turn it into a temple complex where they would rule as priestesses

and priests of their party's pseudo-religious cult? However, inadvertently Bran asked himself also if by considering this as a possibility he might not be following those down the rat hole who were not much better than these extremists. After all, what did they really know about this Eireen Sawarov. For all he knew they were making a lot of noise, but others did so often too. So far, they had done nothing illegal, at least not that he knew about it. These extremists felt discriminated against because the identity of their biological parents was withheld by the children of the sea program, and they tried to rectify that. To some extent Bran could understand their frustration of not knowing who their biological parents were, although he certainly thought it not wise to ask for such information. Still, he must assume that the council woman and her followers would most likely seek to interfere with the skull investigation, regardless of whatever their reasons for doing so might be.

After looking through some of the correspondence which could be important and sending a few responses where it seemed most urgent to do so, Bran took a notepad and drew up a list with the names of all twenty-nine council members. Bran was confident that Peer would support him. Therefore, he needed at least fourteen supporters so that in the case of a tied vote the chairman's vote could be the tie-breaker. He immediately crossed out the names of Eireen Sawarov and of four others of the seven newly elected council members whom he knew to be sympathizers or followers of the council woman. That left twenty-three members. Among those were eight who undoubtedly would support his position on how to deal with the skull. That left fifteen council members. After rank-ordering these fifteen names by how likely they would be to support his position he took the top seven names on the list and looked up their contact information. Then he began to call them, one by one, starting with the council member least likely to support him. Bran could be persuasive and after a couple of hours he put down his communicator with a measure of satisfaction.

Of the seven council members he had called up Bran was confident that he had convinced four of them to support him and he had arranged short follow-up meetings with the other three for the next morning. Before he left his office to walk down the hall to the office of the council chairman and check if he had returned from his meeting

with the utility council, Bran jotted down the contact information of the next three council members on his rank list. He would talk to them after he had met with Peer to see if he could get more of a safety cushion for the vote. Not so much by trying to convince them to support him with their vote as he was certain that Eireen Sawarov had already sunk her hooks into them; rather his plan was to raise sufficient doubt with them so they possibly would abstain from voting on such a highly divisive issue in the first place. If he could get them to believe that a vote for the council woman's position on this issue could upset the council members supporting Bran's position to a degree that these members would reconsider supporting future motions submitted by those voting for Eireen Sawarov's position, that could work.

12

Peer Aksun was about to leave his office for the day when Bran knocked on his door. When he saw that it was Bran who was looking for him his face lit up. Bran closed the door behind himself, and the two men jovially greeted each other. Anyone watching the scene would have immediately known that these two men genuinely liked each other. But it would have been difficult for her or him to find out exactly why this was so. On the face of it, two people could not be more different than Bran Taliesin and Peer Aksun. Not only did they come from quite different families and had made different career choices throughout their lives, they also were completely different characters. Peer Aksun was the family man, had studied law and administration, had pursued a political career for much of his life. He was outgoing, jovial and if there existed something like a model citizen, it was him. Unlike that, Bran Taliesin was an adventurer at heart and an engineer by training and for most of his life he remained single. The mission chief felt most comfortable when he was on one of his missions and would take every opportunity to get out of the office. The only reason that he sat from time to time in his office in city hall was that he needed the city. Without humoring to a certain extent those who represented the city, which was the city council, they would not support the mission chief's plans. Both men knew that much of each other, and they respected these traits

in each other, not believing that one was more worthy than the other but that all what mattered was to be truthful to oneself and to one's family and friends. It was honesty, decency, competence as well as hard work which both respected. Having a friend like that was a gift for each of them and they knew it.

Bran came right to the crux of the matter and Peer immediately understood the significance of the find the archeologists had made.

»You know as well as I do that a fossil discovery like this could revive all those controversial debates regarding as to what happened during and after the *Dark Sky Period*.«

Bran nodded as Peer spoke. Yes, he knew. But he also knew that it would not be a matter of if but of when those debates would resurface.

»Peer, we both know that this is not the first find indicating that there may have been human populations surviving on land. However,« continued Bran, »if the dating of the skull can be confirmed it would mean that many thousands of years after the *Dark Sky Period* there were not just human populations still living on land. To survive an ice age lasting some fifty thousand years which the *Dark Sky Period* had ushered in, these populations must have adapted to a completely new way of life on land.« And after a moment of silence, he added, »such human populations may have survived to this day.«

Peer looked at Bran and he knew that Bran had just put into words what people like Eireen Sawarov and her followers might use for furthering their cause. The possibility that there were other humans out there who had survived on land, who could be quite different from members of their own human species, *homo sapiens oceanus* as it was known, contradicted everything which was taught in city schools. These extremists might rightly wonder what else city officials could lie about if children in city schools were already being lied to. There was no telling as to how people might react who felt betrayed by having been lied to. And the fact that the city officials themselves had been lied to would certainly not interest them at all. If this skull was indeed evidence that humans had survived on land, then it would call into question some of the foundations on which their society was built. There was no telling as to how great a danger such a revelation

would pose to the very fabric of oceanic city life if not to their oceanic civilization itself. But such considerations might not hold back extremists like Eireen Sawarov and her followers in trying to use this issue to further their cause. Hence, there was no other choice but to exclude the council woman from any oversight role with respect to the skull investigation they planned. Evidently, they could not be given any access to the results such an investigation produced unless such results were benign in the sense that they were useless for the extremists. The larger question was of course how the citizenry of their oceanic societies eventually would receive the knowledge that there might be another human species living on land. Such knowledge could certainly not be withheld from their citizens once it was confirmed. In that case they would have to find a way to communicate this to the broader populace and it could not be just their city making the decision on how to do that.

»Bran, the significance of this goes far beyond the borders of this city. I am certain the extremists will also be aware of this. But while Eireen Sawarov and her followers have increased their strength in our city council, the same has not happened in most of our neighboring cities. There, and as I suspect in most other cities, extremists such as the ones in our city are still a small minority. Hence, what we must do is to raise this from an issue that one city can decide to an issue that concerns our oceanic civilization as a whole.«

As he walked around the office, Peer continued to look towards Bran, whose facial expression had changed from pensive to a genuine smile.

»Peer, I never doubted you would find a good way to deal with this situation.« Bran looked relieved as he continued. »If I ask the council for approval to continue studying the skull in secrecy while diplomacy works its way, you can align other cities to weigh in on the issue. By the time that process has run its course we may be able to get all the information from the skull we need to make a final decision, whether it is worthwhile pushing the issue further or not. After all, much of what we know about the skull today is based on conjecture, educated conjecture I admit. But we need irrefutable scientific proof.«

Now it was Peer's time to smile.

»Bran, I see we understand each other well – as always. How about joining us for dinner tonight, or maybe tomorrow?«

»To that I cannot say no but let's make it tomorrow because tonight I still want to call up a few more council members to get them at least to abstain if they cannot see their way through to outright supporting us.«

Peer nodded. They spoke for a few more minutes about other things which were on their minds and then parted company, Peer quickly heading home to his family and Bran slowly walking towards his lonely flat.

Preparations

13

When Bran got up the next day, the early morning light was just about to flood his small flat. Even so humankind had become a fully aquatic society, at least the humankind he knew about, it never had given up its twenty-four-hour rhythm where night was followed by day only to give way to night again in endless successions marked by the passing of weeks, months and years. Without carefully observing the moving shadows cast by objects in the city during the day, or the shadows of moving people following them, it would have been difficult to tell whether the city was illuminated by real sunlight or as was the case, by some quite sophisticated lighting. However, after a while it would have become clear to anyone that the latter must be the case because it never rained in the city, bad weather just did not exist, and all days were just variations of pleasant balmy late-spring or early-summer days as people many thousands of years ago once could enjoy them in temperate climates on land.

Last evening, after returning to his flat, Bran had called up a few more council members. He was confident that several of them would rather abstain than vote along with Eireen Sawarov and her followers. Bran was now certain that his proposal on how to deal with the skull would be approved by the council. However, that would not be the end of it. The council woman would likely try to use the whole issue as well as the voting result itself to recruit more followers. Because everything said in the council meeting regarding the skull and how to deal with it would be classified information, not to be shared by attending council members with anyone outside, not even their own staff, Eireen Sawarov could only do so by leaking this information to third parties who would spread it for her. Bran was certain she would betray her oath to keep the council dealings secret, but that would be difficult to prove. Hence, all they could do was to prepare accordingly, which meant putting in place security measures to nip potential acts of sabotage in the bud; in addition, they would have to protect everyone on the

team which was going to investigate the skull. Because the scientific analysis of the skull would take place in a facility located outside the city itself and not in the institute where Lucy, Manu and Ives usually worked, it would be much easier to protect them once they had relocated there.

Bran sometimes wondered how much more difficult it would have been to deal with such challenges to the rule of law in the land-based mega-cities of a distant past. These cities provided extremists, populists, or just any kind of rabble rouser with some talent for manipulation the opportunity to fish in much richer waters than what was available to people like Eireen Sawarov in their much smaller city. If skilled enough, demagogues in such mega-cities could exploit the fears and prejudices of hundreds of thousands or even millions who felt neglected, ignored or betrayed by their governments for whatever reason, justified or not. Thereby, they could easily paralyze a whole society, even destroy it from within. That the latter had happened more than once Bran had learned from studying the historical records rediscovered on human space outposts many generations before him. There was really nothing that could limit the movement of such incited masses, little that could prevent them from storming the seats of their elected governing bodies. Tens of thousands, yes, they probably could be stopped but likely not without a major blood bath. But how could one stop hundreds of thousands or even millions on the move?

Now and then, Bran allowed himself the luxury of day-dreaming about walking somewhere on land when that was still the way people lived, preferably through a forest or across a meadow. But occasionally he also took imaginary walks through the city streets of one of the megalopolises of the past. When he did that, however, he could never help wondering just how much better their aquatic societies were protected from societal upheavals than the land-based cities of the past. The population of most oceanic cities being less than twenty thousand citizens, their cities were tiny in comparison to the mega-cities of the past. The small size of their oceanic cities and their intrinsic limitations on movement made it much more challenging for populists or extremists to achieve their objectives. There were just too few people in an oceanic city to recruit enough supporters to build a mass movement which could challenge the rule of its elected governing bodies.

A demagogue without huge crowds to rally behind him or her is quite powerless. And even if one succeeded in recruiting most of the city's population – something which had never happened - and thereby could legally overtake the city's government, her or his power would not go any further than the city's perimeter. Of course, Eireen Sawarov and her followers also knew that much, they knew that even if their views should prevail in their home city, there were countless other cities who would continue to go their own ways, unaffected by whatever the council woman and her followers were up to.

14

When entering her office, Eireen Sawarov's two staff members had already been busy for a couple of hours. Right away, they alerted her to an incoming note flagged secret, for council members only, which only she could access via bio-identification. The council woman lost no time in doing so and immediately realized the importance of the classified council meeting she was invited to attend tomorrow afternoon. The meeting required council members to attend in person, no replacements or remote participation permitted. As with regards to the meeting topic, the invitation simply stated that the city's mission chief, Bran Taliesin, would report on the five-week archeological excavation expedition from which his team had returned. It further said that the council was to vote on the chief's recommendation for the next steps and reminded participants in a footnote that this was a classified meeting, and all meeting materials and discussions were for council members only, not to be shared with third parties. Eireen Sawarov quickly understood the significance of the meeting. The mission chief reporting in a secret session to the council and then the council being required to vote in secret on a proposal on how to proceed with the next steps could only mean one thing - this expedition must have discovered something quite unusual. Since Eireen Sawarov had not sat on the council when this mission had been approved, she knew little about it. Now she asked her staff to quickly gather all the information about the expedition they could get. Most importantly, they needed to find out who was on that mission and if possible, they must find a way to talk to these people. She was certain that if anything unusual was discovered on this

expedition there would be no written communication about it. There was little time left before the council meeting to accomplish all of that. She asked her assistant Ned Basic to look for Kimal Abuno, her movement's security chief, to brief him on everything and ask him to send out his best people to gather as much information from the expedition participants as possible. As Ned left to meet with her security chief, Eireen Sawarov asked Cory Wang, her other assistant, to set up a thirty-minute meeting with the office of the council chairman. She needed to talk to Peer Aksun.

When his secretary told the council chairman that council woman Eireen Sawarov was asking for a thirty-minute meeting sometime later this day he had a good idea what this meeting would be about. He thought that there was little to be gained by trying to push out a meeting with Eireen Sawarov. Eventually, he would have to talk to her anyway and the sooner he got an idea as to what she may be up to the better. Therefore, he told his secretary to schedule the meeting with council woman Eireen Sawarov's office for later this afternoon. Just as his secretary returned to his desk to arrange the meeting, Bran knocked on the door. Peer listened to the brief update Bran gave him about the calls he had made last evening to a few more council members and his follow-up meetings earlier this morning with some of the council members he had already reached out to yesterday. All of that was good news. Then Bran told him about his concerns regarding the possibility of Eireen Sawarov leaking information from the upcoming meeting and thereby increasing the security risk for those tasked with investigating the skull. Peer agreed with Bran that council woman Eireen Sawarov would most likely use her access to privileged information to spur her most ardent zealots to action.

»She likely has her people already working on finding out as much as they can about the expedition before tomorrow's council meeting. Her office just asked mine for a meeting later in the afternoon at which I can probe her on just how far she possibly might go,« said Peer.

»Good,« responded Bran, »that could be helpful. However, I believe we must immediately limit access to the expedition documents in the cities archive. Most importantly, the identity of the expedition's team members must be concealed. I am convinced that their agents will track down expedition members seeking to extract information they

believe these might possess by using every possible means.«

»Alright,« said Peer and walked over to the room adjacent to his office where he asked his secretary to inform him immediately if anyone sought access to documents regarding the just returned expedition before granting any access. To his surprise his secretary told him that council woman Eireen Sawarov's office just had made such a request which he was about to grant when Peer walked up to his desk.«

»Not so fast Fin,« told Peer his secretary, »please make sure that only document copies are being shared where all personnel information regarding the mission team members – except that of the mission chief himself – has been removed. And please, still let me know who asks for such copies.«

»Certainly, Mr. Aksun,« Fin responded with audible relief in his voice that he had not sent the documents to Eireen Sawarov's office yet.

With the door between both offices wide open Bran had followed Peer's conversation with his secretary.

»Looks like we caught that one just in time,« Peer heard Bran say when he walked back into his office.«

Peer knew this tone in Bran's voice well enough to understand that he was seriously concerned about the safety of his expedition team members. After a moment of silence, he told Bran it would be best to meet with the city's chief of security right away to arrange whatever measure they deemed appropriate for the scientist's protection. As it happened, today was one of those rare occasions that chief of security Han Nakamoto was in his city hall office so Bran would not have to walk down to the central security station where their chief of security could usually be found. As Bran Taliesin left his office, Peer Aksun called Han Nakamoto's office to let him know that the mission chief was on his way to see him regarding the coordination of some security measures including personal protection for members of a just returned expedition.

A few minutes later, Bran had stepped into the office of the city's chief of security. Han Nakamoto and Bran Taliesin knew each other well. They had cooperated on the security details of countless missions and a very long time ago they had even served together on several missions. Bran briefed the chief of security on the situation at hand,

who and what required additional security protection. He could not tell Han Nakamoto about the skull but that was not necessary, the chief of security had a good idea that there must be an important reason as to why these archeologists, their residential areas, and the institute they worked at might need protection. He also had his suspicions from whom they needed to be protected. While the scientists remained in the city they were at greater risk, once they resided in the secure research facility outside the city it would be much easier to ensure their protection. He and Bran agreed to move the scientists to the secure research facility as soon as possible. Han Nakamoto made a few calls to get things going and gave Bran the contact information of the security personnel which were already on route to the scientists. When Bran left Han Nakamoto's city hall office Eireen Sawarov was just walking down the hallway. For a moment they looked at each other from a distance before each of them went their way. With Bran Taliesin meeting with the security chief, Eireen Sawarov now was certain that something particularly important must have been discovered during the mission chief's last expedition, something that required the attention of the city's chief of security.

15

When he had received his instructions from Eireen Sawarov's office, Kimal Abuno lost no time to brief his agents as to what they must accomplish. Within an hour he had in front of him the transport manifests of the crafts which had brought back the expedition team members from their excavation site. In addition to providing the list of people on the transport back from the excavation site, their contact in the terminal's security team had told them something else. On arrival, the mission chief handed a box to the terminal's security chief, ordering him on behalf of the city council to protect the box at all costs and have it transported immediately to the city's secret research facility located outside the city's perimeter. There, the box was to be handed to the department head of the institute for genomics and anthropology. Within minutes of receiving this information Kimal Abuno was sharing it with council woman Eireen Sawarov's office.

»Kimal,« Eireen Sawarov said with a grateful voice, »I knew I could count on you!«

And then with her voice sounding quite differently she added, »you know, when I asked the chairman's office for the expedition documents earlier today, they sent me the documents with the identity of the mission members concealed. Well, now we have that information too.«

»Eireen, what else did you expect from the chairman's office?« asked Kimal Abuno jokingly. »But seriously,« he continued, »looking at the mission scope in the documents you just sent me, the qualification of the science team members, and this ominous secret package the mission chief had sent to their secret research facility on arrival, they must have discovered something quite extraordinary.«

»I agree,« replied Eireen, »and since they make every effort to conceal from us what it is they discovered it must be something they obviously believe we would be very much concerned about.«

»Quite likely Eireen. However, where it is now, there is little chance we can get access to that box of secrets.«

Eireen Sawarov knew that Kimal Abuno was right. There would be zero chance for them to access the content of the box anytime soon. Certainly not before tomorrow's council meeting. However, there was still another route.

»Kimal,« she began, »we still have more than twenty-four hours to probe the science team members whose names you now have. Given what may be at stake, you should do what you believe is necessary to get them to reveal whatever information they might have about the secret content of the box. Just make sure that whatever you do, nothing can ever point back to us.«

»I understand,« said Kimal after a moment of silence.

He knew that what Eireen Sawarov meant by "not pointing back to us", was really "not pointing back to her". For the sake of their cause, nothing must be allowed to point back to the council woman. Kimal Abuno had expected nothing less and he had already prepared for what Eireen Sawarov had now asked him to do. His agents were only waiting for his signal to jump into action. He usually preferred more subtle methods but this time his agents needed to pursue their objective more aggressively. There was not much time left to deliver what council woman Eireen Sawarov had requested.

Within an hour, several colleagues of the expedition's science team members were being approached by people pretending to be family or friends asking about the whereabouts of the expedition scientists or others proclaiming to be journalists seeking to interview them. At the same time, the apartments of three scientists in the dormitory were broken into. At first glance, nothing seemed to be missing so a burglary was unlikely. But clearly, the living quarters which were broken in had been searched for something. Sue-Ming was first to discover that her flat had been ransacked. Alarmed by this obvious break-in, she immediately called Gil. To her surprise, Gil was already around the corner when she tried to contact him and so were other members of the security team who had been responsible for their security during the five-week expedition. Even though these soldiers were likely looking forward to some recreation after their five-week mission stint, Bran and Han Nakamoto agreed that personal protection could be assured best by those soldiers who already knew the science team members well after their shared expedition experience. Gil certainly did not mind being close to Sue-Ming again and the other security soldiers also, when asked, did not hesitate one moment to volunteer for the job to protect those who had become their friends.

Kimal Abuno's agents saw the security soldiers move into the dormitory and realized that the science team members were now under a twenty-four-hour protection scheme. The city's security had sprung into action quicker than they had expected. There would be no more chance for them to search for clues as to what the contents of the secret box may have been. Also, prying secrets from the scientists themselves, by what the agents referred to as intensive questioning, had now become impossible. They reported the change in situation back to their boss who then broke the disappointing news to council woman Eireen Sawarov. About the same time Bran briefed the council chairman about the situation. Fortunately, of the three ransacked flats, only two belonged to expedition team members but neither of the two belonged to one of the archeologists who had found the skull.

16

Of the nine science team members returning from the expedition, four had been greeted by their families and headed back to their homes with them. The other five, still being single, all had their living quarters in the institute's dormitory. Lucy, Manu and Ives had traveled there together while Sue-Ming and Celine had hitched a ride with Gil. As was the custom on returning from a field expedition, the institute had given expedition members a week of leave. They could of course return to their jobs right away if they wanted to, but that rarely happened. After settling in and having a good night's sleep the five archeologists staying at the dormitory met the next morning for a shared breakfast. It was a leisurely and extended breakfast that eventually turned into lunch as the excitement of being on an expedition gave way to thinking about what would come next. Lucy, Manu and Ives knew what would come next, but they had no good idea how this next phase in their lives would change things for them. They had to wait for Sue Ming and Celine to leave for the gym before they could retreat to Lucy's living quarters to discuss what was on their minds. There, in her living room, as she was about to address them, Lucy looked firmly first at Manu and then at Ives, both standing in front of her.

»I have made up my mind,« she said. »How about you?«

»Me too,« came the immediate response from Ives.

Manu still looked down on the floor. He was thinking. Of course, Lucy would have no doubts, after all, Bran was like a father to her. And Ives would do whatever Lucy did. Lucy was the biological daughter of Hakan and Helen Kassius, both of which were dead, but their names lived on, and Lucy carried that name, opening her doors which would likely remain closed to himself. But he, Manu, did not even know who his biological parents were. He was what polite society euphemistically referred to as a "child of the sea", one of those many children never to know their true parents. Such children, of which there were many, probably constituting the majority of children in most cities, were brought up by so-called parental groups, which included a minimum of eight, but sometimes even up to twenty adults. As for Ives, while he was a child of the sea just like

himself, his parental group was well connected, while Manu's parental group included some characters which not only in Manu's opinion were less presentable. As it was, among the latter were followers of Eireen Sawarov. With these thoughts in his mind Manu looked up from the floor and found Lucy's eyes; she understood. Lucy knew Manu for long enough to guess what was going through his mind.

»Manu,« began Lucy while she took his hand, »it will always be only your decisions, your deeds, your accomplishments by which people will judge you. Look, I know you believed you would never be selected for the expedition from which we just returned because you have those people in your parental group who have disagreements with most others in our society. But as you see, this was not true. Just always do what you, after considering things carefully, believe is the right thing to do and forget about those people whose actions you are not responsible for.«

Manu knew that Lucy was right, but he also knew that those people Lucy was referring to were potentially dangerous. If they ever learned that he, their child of the sea, was secretly working for the council investigating this skull find, they would likely do whatever they could to stop him. If it came to that, not only would he become a target for them, but everybody else working with him would also be at risk. When he shared this concern with Lucy and Ives, it was their turn to look down on the floor. Manu was right, thought Lucy. He was right that these people could become a danger to all of them but where he was wrong is that because of that he should not proceed with what he at his innermost must know to be the right thing to do.

»You know, you are wrong,« Ives blurted out the moment Lucy was about to reply to Manu. »Do you really believe even for a moment that these people would not try to stop any further investigation of the skull at all costs, regardless of whether you are a part of our team or not?«

Ives had looked straight at Manu when he spoke these words. He really liked the guy, and he was not going to watch Manu's career being thwarted by concerns for people who really had no concern for him. Lucy thought she could not have said this much better than Ives had just done and looking at Manu she nodded in agreement.

»Manu, we are a team, « she added, »we really need you!«

Manu's face had lit up. No, he would not let them down and as he said so, Lucy and Ives successively embraced him. With that settled they began to prepare for their two-month stay at the research institute outside the city. Being adults in their mid-twenties and busy scientists, them being gone for another two months would not be too unusual. Bran had told them that he would talk to their department head regarding their continued absence from the institute, so that was also settled. As Manu and Ives were about to return to their living quarters, Sue-Ming returning from the gym had just discovered that hers was ransacked and so did Celine.

17

Shortly after mid-afternoon, Eireen Sawarov walked into the council chairman's office. Peer Aksun, looking up from his desk when his secretary escorted her into his office, had expected her to be a few minutes late; she always was. That was part of her act of letting others know how important she was; just like the fake smile she always put on in public was supposed to signal to everyone that nothing could get to her and no one else was as blessed as she was. Maybe she would have smiled even more ferociously at the chairman today had her agents attempt succeeded in finding out what tomorrow's secret council meeting would really be about. They exchanged polite pleasantries, and the council chairman asked her to please take a seat and if she would like some refreshments. After the secretary had brought the council woman her glass of perfumed water and had also put a glass of plain water on the small conference table for the chairman, he left the office, closing the door behind himself as he did so.

»I hope you like the water, Ms. Sawarov,« the chairman began, »with what can I help you today?«

While the chairman spoke, Eireen Sawarov continued to radiate her fake smile at him, hiding her anger behind it. If you really want to help me, she thought, why do you and the likes of you not just get lost and let us govern the city. But when responding to the chairman she did so in her most polite voice.

»Mr. Aksun, I believe you know why I asked your office for this meeting.«

»Well, Ms. Sawarov, I believe I have an idea as to why you asked for this meeting. You must know you are not the only council member who is curious about tomorrow's meeting? But unfortunately, I will have to give you the same answer I had to give the other curious council members.«

No other council member had approached the chairman regarding the secret council meeting set up for the next day. But Peer Aksun gambled that Eireen Sawarov would not know this. Her sympathizers and followers on the council all worked their agendas through the council woman. They would never by themselves have come to see the chairman on such matters. He knew that; and Eireen Sawarov knew that he knew. As for the other council members, the council woman just could not know whether some really had approached the chairman regarding the meeting or not; they certainly would not talk to her about it nor would she, not before such a meeting nor after it. Hence, Eireen Sawarov had no choice but to take the chairman's assertion that other council members had asked about tomorrow's meeting at face value.

»I see, Mr. Aksun, and I suspect you possibly cannot tell me what it was that these other council members were interested in discussing with you, correct?«

»Quite right, Ms. Sawarov. You see, these conversations were just as privileged as our conversation is right now, not to be shared with third parties.«

»Of course, Mr. Chairman! But was there any information you were able to share with these other council members you could also share with me?«

»Well, Ms. Sawarov, tomorrow's meeting is not just a regular council meeting. As you certainly saw from the invitation, the meeting topic will only be disclosed when the meeting commences, that is, once all council members and the mission chief have been sworn to secrecy. Therefore, I could not tell the other council members anything about the meeting and neither can I tell you. To know what the meeting is about you must attend it in person.«

Council woman Eireen Sawarov understood that she would get nowhere by continuing this polite conversation. Maybe, she thought, it was about time to push the chairman a bit more forcefully. Looking eyes with the chairman she now said in a much more assertive voice.

»You know Mr. Aksun, keeping something in complete secrecy is just not possible. There are always leaks. As it is, we already have our suspicions with regards to what tomorrow's meeting may be about; and if we are only half-way right, we completely disagree with how this is being handled.«

Here we go, thought Peer Aksun, she is letting the cat out of the bag. He did not respond immediately but kept the council woman waiting for half a minute when without a change in tone he asked a seemingly innocuous question.

»Ms. Sawarov, who is "we"?«

For a moment, a cloud seemed to dim the council woman's fake smile as she considered whether the council chairman was playing stupid or why else he was asking her this question. When she spoke again, she leaned just a bit forward to indicate an increased intimacy in their conversation.

»You know whom I represent on the council, Mr. Chairman, do you?«

»Of course, Ms. Sawarov, you represent the interests of the district which elected you, that means the interest of all citizens living in this district. Or are there any other interests you believe to represent?«

While asking this last question Peer Aksun had raised his eyebrows. Observing this, Eireen Sawarov could not help but wonder if the council chairman seriously wanted her to believe that he did not know which interests she served, what and whom she represented. Leaning back, she sat straight in her chair again as she gave the chairman a mustering look.

»You know as well as I do Mr. Chairman, that, once information is leaked, it does not really matter whether the leaked information is factual news or fake news. Once something raises the ire of the public, most citizens will not be able to discriminate anymore between fake and fact. So would it not be best to share at least some information before the meeting so any false information cannot get ahead of the truth?«

Amazing, thought the chairman as he listened to her, this council woman is really trying to threaten me into sharing information about tomorrow's meeting. Information, which she then would certainly manipulate to serve her needs, thereby creating the much bigger fake news she hoped to spread. He had expected her to try something like that,

but just not as brazen. When he addressed the council woman again, he did so in the same calm manner, speaking in the same friendly but firm tone in which he had spoken to her throughout their meeting.

»Indeed, Ms. Sawarov, I share your concerns regarding potential leaks. However, I can assure you that as the council's chairman, I have already taken steps to address them. On my request, our chief of security and his team have taken appropriate preventive measures, and I am confident that any such potential public eruption caused by fake news will be nipped in the bud. Also, most citizens are responsible people and quite a few have volunteered as informants so I am also confident that we would learn about any leak quickly and that we would be able to identify its source in due time.«

The chairman had ended his last sentence with a smile of assurance, signaling to the council woman that any security leak would not just be identified quickly but that those responsible for it would be held to account. The council woman seemingly had understood the message as she thanked the chairman for having the foresight to put such security measures in place. Then she told him that she must be on her way now, muttering a dry good-bye and seeing you tomorrow as she left the council chairman's office.

18

Bran stayed at the scientist's dormitory for about an hour, reassuring the five expedition members that with personnel protection put in place for them, there was nothing more to worry about. Sue-Ming and Celine did not know what Lucy, Manu and Ives knew since their discussion with the mission chief the evening before they had returned from the expedition to the city. Therefore, Bran had to give them the cover story the council chairman, the chief of security and he had agreed to use in such cases. Sue-Ming and Celine understood well what havoc fake news could cause and so they had no problem believing that the consequence of such fake news about their expedition spreading in the city had resulted in some troubled minds ransacking their living quarters.

With the situation at the dormitory under control, Bran got on a transport to his

flat where he finished the report for the council meeting and the proposal on the next steps which he was to submit for the council's approval. By then it was already time to head for Peer Aksun's home where the chairman and his family were expecting him for dinner. The Aksun family lived some fifteen minutes walking distance from his flat. As he walked over there, he revisited in his mind what had happened since their return to the city when suddenly his peripheral vision alerted him to someone seemingly watching him. Bran pretended not to have noted anything and after a few more minutes he arrived at the Aksun family home where Juliet, Peers wife and Bran's childhood friend, welcomed him with a warm embrace.

»Peer is in his study,« she said in her soft voice, »I am sure the two of you still have plenty of things to talk about before dinner. I will call you when it is ready.«

Bran found Peer in his study bent over a book, one of these rare things of which Peer still possessed a few. A very long time ago, practically all land-based cities used to have big libraries, some of them housing many millions of books. Back then, most people owned books themselves, some wealthier people even had small libraries of their own. Printed books were a rarity these days, Bran thought. The printed book libraries of the past had all been lost, the last remaining ones during the *Dark Sky Period*. Fortunately, much of the inventory of the libraries of the past had long ago been digitized. Most books had survived, albeit in digital form. When Peer noticed Ben entering his study he raised his head with a smile.

»Guilty as charged,« he said laughingly, »I just cannot resist reading print books, especially books such as this one here.«

He held up the book for Bran to see for himself. It was an illustrated world atlas, or better, it was the reprint of such an atlas, where white spaces with impressive names still indicated parts of the globe then unknown, waiting to be explored. With an appreciative smile Bran looked at the book and then handed it back to Peer.

»What would I not give to have lived at that time,« Bran mused, »leading expeditions into unknown territory naming rivers and mountains, maybe leaving for posterity a Cape Taliesin, a Taliesin Basin, or the Taliesin Mountains.«

For a moment they both chuckled while Peer offered Bran a drink.

»But aren't we actually living in such times,« said Peer in a more serious tone. »Just consider that today we know next to nothing about the vast interiors of the continental masses. Since the end of the *Dark Sky Period* which had devastated life on land, nobody ever returned there. Remember that at higher latitudes much of the land remained in the grip of an ice age long after the skies began slowly to clear. This ice age ended only some thirty-eight thousand years after the *Dark Sky Period*. Who knows what those areas which were covered by massive ice sheets for many thousand years look like today, some thirty-two thousand years after the ice age has ended? All we really know about the land masses of our planet are the coastal lands and the spots where mining operations continue. The coastal stretches which house much of our industries are not just the coasts of the oceans we live in but also the coastal perimeter of the continental masses, of veritable oceans of land if you will, dotted with the few islands where we operate our mines. What has happened on these oceans of land some hundred kilometers inland or outside the typically twenty-kilometer security perimeter of mining operations? That we do not know.«

Bran's astonishment grew as he listened. He never had considered things from the perspective Peer had just outlined. But of course, Peer was right. In a way their times presented a mirror image to the times when the original of the world atlas Peers still held in his hands had gone to print. Since human life on land ceased to exist many thousands of years ago, the continental masses which humans had never visited again had become unknown territory. But Bran wondered if that was really the case.

»How about satellite mapping?« he asked himself and Peer. »Is not every inch on the planet still imaged by satellites on a regular basis?«

»Yes and no,« began Peer after a moment of thought. »Yes, because in principle most of the planet is still being mapped. And no, because of the many areas we have not been able to get detailed satellite images of for a long time for various reasons.«

»You see,« continued Peer when he noticed that this came as a surprise to Bran, »after the *Dark Sky Period*, when satellite mapping became possible again, imaging in the visible range remained limited to a rather small fraction of the planet. To this day, in many areas visible imaging is still of such mediocre quality that we really cannot see

what is happening there. Sure, visible imaging can be complemented by imaging in other wavelength ranges, but the result is still not good enough to learn more about such areas. Besides, nobody really cares. I guess to rediscover those areas, one would have to explore them with ground expeditions.«

Bran wondered how Peer could know all of this. He must have taken quite an interest in these things.

»Peer, you never stop to surprise me,« he said with a smile, »you have taken quite an interest in these things.«

»You are right,« replied Peer, »I have thought about these things for some time. But now let's return to the matter at hand.«

With that, Peer began to update Bran on his conversation with council woman Eireen Sawarov after which Bran briefed Peer on the content of his report to the council as well as on his proposal for the next steps. He also told Peer that they were likely under observation by some of Eireen Sawarov's agents, which Peer had already suspected. By the time Juliet called them for dinner their conversation had returned to their earlier discussion about the vast unknown interiors of the continental masses of their planet.

Council Meeting

19

For most of his life, Bran had given little thought to how their oceanic cities governed themselves. However, given the nature of his job, the close relationships it brought with many members of the city's administration, he had come to appreciate the strengths and weaknesses of the city's governing body. Except for some minor differences, the governing structure of all oceanic cities was quite similar. That was no accident because oceanic cities faced certain restrictions which had been unknown in land-based cities. First, an oceanic city was an assembly of self-sustained structures where each of them, if required, could be completely isolated from all other city structures. Once such a self-sustained structure was isolated it could provide for any citizens remaining in the isolated structure for long enough to complete the necessary repairs before that isolated structure could safely rejoin the rest of the city again. In case that was not possible, citizens in the isolated structure would be evacuated and eventually the old structure would be replaced by a new one. Quite naturally, these self-sustained structures became the representative units of the city, with each of them being represented in the city's governing body. That worked well for as long as oceanic cities remained comparatively small.

Once populations of oceanic cities began to exceed several thousand, such base units for a city's government had to include more than one self-sustained structure. What happened then was that a new layer was added to the governing bodies of oceanic cities. In essence, groups of self-sustained substructures representing a new base unit became something like city districts. In such districts citizens now elected their district governing body, the district council, which in turn nominated one of its members to become the district's representative in the city council. The number of self-sustained structures in those new administrative units depended on their respective population sizes. In Bran's city an administrative district included between six to eight self-sustained city structures. With twenty-nine districts in Bran's city, its city council had twenty-nine members. Just

as district councils elected one of their members to become the city council member representing their district, so did the city council elect its chairperson which was then referred to as the city council chairwoman or chairman.

In oceanic cities, voting was a right as well as an obligation. Every adult citizen had to cast her or his vote every seven years. However, not all citizens voted at the same time. For example, in Bran's city, for six years, each year four different districts would elect their district councils and in the seventh year the remaining five districts would elect their new district councils. Hence, voting took place in any district every seven years and at the end of such a seven year cycle a new city council chair would be elected. Unless of course when the district of the sitting city council chairperson elected someone else to represent the district on the city council. In that case, the city council had to elect a new chairperson before the seven-year cycle was over.

Political parties were not part of the governing structure of oceanic cities, for the simple reason, that political parties were forbidden. Given the role infights between political parties had played during the *Great Cataclysm*, when they shamelessly placed their party interests above the interests of humankind, they were already banned early in the *Period of False Hopes*, when much of humankind still lived on land. Initially, many had argued for allowing political parties to be a part of the governing structure of the first oceanic cities. Their main argument had been that in those land-based societies of the past, counting their voting population in the many millions, most of them having little education, political arguments could not win elections anymore, but only mass manipulation could. Hence, back then political parties had no other choice but to become experts in mass manipulation which is exactly what had happened. Given the small size of oceanic cities, they further maintained, political parties could now go back to play a constructive role. In the end, their arguments did not prevail, not least because some notable historians had weighed in, citing the political history of Greek city states in an even more distant past when political parties had proven to be just as destructive for the well-being of small cities as they had been for the megacities of a more recent past. In some measure Bran thought that it was the intrinsic properties of oceanic cities which had forced their societies into becoming essentially grassroots democracies.

But even though political parties were forbidden, Bran and his fellow citizens knew all too well that interest groups still very much shaped the politics of oceanic cities like theirs. They just were not called political parties anymore and therefore they had no party machinery behind them. All of that made for a much more level playing field in politics. Elected office was not something reserved any more for the rich and wealthy as had been the case during the centuries leading up to the demise of land-based mega-cities, when elections and political offices could be bought or if that did not work, the successful political candidate money interests had funded usually could be relied on to serve those money interests when in office. The societal gap between the few who possessed most everything and the few who possessed little to nothing just did not exist in oceanic cities. In that sense, Bran always thought, oceanic cities resembled lifeboats where the distinction between rich and poor quickly vanishes for those drifting helplessly in the vastness of an ocean with little hope of being rescued. Citizens of an oceanic city had to rely on each other so much more than people living on land in the past ever did. On land, Bran thought, one just can walk away if there is something one does not like. In the depth of the sea this was different. There one cannot walk away. There one has no choice but to address the challenges confronting not just oneself but everyone else and that is only possible if one works together with those around oneself who face the very same challenges. Citizens of oceanic cities had no choice but to rely on and support each other. Yes, even in oceanic cities there were some who had a little more and some who had a little less, but that was mostly by choice. However, there really were no rich or poor people, there was no upper or lower class, there were only citizens, citizens with different talents and different outlooks on life, different tastes and different opinions. But whatever differences exist between citizens, none of those did matter given their joint effort to not just survive in the ocean but for their city to thrive.

20

Since Hakan Kassius had left for his last expedition some thirteen years ago, never to return, Bran had become more interested in the history of human societies. Maybe

because there was no Hakan anymore whom he could ask about such things. Hakan had known infinitely more about them than anyone else in their city and Bran learned from him many things about which his study books in school had remained quiet. With Hakan gone, Bran had to educate himself on human history. Being an engineer was helpful in this regard as he had access to databases which were off limits to most other citizens, and no one really cared if he was perusing through some technical literature or if he was reading history books and historical records. Only a handful of his friends had an inkling about Bran's interest in things other than engineering because from time to time they would surface in some of their livelier conversations with him.

Humans had of course never stopped to be humans, with all their strengths and weaknesses, hopes and fears which must have characterized their species from its very beginning. Moving from a life on land to a life in the oceans had not changed any of that, rather, Bran suspected, it had only somewhat dampened these human characteristics. Just as humans moving in water encounter more resistance than when moving in air, so seemingly it was more difficult for these human species characteristics to manifest themselves in their underwater societies. But clearly, they continued to be part of human heritage and sometimes they could reassert themselves with surprising force. Rebellions, uprisings, societal upheavals, all of that once occurred in some of their oceanic cities occasionally. Especially so early on, during the first millennia of human ocean colonization. Such events happening in the land-based mega-cities of the past may have cost the lives of many and surely often destroyed much of a city, but usually life would just go on after the dead had been buried and the city had been rebuilt. Not so in an oceanic city. On land, artillery shells destroying a city block left the rest of a land-based city standing, not so in an oceanic city. Every potential rebel in an oceanic city knew perfectly well that the kind of open warfare into which uprisings in land-based cities often evolved, could not just destroy a perceived enemy's position in an oceanic city but most likely would mean the end of the city, and with that the end of their cause as everyone would perish with the city. In land-based cities, even after the most terrible conflicts, victors could triumph in the sense that they had survived and now owned the city, even if that meant they would only own the rubble over which they had raised their victorious flag.

However, warfare in an oceanic city never could have a winner as nobody would likely survive to triumphantly raise or better float a victorious flag over the ruins of an oceanic city. Therefore, some two millennia into the human colonization of the oceans the records show that violent conflicts became extremely rare. Seemingly, everyone had understood, finally, that throwing grenades in the environs of an oceanic city meant nothing else but committing suicide and mass murder at the same time.

As Bran had learned all too well from what Hakan could tell him about human societies before the *Great Cataclysm*, back then, committing suicide and mass murder at the same time was not uncommon. Most such heinous acts had been committed by religious fanatics, who, manipulated by their religious leaders and in a perversion of their own religion, believed that such deeds would assure them an afterlife in a splendid paradise. Even more so than societal conflicts between rich and poor, religious conflicts became one of the main forces pushing human societies into the abyss of the *Great Cataclysm*. With humankind seemingly doomed and the end of time undoubtedly near, many back then became much more concerned with preparing for their presumed afterlife rather than focusing all efforts on pulling humankind back from the abyss it was about to plunge into. It was for such reasons that oceanic cities outlawed organized religion in the same way they had done with political parties. Citizens were free to practice their personal religions, whatever that meant, if they abided by oceanic city laws. The latter were quite liberal in that respect, only asking that religious believers respect each other's varying beliefs and refrain from proselytizing others. The constitutions of oceanic cities enshrined religious freedoms and rights just as much as democratic freedoms and rights but without political parties or priesthoods and clerical hierarchies being part of their social structures.

All of that had only become possible because of the inherent constraints oceanic societies imposed on their citizens, constraints which were not so much imposed by governing bodies but by their marine environment. With an oceanic city's population rarely exceeding twenty thousand and most having around ten thousand or fewer citizens, many of the challenges land-based mega-cities of the past had to cope with did not exist anymore. Sometimes Bran wondered if the impossibility of continuing land-based human

civilization had really been humankind's major motivation to colonize the oceans. What if the real reason had been that this was the only way human societies would not run into the same calamities again which had nearly destroyed human civilization. Whether that was the case or not, the fact was that for thousands of years now human civilization had existed peacefully in the oceans. Something it had never been able to accomplish on land where over the thousands of years land-based human societies had existed practically each century had witnessed devastating conflicts.

21

Just like Bran Taliesin, Eireen Sawarov grew up as a child of the sea. But her becoming an adult was quite a different story from Bran's, who at a still early age had been adopted by Han and Nala Taliesin. Han Taliesin was a respected natural scientist, several times elected to sit on the city council and Nala Taliesin was an administrative professional and community organizer. From the time of his adoption, Bran's life experience became a much different one than that of Eireen Sawarov. Han and Nala Taliesin became Bran's real parents, and he never ever felt the need to search for his biological parents. Unlike that, Eireen Sawarov never experienced what it would be like to grow up as a child of two parents in a family home because she grew up as one of many other children like her who lived in the so-called children of the sea centers. There were no adults in the city who carried the last name Sawarov because it was a made-up name. All children of the sea who, unlike Bran Taliesin, did not have the good fortune to be adopted had made-up last names. Bran did not remember anymore what his made-up last name was which he had carried before he was adopted. As soon as Eireen Sawarov had the rights of an adult citizen, she began to search for who her biological parents were. But without any success. She wanted not just to know who her biological parents were but also believed she had a right to carry their name. Unfortunately for Eireen Sawarov, it was a practical impossibility for a child of the sea to ever discover whose genetic child she or he was. For Bran Taliesin it never mattered who his genetic parents were while for Eireen Sawarov the quest to find her genetic parents dominated her early adulthood.

years. It was this quest which introduced her to the so-called genetic purists, people for whom their unique genome was the mark of their identity. Genetic purists believed that by raising children such that they never came to know their genetic parents, society deprived them of their identity. Worse than that, they contended that those in charge of the children of the sea program manipulated the genetic identity of individuals such as to form a new type of human being.

Genetic purists considered children of the sea as biological aberrations from where according to them evolution was supposed to take the human species. Interestingly, despite those beliefs, it was children of the sea seeking to find their genetic parents, who were most attracted by the siren songs of genetic purists. Eireen Sawarov happened to be just one of them. In a sense, genetic purists became the family which Eireen Sawarov's parental group had never been able to give her. Before she joined them, genetic purists were considered misguided citizens who happened to hold some odd beliefs. Within a few years, becoming their unspoken leader, it was Eireen Sawarov who transformed this group of odd-balls into a well-organized interest group. Under her leadership, genetic purists had become a party in everything but in name, with a party program and the objective to turn this program into policies. That of course posed a problem as the constitutions of oceanic cities expressly had forbidden political parties. However, if such a party happened to be camouflaged as a city district it was difficult to label it as such. As long as a party did not become active beyond a single city district's boundary, it could always pretend to be nothing else than the representative body of this city district, which was the district's council. Indeed, this is just how Eireen Sawarov and her followers had initially proceeded. By becoming the population majority in a single district, they could elect their own as district council members where they eventually were the majority and thus could choose one of them to become their representative on the city council. And this is how Eireen Sawarov had become council woman Eireen Sawarov, one of the twenty-nine council members of the city council.

The morning of the secret council meeting the council woman had convened her closest confidants. They sat together, discussing their options, in the large office of the districts council which had elected her as its city council representative. How far

should she go in challenging her colleagues in the city council this afternoon? There was little doubt that a majority of council members would likely support the mission chief. Eireen Sawarov had briefed them on her meeting with the council chairman. Clearly, they were currently in a position where little could be gained but much could be lost by pursuing a path of open confrontation with the city council majority. Rather, they needed to find a way to insert themselves in the process of whatever the mission chief would propose. After all, they knew that several council members would also like to avoid direct confrontation with them. To achieve that, these council members may be amenable to grant them participation in a joint oversight body for whatever process the mission chief would propose. Why not leverage that? The way Eireen Sawarov laid it out to them, their best option was to go along with supporting what the mission chief would propose under the condition that an oversight body was set up which they would then be invited to join. With that decision made, their meeting was adjourned, and council woman Eireen Sawarov left for city hall where in a few hours she would seek to accomplish what they just had agreed on.

22

When Eireen Sawarov entered the city council chambers some ten minutes before the meeting was scheduled to begin most council members were already present. As she walked towards the seat with her name plate on the table, she exchanged pleasantries with a few who would greet her and ignored the rest. She noticed that the usual circular seating arrangement of the city council was interrupted at one end. In the middle of this open circular segment there was a single table and chair. After a few more minutes the council chairman had arrived and so had the mission chief, who placed some documents on the single table as the council members took their seats around it. With everyone seated, the council chambers being closed, security personnel standing guard outside, the chairman looked around and to his satisfaction found that all council members were in attendance. Then, at exactly two o'clock in the afternoon, Peer Aksun swung his gavel and opened the meeting.

»Council Members, Mission Chief!«, he began, »as you know from the invitation to the meeting you received, this council session is strictly confidential. The first order of business after the roll call will therefore be that each one of us will swear an oath to keep everything which will be shared and discussed in this meeting strictly confidential.«

After opening the meeting in this way, the chairman asked the council clerk on duty to take the roll call which she did by calling out the name of each council member who then either had to respond with “present” or not at all.

»Thank you all for attending,« the chairman said, »and thank you Mission Chief for reporting to us today on the results of the just completed archeological expedition to the Nuran Desert lands. Council clerk, please now receive the oath of secrecy from all council members and the mission chief.«

At this command, the council clerk picked up a copy of the city constitution and went from council member to council member and finally to the mission chief, asking each of them:

»Please repeat after me: On penalty of being expelled from the city I swear to hold everything said in this council session and all materials regarding it strictly confidential, not to be shared with anyone outside the city council.«

After the twenty-nine council members plus the mission chief, all with their right hand on the city constitution, had sworn this oath of secrecy, the council chairman formally declared this secret city council session to be open.

»As to the agenda of this meeting,« the chairman said, »the mission chief has been given thirty minutes to share his report with us after which each council member will be given five minutes to ask the mission chief questions. You can but must not use your five minutes of questioning. If everyone uses their allotted time, we should be done with questions by no later than five thirty, after which we will take a fifteen-minute break. After that, the mission chief will have fifteen minutes to make his proposal for the next steps. The city council then will have one full hour to debate the mission chief’s proposal at the end of which the council will vote to either proceed with the mission chief’s proposal or not. With that, the meeting should be adjourned by no later than seven thirty«

Now the council chairman looked at each of the council members sitting in equal numbers to his left and to his right before he continued.

»Now, those who agree with this meeting agenda please raise your right hand.«

After counting twenty-two council members plus himself raising their right hand in agreement he went on:

»Now, those who disagree with this meeting agenda please raise your right hand.«

Counting six council members raising their right hands he then announced with twenty-three council members approving, six council members disapproving and no council members abstaining that the meeting agenda had been accepted and asked the council clerk to make note of that in the meeting protocol. Eireen Sawarov had been one of the council members voting against the proposed agenda. She had expected that the chairman would proceed in this manner and that it would not be possible for her to influence the meeting agenda. What this voting process had, however, shown here was that five other council members also were not happy with the meeting agenda, more than she had expected. As Eireen Sawarov thought about how this could become useful for her, the chairman had given the floor to the mission chief to begin his report.

Nothing which the mission chief said during the first twenty-something minutes of his report raised much interest among the council members. Some were beginning to wonder what this secret meeting was about. So far, everything the mission chief had told them the expedition team could have published in any scientific or news journal without having to bother the city council with it. Even Eireen Sawarov began to wonder when the mission chief would eventually drop his bombshell news. But then, just five minutes before the time allotted to the mission chief for his report was over, boredom gave way to excitement with some council members visibly leaning forward to make sure they had understood the mission chief correctly. Did he just say that on the last day of the expedition they had discovered a human skull buried in sediments which may have been deposited as recently as ten to fifteen thousand years ago? Looking over to council woman Sawarov, the council chairman could see that she was visibly disturbed. And that disturbed look on the council woman's face changed to one of anger when the mission chief told them about the skulls over-sized molars. The closing sentences of the

mission chief's report were almost drowned out by vocal manifestations of surprise or displeasure which came from several council members. The chairman had to call the council members to order to quell what may have become an even more tumultuous scene. With the added help of the council clerk and her assistants stepping in, order was quickly restored. With everyone calmed down, the chairman addressed the council members with a stern message.

»I understand that this news is a great surprise for all of us. However, as members of the city council you must behave as such. Each one of you will have the chance to speak their mind but not in this way. Any further violations of the city council meeting rules will be followed by the offending council members being swiftly expelled from the meeting.«

With most council members signaling their support to the chairman by knocking on the table in front of them or with a short vocal approval, his words seemed to have the desired effect.

»Well, with that cleared,« the chairman began again, »we can now begin with questioning the mission chief. We will start with the council member farthest to my left. Please, council man Turan, the floor is yours, you have five minutes.«

Sitting far right, Eireen Sawarov would be next to last in being allotted five minutes to question the mission chief. Not all the council members used up their five minutes of questioning time, some of them just repeated questions asked previously, only phrased in different words. It quickly became clear that without an in-depth study of the skull most questions coming from council members could not be answered. In response, the mission chief could only stress the need for further investigations. When it became the council chairman's turn, he reinforced this sentiment by just saying that he would forego his five minutes of questioning time as obviously more study was needed to answer the questions he had. The moment Eireen Sawarov was given the floor for her question period many council members began to lean forward in their chairs to better follow what she would be up to.

»Mission Chief,« she began, »is it that you cannot tell us or that you do not want to tell us more about this skull find?«

»Council Woman,« he replied, »I am not sure I understand what it is that you are asking.«

»Really, Mission Chief? Well, everyone here is asking their questions presuming that this so-called discovery is genuine. But how can we be sure of that? Maybe this is some prank by your archeologists or worse, someone here has an agenda which this supposed discovery serves?«

»Council Woman,« the mission chief now said in a more serious tone, »these are not my archeologists and each of them is a scientist with outstanding credentials. There is no such hidden agenda as you try to insinuate.«

»But Mission Chief,« asked Eireen Sawarov while radiating her fake smile at him, »don't you find it quite remarkable that after thousands of years of finding nothing even close to such a "recent fossil", your archeologists suddenly discover this fossil which contradicts not thousands but tens of thousands of years of archeology?«

»Council Woman, you surely must know how science works,« came the mission chief's response, »something can be confirmed countless times over but one single experiment demonstrating otherwise will suffice to show that such truth did not exist.«

»Of course, Mission Chief,« replied the council woman somewhat triumphantly, »you are correct when it comes to mathematics or physics but here, we are talking about archeology!«

But the mission chief held his ground, not looking anymore at Eireen Sawarov as he spoke but to the council as whole.

»No Council Woman, it is falsification by which all of science progresses, archeology no less than mathematics or physics. Have our distant ancestors not believed that their species was in no way related to other human species which once existed but were thought to be more primitive than our species and therefore could possibly not be related to our species? And have such hypotheses not gone up in smoke because of fossil finds which eventually proved that all early human species were related to each other at varying degrees?«

»Whatever you say, Mission Chief,« came the sharp response from the council woman, »none of that provides us any assurance that this skull is not a fake.«

Regardless of the mission chief's responses, for the remainder of her questioning time the council woman continued to repeat her contention that the skull find must be a fake. The council woman clearly had a tough time accepting that what she and generations before her had been taught in oceanic city schools could be wrong. Life on land had ceased to exist tens of thousands of years ago. This fact had been established countless generations ago and each generation since then had confirmed that fact. How could this skull discovery not be fake? And she was not the only one having this difficulty but as vocal as she and others were on the city council with respect to what they thought about this skull discovery, they were in a minority position. The last council member to be given the floor for his questions stated that there was nothing more he could possibly ask the mission chief that had not been asked already. With that, the council chairman told the council members that they must not leave the council chambers during the fifteen-minute break and that refreshments would be brought in momentarily.

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During the break council members congregated in several small groups discussing what they just had learned. Six other council members were surrounding Eireen Sawarov, who seemingly was trying to convince them that her calling the skull discovery a fake was not just contention but must be the truth. By the time the chairman called everyone back from their break, the council members the council woman had been talking to were seemingly nodding to her as they went back to their seats.

»Council Members,« announced the chairman as the meeting resumed, »we are coming to our next agenda topic. The mission chief will now present us with his proposal regarding the next steps. Mission Chief, the floor is yours. You have fifteen minutes.«

A few minutes into Bran outlining his proposal, the chairman could see from their respective postures that most council members would support the mission chief's proposal. Given how little they still knew about the skull it must have been clear to them that the only sensible way forward had to be a thorough scientific investigation. And given the contentious nature of the archeological find, something they had just had the

opportunity to witness firsthand, it only seemed prudent to conduct this investigation in a protected facility. When the mission chief had finished, he had not said anything with respect to how he expected any results forthcoming from such an investigation to be handled. This was no accident as the council chairman and the mission chief had agreed beforehand that the mission chief would not speak to that at all; it was the prerogative of the city council to decide such things.

»Thank you, Mission Chief,« began the council chairman after Bran had finished, »you may leave us now to our discussions.«

After Bran Taliesin had left the council chambers, Peer Aksun looked first to the council members on his right and then to the council members to his left.

»And now, Council Members,« he continued, »we have one hour to discuss the mission chief's proposal. We will proceed as we do in all our council discussions. Council members who have something to contribute will raise their hand. After the council clerk has made note of who desires to speak such council members will be called in succession to speak one by one. When called to speak they will have two minutes to do so. Nobody will speak unless given the floor. Now, please raise your right hand if you desire to speak.«

Most council members raised their hands but not all of them did. The council clerk took down their names, handed the list to the chairman who then called them up one after another. There were strong advocates for further examination of the skull, and somewhat fewer advocates for conducting such an examination in a secret facility. What clearly concerned council members most was the level of secrecy required for such an investigation. Most of them believed any information resulting from such further examination of the skull should be classified as top secret. The latter of course meaning that such information sharing would have to be on a strict need to know basis for the participating scientists and otherwise would be limited to the council members themselves with the council chairman having to approve each such information sharing with council members. It was the latter which Eireen Sawarov was aggressively arguing against, demanding that all council members must have immediate access to any information forthcoming from such an investigation and in addition also must have direct access to

the scientists themselves. As this debate went on for a while it looked as if any vote on information access could be a close one.

»Council Members,« began the council chairman when the council clerk indicated that the one hour scheduled for discussion was over, »before you consider motions for how to limit or not to limit information access to any such study, I propose we first vote on the mission chief's proposal itself. In the first vote the council will decide if it approves moving ahead with a further investigation of the skull or not. In case the council approves such an investigation it will decide in a second vote if it approves to conduct it in a protected facility or not.«

»Council Chairman Aksun!«

Unmistakably, this was council woman Eireen Sawarov's voice, thought the chairman as he turned his head to the council members sitting to his right.

»Yes, Council Woman Sawarov, what is the matter,« replied the chairman politely.

»I motion to supplement your process proposal with an additional vote,« she began. »If the council decides to conduct further investigations as discussed here, it should subsequently also decide whether an oversight body needs to be established to supervise such investigations.«

Peer Aksun could hear audible approval for the council woman's motion from council members to his right and to his left. When he asked the council members to vote on Eireen Sawarov's motion, as he was obligated to do, it passed with a narrow majority.

»Council Members,« he now addressed the council, »with the council woman's motion sustained we now must first decide if there shall be further investigations of the archeological find. If that should be the case we will then decide if such investigations must be conducted in a protected facility or not and finally, we will decide if such investigations require an oversight body separate from the city council itself. If anyone objects to this decision process, please raise your right hand now.«

Nobody objected and with the proposal on process thus being approved the chairman called the first vote regarding the mission chief's proposal. Twenty-three council members voted in favor of conducting a further investigation of the skull. However, when asked to

vote on whether such a study should be conducted in a protected facility, only seventeen council members voted in favor of that with twelve opposing it. Everyone was now waiting to see if an oversight body such as Eireen Sawarov had asked for would be approved. When the chairman called the vote on the council woman's proposal it was defeated by a narrow margin. This was just what the council chairman had hoped for when he had phrased the motion of the council woman as a choice between a body separate from the city council or the city council itself being in control of overseeing the skull investigation. Seemingly a few council members who had earlier voted in favor of Eireen Sawarov's motion to add this proposal for an oversight body had changed their minds. The natural oversight body for any such investigation was of course the city council itself. Having understood that by voting for Eireen Sawarov's proposal they may be relinquishing their own oversight function it took only two council members who had voted for the council woman's motion to change their minds to reject the proposal for a separate oversight body. Eireen Sawarov understood that the chairman had outmaneuvered her but there was nothing she could do about it.

»Council Members,« the chairman concluded, »we have decided to conduct a further investigation of the archeological find in a protected facility. Now we must consider how to handle information sharing with respect to such an investigation. The floor is open to submit your motions.«

The moment he finished this last sentence, Eireen Sawarov's voice filled the council chamber.

»I motion to declare all information forthcoming from such a study to be public and subject to immediate release by publication along with any other such public council news. The public has a right to know, and the public must know,« the council woman demanded forcefully.

As the council clerk made note of the council woman's motion only six hands went up in support of her motion when the chairman asked all council members to vote on it. With the council woman's motion squashed the council chairman waited for the next motion which came from a council member who requested that all information forthcoming from the investigation should be classified top-secret. This motion was also squashed but only

by a very narrow margin. To the chairman's surprise, now a motion was made to not only classify such information as top-secret but in addition restrict its sharing even within the city council, leaving it to the chairman's discretion not to share information with certain council members if there was a real danger that such information might be leaked by some council members to serve their own interests. Clearly, this was directly aimed at Eireen Sawarov and those on the council who were sympathetic to her. Eireen Sawarov's ever radiant smile was overshadowed by what was clearly deep anger, but only briefly. That changed however, once the chairman had brought the motion to a vote and again to his surprise the motion passed. Now, if he ever had seen Eireen Sawarov angry, thought Peer Aksun, this was it. Not even he had counted on such a motion passing, much less so the council woman. Eireen Sawarov was livid. How dare the city council empower the city council chairman to restrict information sharing for some members of the city council? How many of them, she rhetorically asked, were in on this con game with the supposedly discovered skull; what had the chairman promised them in return for their betrayal of the city council?

»Council Woman Sawarov,« the chairman demanded firmly while swinging his gavel, »I call you to order. There is no place for insults and accusations of this kind in this council.«

Eireen Sawarov had to swallow her anger as the chairman declared the meeting adjourned after reminding all council members again of the oath of secrecy they had sworn. From her perspective this was the worst possible outcome as she was now sure to be excluded from information sharing. They would have to find other ways to obtain the information that the city's secret investigation of the skull would reveal.

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By the time, the council meeting was over, Ari's family, Bran and Lucy were already sitting around the dinner table in the Niagato family home. Bran and Ari had met as young men studying engineering and had been friends ever since. When Bran, shortly after finishing his studies, moved to work in onshore facilities as well as at mining sites

far inland they lost sight of each other. By the time they had met again a few years later, Ari, who had joined the city's body of engineers, had married Hana. Hana and Ari had already been together when Bran first met Ari. When asked how they had first met, Hana and Ari would often tell people jokingly that they had met by accident. Ari had hurt himself in a sports competition and Hana happened to be the doctor in training who would treat his wound. So literally, Ari and Hana first met because of Ari's accident. Bran had always thought that Hana and Ari were destined for each other, so he was not surprised to find them married when after many years he returned to the city. Like his father, their son Kareem, their eldest and Lucy's boyfriend, had become an engineer. Their daughter Sarah, who wanted to become a historian, had just turned seventeen and would join the ranks of adults the coming year. As for their youngest, their fourteen-year-old Joshua, he loved nothing better than playing music.

As they sat around the family dinner table, the events of the past days faded in Bran's mind, and he just enjoyed the company of this loving family. He could see how fond Lucy and Kareem were of each other; they still had their whole lives in front of them. And he saw how fond Hana and Ari still were of each other after having spent much of their lives together. This is what true happiness looks like, he thought. After dinner, Lucy and Kareem excused themselves. With Lucy leaving the city again, there was not much time left for these young lovers before they had to kiss goodbye for two months or longer. After cleaning up, Sarah and Joshua went to their rooms while Hana, Ari and Bran retreated to the family living room, each of them having a drink in hand.

»You know Bran,« began Ari, »sometimes I wonder which beverage people before the *Great Cataclysm* enjoyed on occasions like this one, when long-time friends can finally come together again.«

»You have no idea Bran,« chuckled Hana, »Ari has been researching alcoholic beverages of the past. Can you believe it, secretly he has even engineered his own first wine!«

Bran could not help but laugh. This was so much like the Ari he knew. He remembered that back in their student days, Ari had been re-engineering many food staples which in the distant past had sustained people living on land. Of course, Hana knew all

of that as well. Recounting the various food items Ari had been working on throughout his maître chef de cuisine career, as Hana put it, time passed quickly for the three of them. When it became time to say goodbye their conversation returned to more serious matters.

»Bran,« said Ari, »please be careful and watch your back when dealing with council woman Sawarov and her followers. So far, these extremists have mostly been harmless, but I believe they are becoming more radical in their thinking and with that likely more dangerous. In my job I get to see parts of the city most people never visit, and I meet people most others will never run into. Things have changed, her supporters have multiplied, and they have become more aggressive. Even some of my close colleagues whom I have known for a long time now seemingly support her.«

»Yes, Bran,« added Hana, »I see similar things happening in my workplace. Be very careful.«

Bran promised Hana and Ari to be watchful and asked both to do the same. Being friends with the mission chief could become a risk for them and it probably would be best if they did not see each other again until this whole affair would hopefully be over in a couple of months.

»Too bad Bran,« said Ari with a smile on his face, »this means that you will not have a chance to taste my new vintage when it is ready in a few weeks.« Then he added in a more serious tone, »but you are right, let's not see each other for a while and if we need to talk, let's do that indirectly through city security.«

Bran nodded and after embracing Hana and Ari he left their home to return to his flat.

Crowden Institute

25

Two security soldiers had accompanied Lucy to the dinner with Kareem's family where she had met Bran again. Waiting outside Kareem's family home the whole evening, provided by Sarah with food and drink, they had then escorted her back to the dormitory, where she went right to bed. But sleep kept evading her. Tonight, Bran had told her that the day after tomorrow they would likely have to leave for the secret research institute outside the city. Even with all the excitement of the expedition, she had missed Kareem during those five long weeks. And now she would likely not see him for the next two months or even for longer than that. It was not just Kareem whom she loved; she loved his family too. Sometimes when she closed her eyes to day-dream, she imagined her life with Kareem. Most of the time, the images her mind then conjured up for her resembled Kareem's family, just that she had become Hana and Kareem had become Ari, and Hana's and Ari's children had become theirs. She knew that she wanted a family, a family as loving as Kareem's family. But she also knew that she would have to give up pursuing a scientist's career which was just as important to her. Of course, she could be a wife and mother while remaining a scientist, but the scientific career she envisioned would probably be unattainable. When she thought about it, her two possible futures had sat around the dinner table tonight. There was Kareem's family and there was Bran, a man without a family but a man pursuing a unique career, something that he possibly never could have done if he had become a family man. Sure, Bran was an engineer and not a scientist. But that did not matter as it was the passion with which Bran had always pursued his career and not the subject matter of it, which Lucy was thinking about. Sure, most who knew Bran only a little would not have associated passion with this man, but Bran had made few compromises in his life in following the path he had chosen for himself. He had never really pursued his calling for the sake of making a career because having a career never ever mattered to him. What mattered to Bran was to be able to

do the things he deemed to be important. And in that Lucy thought, he was just like her. It just so happened that she had chosen other things to be important than Bran had chosen for himself. Things that in Lucy's case happened to align best with pursuing an archaeologist's career.

Such thoughts had been on Lucy's mind for some time, and she had tried to share them with Kareem on numerous occasions. But she felt he never really understood what her work meant to herself. Kareem was an excellent engineer. There was no job which anyone could ask him to do that he would not accomplish. If it was at all humanly possible to do such a thing in the first place. But if left alone, Kareem would never dream of putting such challenges in front of him. Lucy would not have minded that Kareem had no such ambitions if that had not kept Kareem from understanding how Lucy felt about her own work. Tonight, she had breached this topic again with Kareem but to no avail. Kareem did not just love Lucy; he cared deeply about her. That made it even more difficult for him to realize that there was something with Lucy he could not truly understand. He would do everything for her, Lucy knew that. But could two people walk together through life if their compass needles pointed in different directions? She knew he would acquiesce to her desire to explore and discover things that she had dreamed about since being a little girl. He would just ignore his compass and follow Lucy's. But was it fair of her to accept such a sacrifice from Kareem?

What if this skull investigation was not over in a couple of months but was the beginning of something much bigger, forcing her to make decisions she was not yet ready to make. Maybe forcing her to decide between a life with Kareem and that which she felt was her calling. But what if she must? Had Bran faced such decisions in his life? Sure, he must have. Bran was certainly not immune to romance or love, that much she knew from the women which had been around Bran over the last ten years or so. But had he ever fallen so deeply in love with someone as she felt she had with Kareem? But how could a man even understand how she felt? If Hana were not Kareem's mother, she certainly could talk to her about all these things. Was there anyone else aside from Hana she could confide in? Maybe she could talk to Juliet, the council chairman's wife, even though her relationship with Juliet was not as close as the one she had with Hana.

She had known Juliet for a long time and genuinely liked her, a feeling she knew Juliet reciprocated. Maybe I should talk to her, Lucy thought, as she finally fell asleep.

26

The morning of the next day Lucy, Manu and Ives were told that they had to pack and be ready by noon to be escorted to a secure city facility. There they would be introduced to staff of the Crowden Institute which was located outside the city. After being briefed on what would expect them at this institute, they could ask questions and by late afternoon they would have to make the decision if they wanted to continue with their investigation of the skull or not. Those choosing to continue their investigation would stay overnight at the city facility and then in the early morning leave for the Crowden Institute. Whoever chose not to continue working on investigating the skull would be escorted back to the dormitory the same evening. So that was it, thought Lucy. It took her, Manu and Ives less than an hour to get ready. Then they met at Lucy's quarters to wait there together until noon, when their transport to the security facility was scheduled to arrive.

»My stomach feels just like it did before my final exams two years ago,« said Ives, his facial expression visibly illustrating how he felt.

»Yes, there is this feeling of excitement and at the same time there is all this uncertainty one feels when a major change occurs in one's life,« Manu agreed.

Manu, Lucy thought, had quite likely more experience with such life-changing events than either she or Ives had. She shared the uneasiness, and the excitement Manu and Ives articulated.

»Hopefully, what we learn this afternoon will remove much of the uncertainty and only leave us with the excitement of it,« she offered with a reassuring smile.

With such conversations they kept their unease at bay until, after a few hours, it was time to leave for the secure city facility. Escorted by some of the security soldiers whom they had come to know so well over the past five weeks, it took them less than thirty minutes to arrive at the secure city facility located right next to the transport hub

from which they would leave tomorrow morning to head for the Crowden Institute. After entering the facility, they were brought to a large meeting room where a few people were already waiting. Among them was Bran who was immersed in a conversation with a tall woman whom Lucy could not remember to have ever seen around Bran before. When Bran saw them entering, he and this woman walked over to them.

»Carleen,« Bran said to the woman, »these are the three scientists I told you about, Lucy Kassius, Manu Orontes and Ives Dubois.« After which he continued, »Lucy, Manu, Ives, this is Carleen Nuratu, president of the Crowden Institute.«

Lucy could not believe she was standing in front of Carleen Nuratu, and neither could Manu or Ives. This woman was a legend, their own institute was named after her distant ancestor, Igor Nuratu, who had been a no less formidable scientist than his great grand-daughter Carleen Nuratu. Now they were shaking hands with one of the modern science pioneers who had revolutionized genomics and its application in technology and other sciences such as archeology. Much of the unease Lucy, Manu and Ives had felt all morning was already falling away. When Ms. Nuratu asked them if they would like to join her for lunch, they were only too happy to accept.

It was Carleen Nuratu who broke the ice during their lunch conversation. While becoming an eminent scientist, Carleen Nuratu had always remained the warm and open person the mission chief had known since his childhood days. The Nuratu and the Taliesin families had been close friends as far back as the mission chief could remember. They had known each other since the time Han and Nala Taliesin had adopted him. Just as the mission chief's life choices had brought with them a certain degree of solitude so had Carleen Nuratu's career decisions. About a decade before Hakan Kassius vanished forever she had accepted the offer to become the director and principal scientist of a newly founded genomics institute which was to become part of a much enlarged and reconstructed Crowden Institute. At the time she was still a young scientist but with accomplishments which rivaled those of her most senior colleagues. She knew then that with this decision she would leave the open science community in exchange for the extraordinary opportunity to build her own institute aligned to her science priorities without any outside interference. The price she had to pay for that was that much of

her research would from then on be classified and could not be shared anymore with scientists who did not have the required security clearance. Mustering these three young scientists sitting across the table, Carleen Nuratu could not help but think back to the time when she was just such a young scientist. She was very much looking forward to working with them, something about which she made no secret. Lucy, Manu and Ives, exchanging glances, just could not believe their good fortune. They would be working with Carleen Nuratu.

»The Crowden Institute,« began Carleen Nuratu her introduction to the secret research facility when they were back in the meeting room, »was founded almost thirty years ago. Over the next hour, I will tell you the story of this institute of which I am currently the president.«

The mission chief was familiar with the history of the Crowden Institute which Carleen Nuratu now shared with ten young scientists, seven of whom already had heard this story before. It was an old trick but a good one, to make the transition for Lucy, Manu and Ives easier by having them believe that they were not the only ones going through it. They did not know that the other seven scientists were already part of the institute staff for a while and their only job today in the meeting room was to make the three new scientists about to join the institute more comfortable. As the mission chief listened to Carleen Nuratu's presentation, it occurred to him how little beyond this well-known history he knew about the institute. It was one of the few places which were even off-limits to himself. Even though only a few kilometers of open ocean separated the institute from the city, it could just as well have been located on a different planet, millions of kilometers away from the city's home planet. Travel between the city and the institute was strictly controlled and there was not a lot of it. Scientists who joined the institute were usually rarely seen in the city again, if ever. Visiting the institute was out of the question for ordinary citizens and difficult at best for even powerful city officials. As Carleen Nuratu had just explained to her audience, the old genomics institute of the city had been newly founded outside the city because the research it was engaged in was becoming too difficult and dangerous to conduct within the confines of the city.

Every citizen knew that some thirty years ago the genomics institute in charge of the

children of the sea program and the scientists working there had to relocate outside the city. Neither the scientists nor the databases containing all the information dating from the very beginning of the children of the sea program were safe anymore. It was the time when the voices of genetic purists demanding the termination of the children of the sea program and the destruction of all its records could not be ignored any longer. Genetic purists had become a security risk for the program and its staff. Even more so after former children of the sea began to join them hoping to discover their biological parents in the program records which, once they had the information they desired, were to be destroyed. To achieve their objective, genetic purists and their followers were not fussy in choosing their means. It was because of the threat these extremists represented that, once the reconstruction of the Crowden Institute had been completed, converting the old Crowden Institute into a much more modern and very much enlarged research facility, the old genomics institute of the city transferred to the Crowden Institute, becoming the modern genomics department of the Crowden Institute. However, to this day, Eireen Sawarov and her followers contested that this was the real reason for relocating the city's genomics institute into the Crowden Institute. Rather, they maintained, this relocation occurred only so that scientists could continue the kind of genomics research which under city law was forbidden.

The mission chief himself sometimes had second thoughts as to why the city's genomics institute had been relocated outside the city but for quite a different and much more mundane reason. Knowing Carleen Nuratu so well, she and the mission chief practically grew up as siblings, he never really believed that a scientist of Carleen Nuratu's caliber and with her ambition would voluntarily join something akin to a scientist's monastic convent just to ensure the safety of the children of the sea program. It was clear to him that since the city's genomic institute had been relocated and newly founded to become part of Crowden Institute, it had become much more than the safekeeper of the children of the sea program. But just what the city's old genomics institute had become he had no idea, and he doubted anyone else could tell him more about that than the little he knew. Well, maybe with the help of the three new scientists he could now learn more, more than the little he had ever learned from Crowden Institute's president

beyond what was public knowledge. During the investigation, the mission chief would remain in the city, but he would frequently have to visit the three scientists at the institute to check on their progress and to see how they themselves were doing; he felt responsible for them.

After Carleen Nuratu's presentation was over and the scientists had finished asking their questions, including a few invited questions coming from the other scientists in the room who certainly knew the answers themselves, Bran and the three scientists left for a small meeting room. There he told them to talk things over among themselves. He would be back in fifteen minutes and then they would have to tell him their decisions if they wanted to continue their research at the institute or not.

»What about the other scientists in the audience,« asked Lucy, »why are we not together?«

»Lucy,« responded Bran, »just as I am responsible for the three of you, someone else is responsible for these other scientists. They are being asked to do the same thing I am asking you to do now. You will see them again once you have made your decisions.«

That makes sense, thought Lucy as Bran left the room.

»Is there still anything left to discuss,« asked Ives, looking first at Manu and then at Lucy.

»Not for me. Can you believe that we are being offered such an opportunity!« was Manu's response.

»And not for me either,« added Lucy, »coming here I had no doubt what I wanted to do and what we learned this afternoon only confirmed for me that I made the right decision.«

»Lucy, Manu - I feel the same way. What an adventure this will be for us!«

Ives had spoken these last words with his voice trembling from excitement. All this morning's uneasiness about such a major change in their lives had given way to excitement and joy. They were ready and when Bran entered the room again, he could read their answers from their brimming faces. Even though, he still needed to formally ask them after which they left the room to return to the larger meeting room where the other scientists had already returned to.

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Once everybody had moved back to their seats and the room had become quiet again in expectation of what would come next, Carleen Nuratu first made eye contact with each of the scientists waiting for her to speak.

»Every time I meet young scientists who are about to make such an important decision as each one of you has just made, I always marvel at what it is that holds such an attraction for all of us. You know, she continued, not a single scientist today chose to return to the city. And I can tell you that I do not remember one single time a scientist offered to join the Crowden Institute ever chose not to take this opportunity. I guess it is not the excellent cuisine of our canteen which attracts scientists like you to join the institute, right?« remarked Carleen Nuratu, waiting for the laughter to subside.

Then she handed the podium over to one of her administrative assistants who briefed the scientists on what would happen over the rest of the day and about the scheduled transport to the Crowden Institute the following morning. First each of the scientists had to sit down one on one with a clerk who presented them with several documents they were asked to sign after reading them carefully. Most documents were like what they also would have to sign if they changed employers but there were other forms less familiar to them. First, they had to consent to an extended background security check which would take several days to complete. Until they had passed this check their movement within the Crowden Institute would remain restricted to certain areas. Second, they had to sign non-disclosure agreements, practically forbidding them to ever discuss anything of their work with third parties outside the institute unless they had been given express permission to do so. Third, they had to acknowledge that they understood that access to information regarding projects they were assigned to would be on a strict need-to-know basis. And lastly, they had to consent to a thorough medical evaluation which, if they failed it, would be grounds to terminate their contract with the institute. Regarding their individual contracts with the institute, they were told that the city, meaning Bran Taliesin, was still negotiating the skull investigation project with Crowden Institute's administrative office. Until the contract between the city and Crowden Institute was in

place they could not sign their individual contracts. In the meantime, they would have to stay in the institute's guest quarters and undergo the usual security screening before being allowed to enter the institute itself.

This administrative process had taken much of the rest of the afternoon to complete after which the scientists were shown their quarters for tonight and told that they had the rest of the day for themselves. Dinner would be served in a couple of hours at the location where they had eaten lunch earlier in the day as would be breakfast at seven o'clock the next morning. Further, at eight-thirty in the morning, they must be ready to board the transport for the institute. Saying good-bye to Lucy, Manu and Ives, Bran told them that he would come in a couple of days to the Crowden Institute himself. After the three scientists had moved into their living quarters they sat together in Lucy's room.

»Wow,« Ives said jokingly, »have we just been conscripted into an army without knowing it?«

Even though Manu and Lucy couldn't help but laugh at Ives's rhetorical question, they had to admit that the research institute they were joining had completely different rules than the institute that had been their professional home for the past few years.

»But seriously, what good is it to make great discoveries if you can never ever share them with other scientists?«

And before Ives or Lucy could respond, Manu answered his own question.

»I really don't like it. Think about it, even after leaving the institute, you can never talk about anything regarding your work, not for the rest of your life.«

This certainly was different from how they believed science was supposed to work, which was by sharing information, publishing results so others could learn about them, contradict or verify them. Science required a community effort to thrive, how could it ever flourish in such a secretive environment. And as those thoughts surfaced in Lucy's mind, she heard herself say aloud what she was thinking.

»You know, I do not recall a single recent publication with Carleen Nuratu either being the author or the co-author.«

»Right,« joined in Ives, »all publications I know from her are pretty old, dating to

the time before she joined the institute.«

»And I,« added Manu, »cannot remember ever to have seen the Crowden Institute listed under author affiliations on any publication.«

They had expected limitations regarding their ability to publish any results from their studies regarding the skull, but not being able to publish anything ever at all was something quite different. Clearly, thought Lucy, they had underestimated what a secret investigation would entail. They had of course expected that conducting research in a secretive facility rather than in their old institute would be somewhat different. They just had not anticipated the level of secrecy with which they were now confronted.

»Well,« she said, »from the looks of it, I don't think we will be able to share or publish any results from the investigation of the skull we are about to undertake. But there is no other way unless we step back and let others do the job.«

»No,« responded Ives, »that is not an option. We will study the skull and then leave the institute. What we will have learned in the process we may not be able to share but it still will be in our heads and give us an important perspective with respect to anything else we will work on in the future.«

Manu had not looked at it from this perspective and neither had Lucy. Ives was right. What the heck, they would have a two-month gap in their careers about which they never would be able to talk to anyone, but they would still be in the know. And that is what mattered. They had to know if the skull truly constituted irrefutable evidence of humans living on land just a few thousand years ago. As the excitement the three scientists experienced this afternoon had given way to a more pensive mood Lucy suggested that they should go and grab something to eat because dinner would be served soon. Incidentally, that could be an opportunity to get to know some of the other scientists who have joined the institute for some other projects today. Since several of these scientists were a little older than they were, maybe it was not the first time they had signed up to work on projects at the Crowden Institute.

When they entered the room where they had eaten lunch earlier today, more than half of the seats had already been taken. This room, seating maybe about fifty to sixty people, obviously served as a kind of canteen for the whole facility and must have been

reserved for them during lunchtime. The counter-top windows along the back wall on the short side of this room which had been closed at noon were now open, revealing what presumably was the kitchen of this canteen. The three scientists got in line to pick up their dinner and then headed towards a table where they had spotted two of the other scientists from this afternoon's meeting who seemed to enjoy their food without much conversation going on.

»May we join you?«

Both looked up from their plates mustering Lucy who had asked the question.

»Sure, this is Sung-Ho, and I am Fjodor,« said one of them pointing towards the other.

»Great, I am Lucy, and these are my friends Manu and Ives.«

After the three scientists had sat down next to Fjodor and Sung-Ho, it did not take too long for Lucy to start her inquiry. Once their conversation had passed the stage of usual pleasantries, where scientists tell each other a little about their backgrounds to be able to judge the others standing in the scientific community, Lucy changed topics.

»Well, it looks like the two of you already have quite a bit more experience than any of us has,« offered Lucy.

»Yup, a few more years than you do but then neither of us has been on an expedition like you just came back from.«

Lucy looked at Fjodor with a visible surprise written over her face. But he, seemingly pleased, was only smiling back at her.

»You should not be surprised Lucy, that the two of us know about your expedition. Rumors of it returning with some surprising results have made the rounds in the last couple of days. I don't think there are many left in the city who have not heard about it yet. And of course, the three of you showing up here today to join the Crowden Institute just confirmed that something hugely significant had occurred on your expedition. Or is there another explanation as to why the three of you are now in this facility, eating dinner with us?«

Lucy could see that Manu and Ives were as surprised as she was by Fjodor's remarks. How could practically everybody in the city know about their expedition? Even more

disturbing, how could so many know that they had made an unusual discovery, to say the least? She knew that Bran and the people he worked with had been careful in ensuring that no information regarding their unusual discovery got out. So how could Fjodor and Sung-Ho now know about it? She thought about the incident in their institute where two days ago someone had ransacked the living quarters of two scientists. Someone must already have become suspicious right after their return that something unusual had been discovered. But who could that be? Could it perhaps be those followers of Eireen Sawarov in Manu's parental group of whom he was so ashamed of?

What was she thinking? Fjodor, watching her facial expression, which ever so slightly seemed to vacillate between curiosity and concern, was not sure at all. He had been tasked by the Crowden Institute security chief to probe these three scientists a little, but he was certain that the orders for that came straight from Carleen Nuratu. The security chief was only a tool, just like they were. The three expedition members had been sworn to secrecy about whatever it was that they had discovered. Would they betray their oath by sharing their secret with him and Song-Ho? This accidental dinner meeting between the three scientists and himself and Song-Ho was a trap, a fact Fjodor regretted. He would have loved to get to know Lucy under different circumstances.

Manu and Ives were waiting for Lucy to respond, she would know best what to reply to Fjodor's contention. And after a few more moments and reassuring eye contact with Manu and Ives she addressed Fjodor.

»Interesting to hear that Fjodor, but I must disappoint you. Whatever it is that people are gossiping about, I do not know and neither do my friends Manu and Ives. However, I can assure you that I will pass on your information to our mission chief the next time I see him as I am certain this will concern him. So, let's not talk about rumors, let's talk about more relevant things. You know, none of us three has ever worked with or for the Crowden Institute, but the two of you may already have done so in the past. If so, can you tell us anything about how it is like to work there? Of course, I am not asking you to share anything you must remain silent about because of the contracts you have signed. I am asking more about the general work experience. How is it to work in such an isolated place? Do you miss the city at all?«

»Of course, we certainly can tell you a little about our work experience at the institute,« responded Fjodor.

And with an inward sigh of relief and a smile surfacing on his face, Fjodor began to tell the three scientists what he could safely share, and so did Song-Ho. Lucy, Manu and Ives had lots of questions, some of which Fjodor and Song-Ho could not answer. But by the time the clean-up crew moved in, and the canteen was to be closed, they had learned quite a bit about what working at the Crowden Institute would be like.

28

After saying his good-byes to the three scientists at the facility from which they would leave the next morning for the Crowden Institute, Bran Taliesin had returned to city hall. There he sat now with Peer Aksun in the council chairman's office. The mission chief had come to see if the council chairman knew more about the Crowden Institute than he did. But he was to be disappointed, the chairman knew only a little more than he did.

»Bran, the difficulty is that the city has no direct oversight over this place. The institute is associated with the city, but it is in no way controlled by it. It has capabilities we do not have, and it provides a secure environment for conducting such investigations as the current one regarding the skull find.«

Bran looked at Peer and could sense his friend's uneasiness regarding the city's relationship with the Crowden Institute. He knew Peer all too well, the chairman was an administrator's administrator, an incorruptible and honest leader, hardworking and capable. He probably loathed nothing more than the lack of accountability; at least - going by Peer's facial expression - that was what it looked like now. As it was, the Crowden Institute, separate from but officially a part of the city, had no accountability to the city, whatsoever.

»But who is it then to whom Carleen Nuratu must answer to?«

»I can only guess because I do not know for certain. As you likely saw, the contract documents regarding the skull investigation only list the Crowden Institute and the city

as contract parties. The Crowden Institute is negotiating for itself and not as an institute which is part of a larger organization.«

»Doesn't that then mean the Crowden Institute is free to conclude any contract whatsoever, with the city or another party, without the interference of a third party from which it would require approval?«

»On the face of it, yes, this is just what it looks like. But I doubt that this is really the case.«

Before Bran could even ask the logical follow-up question, the chairman was already answering it.

»You see Bran, while I have no proof of it, I am certain that the Crowden Institute is just part of a much larger research organization.«

With this brief introduction, which made the mission chief even more curious, the council chairman began to lay out his reason as to why he believed the Crowden Institute was part of such a larger research organization. Like all city chiefs, Peer Aksun would occasionally travel to neighboring cities and even to cities farther away. Most often such trips were motivated by hearing about some new developments in other cities, which stirred the chairman's curiosity about how such developments benefited a city and possibly could benefit his city. And then there were also annual meetings where the city chiefs from across a larger region would come together to exchange what concerned their cities. Over the years, the chairman told Bran, he had learned of several such cities which had a separate research institute outside their city associated with it. In all such cases the situation was the same. None of these research institutes associated with a city were answerable to that city and none of the respective city chiefs had any idea as to whom these research institutes were accountable.

After Peer had finished, both men sat for a while quiet. The first to break the silence was Bran.

»Can you imagine what would happen, what conspiracy theories this could give rise to, if Eireen Sawarov or one of her cohorts ever knew about this? Something like that becoming public would make her look like a clairvoyant and us like idiots or worse, conspirators and villains.«

»Yes, that thought has also come to my mind. As it happens, it was already a long time ago and this is why we are keeping close tabs on everything regarding the Crowden Institute. For now, that has worked. But can anything work forever? Probably not.«

»Peer, we both know that we must find out to whom Carleen Nuratu and any of the other research institutes answer to.«

»Don't think for a moment that I have not tried, tried many times, but to no avail.«

The mission chief could see the disappointment in Peer Aksun's face when he made this admission. If Peer had tried and failed, who else could possibly succeed? Did a city council chairman not have all the best means at hand to find out such things? The more he thought about this the more his initial "yes" turned into a "yes and no". Yes, a city's council chairman had means at his disposal which no one else in a city could command. However, nobody else in a city was as visible as the council chairman because all his actions were subject to the city council's scrutiny. Thinking about it a bit more, Bran asked himself if there was anything a city chief could do in this regard without attracting undue attention? Likely not, concluded Bran for himself.

»You know Peer, you have much power. You can do things no other citizen has the power to do but then, nobody else in the city is under more scrutiny than you are. Hence, I am not surprised that all your attempts to find out to whom Crowden Institute's president reports have failed. You just cannot do what is required in such cases as this would attract undue attention and thereby every such attempt of yours is doomed to fail because it would be squashed before it could really begin.«

Peer looked at Bran, silently nodding. He was right and if he understood where Bran was headed with this, he would propose next that he was in a much better position to achieve what a city council chairman could not. But before Bran could say so Peer had already acknowledged that as mission chief, with all the contacts he had outside the city, Bran had a much better chance of succeeding where he had failed. What the council chairman did not know was that Bran's contacts reached much further than he assumed. The council chairman had thought only about the contact network any mission

chief would have to develop to be successful, and Bran certainly was a mission chief most successful. However, Bran's contact network which he had built before he became the city's mission chief, over the many years he had been away from the city, was likely to be much more helpful in finding out to which organization research institutes like the Crowden Institute belonged to. Pointing this out to his friend, Peer Aksun acknowledged that he had not thought about that. But that was an even better argument as to why Bran could succeed where he could not. They agreed that Bran's best working hypothesis was to assume these research institutes all belonged to one organization.

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When Eireen Sawarov met with her closest associates the morning after the city council meeting, her frustration about that meeting was still palpable. Her failed effort to get approval for an oversight body for the skull investigation separate from the city council itself was a defeat. No doubt about it, she had to admit that. Last evening, she had informed today's meeting participants about the council meeting outcome and asked them to come prepared for this morning's meeting with proposals on what to do next. Without the influence or even the control, participation in such an oversight body for the skull investigation could possibly have given them, it would be difficult to keep tabs on the skull investigation, not even to speak about influencing it. As usual, their meeting took place in the district council meeting room of Eireen Sawarov's home district. There, they not just controlled the district council but also the district council facilities. This way, they could ensure that whatever they discussed could not be listened to by third parties. Once everyone had taken their seat, Eireen Sawarov gave them a more detailed report on the previous day's city council meeting. Everything the council woman now shared with her closest associates constituted a breach of the oath she had sworn less than twenty-four hours ago. But that seemingly did not bother her. She knew that there would be no consequences – no plaintiff, no judge. And even if someone should accuse her of breaking her oath, how could anyone ever prove it? Those in charge of city administration were lying to her, they betrayed her just as much as she betrayed

them. After Eireen Sawarov had finished her report, she answered the few questions her associates still had and then she asked them to share their thoughts on the situation and what their proposal was for how to proceed.

Those sitting around the table with her were her closest associates and some of them also her rivals. For as long as their movement had been focused on taking control of one city district there was no one who would challenge Eireen Sawarov's leadership role. However, once they had turned their attention towards increasing their influence in other city districts, this began to change. The problem was that political parties were banned in oceanic cities. With that, Eireen Sawarov could only ever be the representative of the interests of her district but not of any other district. Hence, each district had to have its own organization and its own leader who on the face of it had to be perceived as Eireen Sawarov's equal and must not be seen in any way depending on her or being influenced by her. Even though it was her who gave the orders and the movement's leaders in other districts who followed them. Naturally, this token independence on display for the public began at some point to manifest itself in some of their leaders in other districts trying to assert a measure of real independence, thereby challenging Eireen Sawarov's leadership role. To them, she was at best first among equals but not their uncontested leader. The council woman was aware of that, and she mostly let it go when one in their leadership team representing another district occasionally became too assertive. After all, their independent behavior helped diffuse accusations that they had formed a political party of which she was the presumptive leader. Hence, leaders from other districts publicly displaying their independence within certain bounds served a useful function, but it sure had its limits. Like in today's meeting. Anyone around the table seeking to use the outcome of the city council meeting to weaken Eireen Sawarov's leadership position would have to be swiftly dealt with. Of that she would make certain. All of those sitting around the table knew this just as well but the council woman was certain that some might still try to benefit from what they would call her failure.

From her own district Eireen Sawarov and four of her confidants were present. The remaining twelve participants represented the six other districts where they had already managed to build a strong base, each of those districts being represented by its local leader

and that leader's first lieutenant. The council woman had little concern that there would be much criticism from four of the other districts represented here. But of the other two districts she considered the leader of one to be likely to use the occasion to steepen her profile and was certain that the other one would not pass up the opportunity presented to him to do likewise. When the council woman gave them the floor to make their proposals, sure enough, four of them just did that. But then one of the representatives of the two districts she was concerned about, instead of making proposals, began with accusations. Taras Daley represented a district whose population significantly exceeded that of Eireen Sawarov's district, and he was not happy.

»Ms. Sawarov, two days ago you convinced us of a path of action which you must have known at the time that it could not succeed.«

»Mr. Daley, I was not aware that you could be so easily convinced of something that in hindsight you now say had no chance of success? Did you not think things through when we jointly decided to take the course of action that brought us to this point? Or did you not think about it back then at all when you supported the decision we took two days ago?«

Eireen Sawarov's response to Taras Daley's challenge had come swiftly, her sharp voice snapping in the direction of the district representative whom she seemingly also thought to pierce with her eyes as if such a thing would have been possible. But Taras Daley seemed not to be irritated the least by what came from the council woman.

»No Ms. Sawarov, I did neither of those things. Rather, I believe you withheld material information from us that day which if it had been presented there and then would have resulted in us making a different decision.«

»Oh, is that right Mr. Daley? Can you then please tell us what this material information was which I purportedly withheld? Since you know it was missing you must be able to tell us what it was that was missing, correct?«

To those sitting around the table observing this exchange carefully it now began to look like as if Taras Daley and the city council woman, respectively, were slowly turning into the proverbial rabbit paralyzed by fear and the snake which was about to devour the poor critter. But Taras Daley somehow refused to acquiesce in his role. Even though,

like all children in oceanic societies, he must have listened to this land-based children story many times.

»Ms. Sawarov, you know exactly what I was referring to. As a member of the city council, you must have had a good idea as to what support you could expect. You must have known that the support you could garner would never be sufficient to get an oversight body separate from the city council itself approved. Convinced by you, we asked the city council for something which you already must have suspected we could not get. By doing that we have thrown away other options which may have had a better chance of success.«

»Do you want to tell us Mr. Daley that if you were our representative on the city council, our leader, you would with the hindsight you have now elaborated on, charted a different course of action? What would that course of action have been? What course of action would you have suggested to us two days ago? Please tell us.«

The council woman had spoken the last sentences in a softer tone. She knew that Taras Daley had no satisfactory answer to her question and so it was. When his response finally came it was a retreat. He did not mean to challenge her leadership; he was just deeply dissatisfied with the current situation and wished the council meeting had not completely excluded them from the investigation of the skull. Looking over to the other district leader who may have voiced similar concerns, Eireen Sawarov quickly judged from that representative's facial expression, if it had existed before, this woman's appetite for a confrontation had disappeared. Her instincts told her that it was time to become conciliatory and accept district representative Taras Daley's defeat without humiliating him further.

»Mr. Daley, we all wished the council meeting outcome would have been different, and I believe we all can understand your frustration with the current situation. But now we must look forward and we must find a way to gain access to the ongoing investigation one way or another. Can we agree on that?«

Taras Daley certainly could and so could everyone else around the table but first they would listen to what Kimal Abuno, Eireen Sawarov's trusted security chief, had prepared for this meeting. As he laid it out for them, there was zero chance that they

would be able to get one of theirs into the Crowden Institute. There was just one way into the institute and as he put it, not even the tiniest of insects would be able to make it in or out of the facility without city or institute security noticing it. At the debarkation port there was not just one security check but two. First one had to pass city security to get into the departure port and before boarding the transport one had to pass through institute security. Those traveling to the institute had to pass two full body scans, the first one before boarding the transport and the second one after leaving the transport at the institute's docking port. Only then could anyone enter the institute itself. That left them only two options to get access to the investigation, by recruiting someone who already worked at the institute and by seeking access to the information exchange which somehow must occur between the city and the Crowden Institute.

After debating the options just presented by Kimal Abuno, all present agreed that the next steps must be to gather better information as without it, they could never hope to successfully execute schemes along the lines Kimal Abuno had just outlined. To this end, the security chiefs of each district, the first lieutenants who had accompanied their district representatives to this meeting, would gather information in their districts and pass it on to Kimal Abuno. They then charged Eireen Sawarov's security chief to present them with an executable plan within a week. With the meeting adjourned, it occurred to Eireen Sawarov that it had gone better than she had expected, and her fake smile ever so briefly gave way to a genuine smile.

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Sitting relaxed in the recliner chair of her office with eyes closed, Carleen Nuratu thought about the events of the day. She had looked forward to seeing Bran again. Among the things which the isolation of the institute from the city brought along with it, not being able to see the few friends she ever had, most of all her childhood friend Bran, this had been difficult. But seeing Bran today had been eclipsed by her meeting Lucy Kassius, Hakan's daughter. Only when being introduced to the three scientists by Bran had she learned that Lucy was one of them. Hakan, Hakan, she thought, what

would you have said to this? Of course, she had known that Hakan had a daughter, had seen her a few times when she was still a toddler. Before she had joined the Crowden Institute, she used to see Hakan frequently, but afterwards such meetings became rare. Maybe one or two times each year but sometimes a year passed without them seeing each other at all. Usually, they would meet in Hakan's office but occasionally also at Hakan's family home where his wife Helen would join them after they were done with talking business. However, after Lucy was born, Helen and her daughter would usually be away, except for a couple of times when Lucy was still a toddler. It was as if Hakan did not really want her to get to know Lucy and vice versa. Hakan, wherever you may be now, Carleen Nuratu thought as she opened her eyes, I know this is not what you wanted but rest assured, I will do whatever I can to protect your Lucy.

It was already late when her assistant entered and told the president of the Crowden Institute what she had been waiting for.

»Everything is well Madam President. The three scientists approached Fjodor Rees and Song-Ho Lee during dinner as we expected them to do. All three of them passed the loyalty test without fail.«

»Thank you, Eno. I assume everything has been prepared to receive them in our guesthouse?«

»Yes, Madam President. They will be able to enjoy all the amenities of the facility but will have no access to any communication device or be able to otherwise contact anyone working in the institute. Security and health checks should be completed in about four days after which we will know if the three scientists can be admitted to the institute.«

»Very well Eno, is there anything else I need to know before I retire to my quarters?«

»Just one thing Madam President. Central has scheduled a call with you for tomorrow morning at the usual time.«

»Duly noted, thank you Eno.«

Carleen Nuratu left her office walking behind her assistant until she had reached her quarters where they wished each other a good night. After a quick bioscan confirmed that

it was Carleen Nuratu who desired to enter, the door to her quarters opened and then closed automatically after she had walked in. Considering her position at the institute, her appartement was small but it was comfortable; she always had preferred this to living in a large and luxurious place. She took a shower and went to bed, but sleep kept evading her. Central must be nervous, she thought, asking for another call only two days after they had spoken last. Usually, calls with Central occur once a month, she reflected, sometimes even only every other month as practically everything that needed to be taken care of could be done so by means of electronic communication. Two calls in the span of two days, she could not remember when that happened last. But of course, they must be nervous. Since Hakan's mysterious disappearance, this skull find was probably the most serious incident. But serious for whom, she wondered.

As it were, Carleen Nuratu always had her doubts about this organization, to which those who knew about its existence referred to as Central. Would she ever have accepted the invitation to become a founding member of the Crowden Institute if she had known about it? She had asked herself this question often. But the answer was always the same - probably not. But once she had accepted the position in the newly founded institute it was too late. Once anyone knew about Central, they could not go back to their old lives in the city, they had no other choice but to live in this enormous structure, which admittedly was a small city itself, and work there for Central for the rest of their lives. However, given what this place could offer to scientists, few ever had serious regrets about joining the institute. But occasionally that did happen and if anyone really insisted, they could go back to the city but never ever could talk about their work at the institute or for that matter make use of what they had learned at the institute. That made it next to impossible for most such returning scientists to work for a research organization in one of the cities ever again. Unless of course, they had left the Crowden Institute while still being early in their career. Just like an accomplished musician forbidden to use whatever she or he had learned over a lifetime would at best then be able to perform at a beginner's level, so it also would have been with accomplished scientists seeking to leave the Crowden Institute. They would have to practice science at levels they had long left behind. This is why it almost never happened that senior scientists left the Crowden

Institute. But even though, some younger scientists sometimes did leave.

Being president of the Crowden Institute had made Carleen Nuratu a lonely woman. There was nobody she could confide in; nobody she could share her concerns with regarding the role of Central. Most of the institute's employees did not even know about the existence of something like Central. For the simple reason that they had no need to know about it. As far as these employees were concerned, and they constituted the overwhelming majority of the institute's staff, the Crowden Institute was a research institute of the city. It just happened to be located outside the city because their institute was the guardian of the children of the sea program. Only the handful of employees directly reporting to the institute's president knew about the existence of Central. If, as sometimes happened, representatives of Central showed up they always came under the guise of visiting scientists from another city's research institute. She did not know how any of her direct reports, including her assistant Eno, whom she believed to know quite well, handled the burden of such secrets. Maybe it helped that her direct reports knew only a fraction of what she had learned about Central and its role in the history of oceanic cities. Unlike her direct reports, she had learned things about Central which not even Central knew that she knew. Had Central known what she knew now for more than a decade, she may just have vanished as mysteriously as Hakan Kassius did some thirteen years ago. And with Hakan's image surfacing in her mind she finally fell asleep.

Revelations

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The four of them sat in the small restaurant of the Crowden Institute guesthouse around a small table which barely provided enough space to hold their food trays. Calling it a restaurant was clearly an exaggeration, but it surely sounded more glamorous than calling it a canteen, which was the function this room served. The look of the place made it plain clear that it was only used occasionally. The Crowden Institute had few visitors coming without the security clearance which was required to enter the institute itself and to enjoy a meal in one of the eating places inside the institute, of which there were many. As long as the three scientists had not passed the security clearance, they remained confined to the guesthouse and could only use its canteen.

Bran listened carefully to what Lucy, Manu and Ives had told him about the additional interviews they had gone through over the past two days while Crowden Institute security conducted extensive individual background security checks on each of them. He was not concerned about Ives getting his security clearance as there just was nothing in this chap's past or present which could have been an obstacle to obtaining one. However, he was concerned about Manu and Lucy, but for different reasons.

From what Manu had told them, institute security clearly had focused on the few followers of Eireen Sawarov who were members of his parental group. The mission chief had expected that this could become an issue. When coordinating security measures for the three scientists a few days ago with Han Nakamoto, he also had asked the city's chief of security to have a background security check run on the three scientists. He had already known about these followers of Eireen Sawarov being part of Manu's parental group because Manu had offered this information during the interviews conducted during the screening process of the scientists being evaluated for possibly joining the expedition's research team. At the time, Manu had been worried that because of this association of four people in his parental group with Eireen Sawarov he would not be able to join

the expedition. But he was wrong. A quick background check on these folks in Manu's parental group revealed nothing of great concern and with the expedition being thousands of kilometers away from the city there was just no harm they possibly could have caused which could have impeded the expedition. But the situation was different now and tabs had to be kept on the movement and actions of these people in Manu's parental group. Bran could see that Manu was visibly worried that he would be sent back to the city. It looked like every time Crowden Institute security learned some more about this part of Manu's parental group they scheduled more interviews with him, every time asking more probing questions regarding his parental group.

»I have told them that I broke off contact with these people shortly after I became an adult and had decided to become a scientist. But they continue to ask questions about them, questions I cannot really answer because I have not spoken to these people for years!«

They all sensed the distress in Manu's voice. Lucy tried to comfort him by pointing out that institute security was only doing their job and that they would come to the same conclusion to which Bran had come when selecting the research team members of the expedition.

»Look Manu, Lucy is right. All of this is stressful, but it will be over in a couple of days, and nothing will come of it. You will be part of the team.«

As Bran spoke those words, he knew all too well that it would require some convincing for the institute to grant Manu the security clearance he needed to be able to work in the institute. He knew that there were a few levers he could pull and hoped that this would do the trick; but he was not overconfident. But that was his to worry about and Manu needed not to know about any of it. What mattered was that Manu would continue to work his way through the remaining interviews regardless of how annoying they must be for him. And of course, all three of them had to pass their medical exams but that was probably a non-issue. Unless any of them had brought along some new kind of virus from the expedition they should pass their medical exams at the Crowden Institute. Just like they had passed the city's medical exams without any issue before joining the expedition.

»Now,« began Bran, »I know, all of which you went through the past days is new to you and not all of it is pleasant. But remember, this will soon be over and the only thing that matters is that you continue to work with the security and medical teams of the institute such that everything runs its course smoothly. They are only doing their jobs. If there should be road bumps along the way, don't do anything rash, just inform me of it and then leave it to me. I will take care of any such things. Understood?«

All three nodded, Manu visibly with some relief. They understood.

»Good. For now, I believe we have covered everything we needed to discuss... «

»Do you think it will be over in a couple of days?« interrupted Ives before Bran could complete his sentence. »This place gets boring. There is nothing to do but wait to be called for more interviews or examinations.«

»Ives,« responded Bran with a smile, »there are three of you. None of you should be bored as you have each others company to pass the time. Play some games, enjoy the remainder of this security quarantine for as long as it will last. Once your job here begins, there will be little time for other things. So, enjoy your free time while you can. But now, Manu and Ives, if you would please leave us, I need to talk to Lucy about some family stuff.«

Lucy looked surprised. Hearing from Bran that he needed to have a family talk with her was more than unusual. They never talked about family. They were friends and they talked about everything like friends did. Although she had to admit, Bran sometimes had a fatherly touch, something she loved about him. But that they both acknowledged without ever talking about it. So, what was it that required a family talk? Bran could see the question on Lucy's face as she looked at him with a teasing smile, conveying her message without saying a word. Well, finally, here we are, he said to himself, wondering what Lucy was thinking now as Manu and Ives left the canteen.

Bran's concern regarding Lucy was of quite a different nature. Being the daughter of Hakan Kassius, she would most certainly pass the institute's security clearance process with flying colors. But herein also lay the problem - she was the daughter of Hakan Kassius. With Lucy it was just the other way around than with Manu. Manu had to be concerned that the institute would not allow him to work here. With Lucy the danger

was not that the institute would refuse her the opportunity to work here, rather the question was whether Lucy would still choose to do so once she knew. Would she be willing to continue the investigation of the skull once he had told her what she clearly must know, before invariably, she would learn it from others working long enough in the institute to remember Hakan Kassius? He could not run the risk that she would learn what she must know from others and then possibly quit working at the institute. He had to tell her, and he had to tell her now.

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After Manu and Ives had left the canteen, they sat silent for a while, looking at each other and then looking at the table between them. Bran did not know how to start. He had hoped that it would never come to that, that he never would have to tell her. But now that had become unavoidable. He knew that, for all purposes, it was he himself who had brought about this situation. Had he never taken her on one of those expeditions, specifically not on the last one, it would never have come to that. But while Bran still thought about how to best begin it was Lucy who broke the silence.

»This is not about family; this is about the institute. Am I right?«

»Yes and no. It is about family, and it is about the institute. Lucy, do you know what your father was working on over the last years before he vanished?«

Lucy stared at the table in front of her as she thought about what she knew regarding her father's work. She knew of course what he was working on in his official function as probably everybody knew. Her father had been one of the most prominent scientists, not just with respect to the city but he was highly respected for his work in the broader scientific community of oceanic cities. He began his career as a biologist but unlike so many others, he did not just specialize in one field but became an expert in several of them. His works were not only cited in genomics circles, but archaeologists and anthropologists claimed him as one of their own just as well. As a respected citizen he had also served in official roles, at one time even as a city council member. The only thing she remembered about the last years with her father was that some of his friends

were jokingly accusing him of becoming a philosopher. But if that had anything to do with the things he worked on in his final years she had no idea.

Bran had waited in silence for Lucy to search her memories for what she might still know about her father's work. But when she had done so and looked at him, she was shaking her head. No, she did not really have any idea what it was which her father may have been working on during the last years of his time with them.

»I thought so. Your father always wanted to protect you, and he must have made sure that you had no idea what he was working on.«

»Don't speak in riddles. Why would dad have to protect me from knowing what he was working on. All his work is published. What he did not publish in his lifetime here in the city was published posthumously. What else can there be?«

»I am not sure either Lucy. You know that your father and I have been best friends since we first embarked on our little-boy adventures. But not even with me, his trusted friend, did he share what he had been working on over the last two years he was with us. Clearly, he must have felt that he needed to protect not just you from knowing what it was that he was working on but also me.«

»So why do you then ask me if I know anything about what he may have worked on in the last years before he disappeared?«

»I wanted you to think about it and I wanted you to understand that your father had secrets he did not share with those who were closest to him. And that he must have done so because he knew all too well that what he was working on could be dangerous for anyone knowing about it.«

»Well, consider this object accomplish. Yes, he must have had secrets because otherwise he would not have acted as seemingly, he did. But what has that to do with the Crowden Institute?«

»Everything.«

Lucy was looking at Bran with disbelief but before she could ask another question, Bran had signaled her not to speak. During their conversation Bran had noticed that the two cameras surveying the room were being trimmed on them and he suspected that they were not just being watched but that most certainly they were being overheard.

Bran could not help to smile about the irony of it. Crowden Institute security felt the need to eavesdrop on them even though he could have had this conversation with their president in her office. They did not know what their president already knew and were most likely just following longstanding procedures and these seemingly included invading the privacy of their guests. His eyes told Lucy that it was about time to leave and so they did, heading for Lucy's room. When they entered Lucy's room Bran put a finger on his lips telling Lucy to stay silent while he began to search for cameras or listening devices. He was confident that they would not have cameras in the room, those were just too easy to detect; and he found none. However, there were certainly listening devices hidden somewhere. After having made sure they were not being watched he pulled out a little device of his own which he put on a small table sitting next to one of the walls. There he turned it on and after a little green light became visible, he told Lucy to please take a seat as they could talk now.

»Bran, what kind of device is this?«

»Well, this little device protects our private conversation. Institute security had been watching us and they probably listened to a good part or all our conversation but what I must tell you now is not for their ears. As I said, this is about a family matter.«

»But are such devices even legal?«

»Yes Lucy, here they are but inside the institute it would be illegal. You see, as the city's mission chief, just like any other city officer, I frequently must talk to people in environments which are all but private. And that requires me to carry a device like that. Every city officer does. Crowden Institute security knows all too well that it is illegal to eavesdrop on conversations involving city officials, but they seemingly still do. This premise, their guesthouse is neutral ground where city officers such as me have permission to carry these devices just like we do in the city. However, if I were to enter the Crowden Institute itself then I would have to hand in the device and pick it up again when I leave. But enough of that, lets continue our conversation regarding your father.«

Bran decided to give Lucy a couple of minutes to digest what had just happened and what he had told her. It had to be up to Lucy where this conversation would take them. His role was to help her understand as best he could because he himself was short

of explanations regarding Hakan's time at the Crowden Institute. After a few moments, Lucy broke the silence.

»You said everything regarding dad's work in his last years had to do with this institute. In which way, how?«

»A few months before your father vanished, he began to work at this institute again. He had worked at the Crowden Institute many times before, for months on end, even spent one of his sabbatical years here. But something must have been different when he came here for the last time. But what it was I do not know.«

»Then what do we know about his last time here at the institute? When was that exactly, how long did he stay?«

»You see Lucy, this is where it gets difficult. What we know is that your father just never returned from the institute to the city. The institute always maintained that your father had returned to the city and then vanished. But I am convinced that this was not so. Relations between the city and the institute at the time really soured over this disagreement. Eventually the city gave up even though it had all the evidence showing that before his disappearance your father had been working at the institute for several weeks without ever returning to the city.«

As Lucy had listened to Bran, her eyes began to look at him in a mixture of confusion, disbelief and anger. Then she sat down on her bed, burying her face in her hands. When she lifted her face again to look at Bran who was standing in front of her, he could see tears running down her cheeks.

»Are you telling me that dad may have been murdered in this institute which I am about to join? That this institute is hiding the truth about my dad's disappearance!«

»No, I am not telling you that. But I understand that one could draw such conclusions.«

»Then, what is your conclusion? What do you think happened here more than thirteen years ago?«

»I do not know that. But I do know that people like Carleen Nuratu are not murderers. The conclusion I have come to is that they do not know themselves what really

happened and that for whatever reason they felt the institute could not be implicated by any of that.«

As he spoke, Bran sat down next to Lucy, putting his right arm around her shoulder. For several minutes they said nothing until Lucy stood up to refresh herself. When she returned, she looked at Bran with calm and resolve.

»I guess, we are having this family talk only because I am about to start working here. Otherwise, you probably would never have told me about any of this, correct?«

Bran returned the smile which had begun to surface on Lucy's face again as she spoke. How well she knew him, he thought.

»Yes Lucy, you are right. None of this would have been helpful to you, could have only hurt you. But once it became clear that you would work here, I immediately knew that you must know what I know about those things. I did not want you to learn this from anyone else.«

»Who else knows about this?«

»Well, some of the older scientists at the institute may remember your father's disappearance but I doubt that it is based on more than hearsay. At the time, Carleen Nuratu was the institute's chief science officer but not its president; she only assumed the latter role three years after your father vanished. With the institute operating on a strict need-to-know basis, I am not sure how much she knew about your father's disappearance. But Carleen Nuratu and your father knew each other well, she must have seen you at some time in your early years when she visited your family's home.«

»You then must know her well too, I guess. . . «

»No need not tease me, Lucy. Carleen and I have known each other since I was little. In a way, she is something like a younger sister to me, and I know your father looked at her the same way.«

»And who remembers any of it back in the city?«

»I believe only the council chairman and I know about your father never returning from the institute, everyone else in the city believes that your father just left the city and never returned.«

»You're not finished yet, are you Bran?« asked Lucy wondering that there were not

more people in the city who would know about her dad's disappearance.

»No Lucy. I must ask you one more question.«

Lucy looked at him in expectation of what that question would be, but he knew that this was show. She was just too smart not to know what that question had to be.

»After what you have learned now, will you reconsider your decision to join the institute for working on the skull?«

»No, Bran! And you knew that would be my answer.«

»I did not Lucy, but I hoped very much it would be your answer.«

Bran was relieved. Yes, he very much had hoped that Lucy would stay on the project but there was always the chance she would decide otherwise. Happy that this was sorted out he left for his appointment with the institute's president and her staff. He had not asked Lucy to keep their conversation confidential as that was unnecessary. She would not share it with anyone, about that he was certain.

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It was only a few minutes' walk from Lucy's room in the guesthouse to the small meeting center attached to it. With the security procedures of the Crowden Institute such as they were it was more convenient for Carleen Nuratu and her administrative staff to meet with the city's mission chief outside the institute in the guesthouse meeting facilities. When he entered the room, the institute's representatives were already there as was the city's legal counsel, Ahmad Perez. After a few handshakes and the usual greetings, they turned to business.

»Thank you, Mr. Perez, for sending us your contract proposal. I believe our legal counsel returned it to you with our annotations. How would you like to proceed now?«

»Ms. President, I suggest we work our way through the numerous change requests your team has made. I must say, it is not just the number of change requests but also the kind of requests your team made which will require quite some time to work through. But shall we begin?«

The mission chief nodded in agreement with the city's legal counsel suggestion as did Crowden Institute's president and then he sat back to listen and observe everyone as they worked their way through the change requests the institute staff had made regarding their contract proposal. Ahmad and he had discussed these matters last evening and now it was up to the city's legal counsel to work towards what the two of them had agreed upon. When the mission chief had examined the institute's change requests the previous day he was surprised as to how brazen some of those were. They must have known when they made these requests that they had little chance of success. Why would the city ever give up its ownership of the skull to start with, or why should the institute own any of the results obtained from the skull. They would get user-rights on those results, but the results themselves would be owned by the city, as always had been the case in situations like this one. Maybe they had to put in all those unrealistic change requests for show, like in some kind of ritualistic legal dance where even when one knew the certain outcome one still had to go through the motions, pretending that a different outcome may be possible after all. It would be interesting to know what Carleen Nuratu thought about this dance being performed for her just as well as for him. She surely must have known that none of the demands her institute's legal representative made were realistic. Thinking about it, suddenly it became clear to him that she must consider this whole show of pseudo-negotiations a pure waste of time. And the Carleen Nuratu he knew was certainly not someone who would tolerate such a waste of time if she could help it. Of course, that is it, that must be it, thought the mission chief Bran as he continued to watch Carleen Nuratu. These change requests neither came from her nor did they come from her administrative staff or legal counsel. Someone else must be asking for those change requests to be granted, someone who was not even party to the contract.

Somehow Carleen Nuratu must have sensed what was going on in the mission chief's mind. Her facial expression slightly changed from neutrally observing to a little concerned as she looked away from the mission chief. She had told those stubborn legal advisers from Central that it was a bad idea to ask for these changes, but they had insisted. She could not make them understand that there was a difference if legal professionals haggled about a contract among themselves and a contract negotiation where someone like the

city's mission chief would be present. Which mission chief, they had asked her. And on hearing Bran Taliesin's name they sounded almost amused. Like she had seen it with so many others, they severely underestimated the mission chief. She knew her Bran and she knew that he understood what was happening. Well, it was Central's fault not hers, they would have to deal with the consequences. Thinking about it again, she thought to herself that she probably would have been disappointed if Bran had not caught up with what was going on. She unwittingly had to smile when she saw him sitting there with his face not betraying in any way what he quite likely had just found out; only to be given back a barely noticeable smile when he saw her looking at him. Now they both knew. Crowden Institute's president knew, the city's mission chief had by now concluded that few of the institutes change request came from the institute itself, and he knew that she knew about his discovery.

After two hours they had only worked their way through a few of the change requests the institute had made, all of which were turned down. They took a fifteen-minute break and then continued for another hour at the end of which the city's legal counsel remarked dryly that if they continued at that speed, it would take a full week just to work through the institute's change requests. With all the institute's change requests they were able to work through today having eventually to be withdrawn by the institute, Mr. Perez asked the institute's legal adviser to seriously consider having them work through the remainder of the change requests. Would it not be much better if they reconsidered and focused on the few change requests which might have a chance of being seriously considered. That would save all of them a lot of time. Bran could tell that Ahmad was not too happy but when he asked him about it after the meeting was adjourned, he only smiled and whispered something to the extent that this was to be expected, the institute was always this unreasonable at the beginning of negotiations but in the end they would invariably concede.

Just as the mission chief was about to leave the meeting room, he felt a soft tap on his shoulder and turning around he found Carleen Nuratu standing in front of him.

»Do you have a few more minutes, Bran? There are a few things I would like to talk to you about; in private.«

»Sure, Carleen, for you I will always have a few minutes.«

There again it was, Bran's irresistible smile. There could be no doubt about it, Carleen Nuratu thought, he still must like her quite a bit. After everyone else had left the meeting room and Bran had closed the door they sat down. With a brief wave of her hand, the institute's president then magically made the cameras turn away so the two of them would be outside their field of view.

»I presume this also turned off any listening devices in this room, right?«

»I hope so Bran, but this will certainly give us privacy, one never knows.«

And with that, she put her own little privacy device on the table and turned it on. As Bran did with the device he carried in his pocket.

»Well, Carleen,« now that we have privacy, I can tell you what I could not tell you when a few days ago I saw you for the first time in what must be years. It was so good to see you again, after all these years. You know, you are as beautiful and charming as ever. I never stopped missing the sound of your voice, the look of your eyes... «

»Bran, please, you are also charming as ever, but we cannot and must not talk about this. We have other things to consider.«

»I know Carleen, but I had to try. You must understand that.«

»Sure, I do, and I would have been disappointed if you had not tried.«

The laugh with which Carleen Nuratu accompanied her response would have been completely unfamiliar to any of her staff, but Bran had known it since his early childhood days. That was long ago but some things never change, he thought.

»So, what is it that you would like to talk about Carleen?«

»Well, first, did you talk to Lucy? Does she know what happened?«

»Yes Carleen, I did talk to her earlier today. She does not know any more than I know what happened back then, but she certainly now knows what I know, if it is that what you are asking about.«

»How did she react?«

»You can imagine that at first, she was confused, even angry, but most of all, it upset her emotionally. But she recovered quickly. Of course, she had questions, all of which I answered to my best knowledge, not hiding anything from her.«

»But will she stay on the project?«

»Yes, she will. You know, after all, she is her father's daughter.«

»You are right, I already noticed that about her. What does she know about me, about us?«

»Hm, I told her that just like me, you have known her father since you were a young child. I suggested to her that you were practically our sister.«

»Did she believe you?«

»With respect to her father yes, but I guess she suspects that we may have been more to each other than sister and brother.«

»Smart girl!«

Carleen Nuratu had almost shouted her last reply, accompanied by the signature laugh Bran could not get enough of.

»Well, it is good that she knows all about this. Nevertheless, whatever happened here some thirteen years ago, you must know Bran, that I will do whatever I must to protect her.«

»I know Carleen, and so will I.«

»There is one minor thing she does not know about yet. I told her that only two people knew the truth about her father never returning from this institute, our mutual friend the city council chairman and myself. I told her that I did not know what you knew about her father's disappearance; after all you were not the institute's president back then but its chief science officer. I believe it is best you find your own way of telling her once the two of you get to know each other a little more. If I had told her now, she may well have decided to leave the project and go back to the city.«

»Thank you, Bran. I am glad you left it to me to tell her myself and I will do so at the right time. I believe this is all there is to discuss with respect to Lucy. Let's change the topic. What do you think about this afternoon's contract negotiations.«

»Is this a serious question? You know as well as I do what was happening there.«

»Yes, I do Bran. But we have no choice but to go through these motions.«

»Who makes you do that?«

»You know that I cannot talk about any of it. Please let's leave it at that?«

Bran nodded. There was nothing he could gain here by pressing her further. Carleen had her orders, that much was clear. And he did not want to think about what the consequences would be for her if she ever talked about such things. Maybe she would just vanish like Hakan did some thirteen years ago. He had to find other ways to figure out who those people were who controlled the institute. With the cameras still turned away and their privacy devices still turned on, their good-bye was a little more intimate than it otherwise would have been, after which Carleen Nuratu headed back into her institute and Bran Taliesin boarded the transport back to the city.

34

The next morning the mission chief sat in the council chairman's office to brief him on the current situation. He began by telling him about his conversation with the three scientists, adding that for one of them they might have to apply some outside nudging so he would be cleared by Crowden Institute security.

»What is the matter, Bran? All three scientists had passed the security checks required to get on the expedition they just returned from. Has Crowden Institute security discovered something that we missed?«

»No, not at all. Back then, you see, I made a judgment call regarding one of them. I believe someone should not be punished for an association with people of dubious intentions when they had no choice in that regard?«

»Meaning?«

»Well, four people in Manu Orontes parental group are known followers of Eireen Sawarov. However, shortly after Mr. Orontes received his status as an adult citizen and had chosen for himself the career of a scientist, he never met these people again. So, when he applied for a position on the expedition research team, he had had no contact with the people in his parental group for more than five years. That was good enough for me. Nobody gets to choose their parents and that is as true for one's biological parents as well as those chosen to be in one's parental group. So why punish Mr. Orontes for a formal association which was not of his choice?«

»You are right, Bran. That would not have been fair. So, if the institute needs some outside nudging, as you call it, to look beyond the fact that Mr. Orontes has those people in his parental group, we should certainly help with that. However, one never knows, we should also keep an eye on those four followers of Eireen Sawarov. She might still decide to make use of them if she sees potential there.«

»Han Nakamoto's men are already on it, Peer.«

»Good. What about Lucy? Does she know?«

»Yes, she does. There are now four of us who know that the official story of Hakan's disappearance is a cover-up - you, Carleen, me and now Lucy. But Lucy does not know that Carleen knows, I thought it best she hears that from Carleen herself once the two of them have established a relationship of trust.«

»I would have done the same. The risk of Lucy bolting the project upon hearing that the leader of the institute may have known all this would have been just too high. I am sure Carleen will find the right time to have this conversation with Lucy.«

Over the next half hour, the council chairman updated the mission chief about new developments regarding Eireen Sawarov. The council woman may believe, began Peer Aksun, that meetings in her district's council meeting would remain private and technically she was correct. There was no way that city security could legally eavesdrop on conversations taking place in a district's council meeting room. The security chief of Taras Daley, the movements leader in a city district more populous than Eireen Sawarov's district, was, however, one of their own. Planted in Daley's organization quite some time ago, this man had proven his worth to Taras Daley to the extent that he became his new security chief after a couple of years when city security had arrested his previous security chief for matters unrelated to Taras Daley or his organization. City security could have arrested Daley's previous security chief long ago, but they waited until their man had maneuvered himself into a position where he would be the natural choice of succeeding Daley's arrested security chief of old. Since then, city security sat in Eireen Sawarov's meetings every time her district leaders brought along their security chiefs. After laying out all of this, the council chairman leaned back in his seat and looked at the mission chief with an almost boyish smile.

»I thought I knew you well, Peer,« said Bran returning the smile, »but still, sometimes you really surprise me.«

»Well, Bran, this all was devised and executed by Han Nakamoto and his team. All I did was to give him permission to execute the plan. So, thanks to our security chief's creative thinking we now know for example what was discussed at the meeting Eireen Sawarov had called two days ago with her movement's leaders from six other districts.«

»So, what are their plans?«

»Well, to know that we would not need a spy, would we Bran? Obviously, they want access to the project and its information and if in any way possible, thwart the whole investigation. The important thing is how they will go about putting their plan into action and that we will learn in a meeting that will take place in a few days, a meeting where our man will have a seat at the table.«

»That is good news. However, we should never underestimate Eireen Sawarov. I am almost certain that she would never just bet on one single plan to succeed. And I would not be surprised if she was working in parallel on a second plan, a plan quite different from the one she will share with her movement's other leaders.«

»Certainly, there is this possibility that all of it may be a ruse. She likely will not trust any of the other movement's leaders outside her district. Our security chief also thinks so and his team is monitoring the activity of the council woman and her closest associates.«

»Peer, the good thing is that we know much about Eireen Sawarov and her followers. With respect to them, we know with whom we are dealing with. However, we still know nothing about this organization which hides behind the Crowden Institute. It could all be benign, but who is to say if this organization could not pose an even greater threat to the successful execution of the skull investigation than Eireen Sawarov and her followers could ever become?«

»Please elaborate. Have you found out anything about this organization?«

No, the mission chief began to explain, he had not found out anything new about this organization, which they had presumed the other day that it must exist. Except

that it did exist. The council chairman looked at him with surprise, how could he be certain he had proof such an organization did exist. However, then the mission chief told him about the contract negotiations, where these numerous and unreasonable change requests the institute had made to their contract proposal had aroused his curiosity. Crowden Institute must have known that almost all these change requests would never make it into the final contract, at least not a contract the city would ever sign. But still, its negotiators insisted on going through the motion of discussing them. Then, in a later private conversation Crowden Institute's president admitted as much. These change requests came from a third party but nothing Carleen Nuratu could talk about. And as the city's legal counsel had told him, negotiations with the institute always proceeded like that. The institute would make all these demands but, in the end, invariably almost none of their change requests ever made it into a final contract. Peer Aksun listened with great interest and nodding his head he agreed with the mission chief's conclusion.

»You are right, Bran. This constitutes circumstantial evidence that such an organization hiding behind the institute exists. But honestly, I did not expect that we would get this confirmation that easily. Carleen must have known that once someone else, but a legal counsel sat at the negotiation table, someone like you, such a negotiation strategy would raise suspicions.«

»I am sure she had this concern. Her position must be quite a difficult one. Whoever gives Carleen her orders must have insisted.«

The chairman looked at the clock on the wall realizing it was almost time to leave for his next meeting. But before that he had to brief the mission chief on something else he had learned.

»Bran, before we part there is one last thing you need to know. As we agreed last time, I had all the information about the institute retrieved from the archives. Along with all the documents I also received the list of those who last accessed any of this information. Now, can you guess who was the last person to peruse through the institute's blueprints?«

The mission chief had no answer, not even a good guess. His dealings with the institute had been limited so far and he certainly had not perused through any of the

archived documents himself, so he could not possibly know who did so the last time. Peer Aksun held him in suspense for a few more seconds before he leaned forward in his chair and almost whispered:

»Hakan Kassius, some thirteen plus years ago.«

35

Sitting in his office, Bran clicked through the documents which the council chairman's office had just sent to him. What he was looking for were the specific documents in this archive container which Hakan had accessed. The archive container held all documents relating to the Crowden Institute and it took a while for Bran to filter out the few which Hakan had accessed. To his surprise, Hakan seemed to be exclusively interested in the institute's building structure, specifically in its utility infrastructure. To understand any of it, Bran knew he would have to work through some of the other documents. Hakan may have known things about the institute building he did not need to look up because they were familiar to him. As it were, as one of the city's eminent scientists at the time, Hakan had been deeply involved in the planning phase of the institute and had often consulted the project as old Crowden Institute was under reconstruction. After locating the documents containing the project plans submitted to the city for approval, Bran realized that not all the Crowden Institute reconstruction can have been new construction. Evidently, there existed another much smaller structure, the old Crowden Institute, right where the new Crowden Institute was located now. The question was simply how much of this older structure had remained, becoming part of the new Crowden Institute, and how much of it had been removed. Bran marked several documents, transferred them to his personal device and left for his flat. On arriving at his flat he first ate a quick meal, poured himself a drink and then settled into his reading chair. It would be a long evening.

After spending a couple of hours reading documents and consulting some of the city's historical records about that time, he had found out a few things. First, this smaller structure which had housed the predecessor of the current Crowden Institute

must have been quite old. Bran was able to trace the building dates of even the oldest city atoms. Some of them dated thousands of years ago. Of course, none of them were as old because typically city atoms, after several hundred years of use, contained probably none of their original building materials anymore. An oceanic city, unnoticeable on a human time scale, probably renewed itself in a thousand-year cycle. With few citizens ever seeing the city from the outside, all people ever noticed were usually changes on the inside. Examples were city atoms providing more internal space, increasingly more comfortable accommodation, or optical illusions becoming ever more perfect, making space seem even more abundant. Had people been shown a model of their city, of what it looked like a thousand or even five hundred years ago, they would not have recognized it as their own city. Bran found it more than peculiar that for all but this single structure outside the city which had housed the old Crowden Institute before its modern and much larger successor took its place, he could find the original construction dates. But being an engineer, the blueprints of this structure, even without an original building date, gave him an idea as to how old this structure must be because he knew when structures of this kind were once built. Even so, he found it hard to believe that just outside their city sat a structure several thousand-years old about which so little information could be found in the city's archives.

From the size of it, a structure like that could not have housed many more than a thousand people. A fraction of today's Crowden Institute's population. Looking into the city's utility records, he concluded that the institute must now be home to several thousand people, maybe up to eight-thousand. Going by the institute's sewage recycling figures, while not a perfect measure, this was a reasonable population estimate to within ten percent of the actual number. They were lucky to have those utility numbers because Crowden Institute had its own utility level, not connected to the utility level of the city. For some reason, however, Crowden Institute had chosen not to service its own utilities but had contracted this largely out to the city, though not exclusively. That is why he could now look up these numbers in the first place. But more importantly, Bran could not imagine that the institute would allow city utility engineers to access their utility facilities through the institute level. That just would not have been practical

given the institute's security requirements, which made it even cumbersome for someone like himself to meet with anyone inside the institute. As Bran considered all of this, he concluded that there was only one reasonable explanation. An external access port to the institute's utility facilities must exist, and thereby a second entrance port to the Crowden Institute structure through its utility facility.

He had been looking through documents now for the past four hours and his eyes were tired. He turned off his viewing device, put the dinner left-overs into the recycler which liquefied them and sent them down to the utility sector. It all comes down to the utility level he thought as he wondered about what he had discovered this evening. As he was already half asleep his mind continued to sort through what he had just read when suddenly it became clear to him. The city and the Crowden Institute both could be right. The city had maintained, until a weak city council chairman for reasons unknown caved in, that Hakan had never come back from the institute. However, Crowden Institute continued to insist that Hakan had left the institute and must have vanished in the city. What if Hakan had left the institute through this utility access port of which he now was certain that it must exist? Then they both could be right, that is, if Hakan had left the Crowden Institute through the utility level and never returned to the city but went somewhere else.

Bran was up again and had turned on his device to look once more through the files regarding the institute's utility level which Hakan had accessed. What had interested him in looking these files up? Which of them had been of particular interest to him? After some analysis Bran was almost certain that what had interested Hakan most were the areas around what he must have believed was the utility level access port. But while studying these documents something else occurred to him which he had missed earlier. The exterior and some of the interior walls of the utility level were too massive for a regular utility building. Given the depth at which the structure was in the ocean there was just no need for such massive walls. But what other reason could there be to build out walls to such strength. Of course, why had he not thought about it earlier? This must be some kind of armor protecting the structure, hardening it to the point where ordinary weapons could do only minor damage. If the original structure, some

of which seemed to have been preserved at the institute's utility level, had indeed a military function then it no longer was so strange that there existed no document in the city archive which could speak to the construction date of this structure. There was no record of any kind of military structure being associated with the city. The council chairman had said that each oceanic city had associated with it a research institute like the Crowden Institute, separate from the city. Did that mean that at some point in time all oceanic cities had such military structures associated with them. But why? As far as he could recall, no oceanic city ever possessed a military. Warfare within a city would have meant committing mass suicide and warfare between oceanic cities would have resulted in mutual destruction. This is why their history books told them that oceanic cities never had any kind of armed forces, except for the small number of city security soldiers. Did their history books lie?

Before Bran turned off his device for good to finally get some sleep, he sent a note to Ari over a protected channel which city security maintained for its officers. He needed to talk to him. If there was anyone, he could ask to help shed some more light on the peculiarities of the institute's utility level without attracting unwanted attention, that person was Ari. They had agreed that meeting in person for the time being was to be avoided but communicating via a secure video link would be sufficient.

36

The next day began for Lucy, Manu and Ives with another round of interviews with institute officials. They really had no clue who these people were who sat across the table asking questions that even a dear friend would think twice about asking. Neither did they have an idea as to what the function of any of them really was. The questions some asked were obviously security-related but then there were others who asked questions which seemingly sought to probe their psyche. Quite probably they were psychologists. However, never would any questions probe their science qualifications, at least that seemed to be off limits. But little else was. This morning was not much different, at least for Lucy and Ives. However, it was different for Manu.

»For whatever reason, they stopped probing me about those four people in my parental group,« said Manu as he put his lunch tray on the table where Lucy and Ives were already half-way through with their lunch.

»Really!« came it unison from Lucy and Ives.

»Psst – don't shout! Who knows who is listening.«

Lucy looked around but aside from them there were only two people sitting in the far back of the canteen. But maybe Manu was right, and they were under surveillance everywhere. Why else would Bran have turned on his privacy device in her room the other day?

»Well, did you notice any other change today?«

»No Ives, they just did not ask any more questions about my parental group?«

»I think Bran must have intervened somehow,« offered Lucy, »he said he would do so yesterday, didn't he?«

»Not really, he just said I should work through the interviews and not be bothered by those questions anymore.«

»Right, but he also said something to the extent that everything would work out. Maybe he decided after all he had to do something about them pestering you because of these people in your parental group.«

Lucy was convinced that Bran must have intervened in some way. Unless, that is, the officials in charge of their admission had already decided on Manu's security clearance. If they had decided not to admit him then why would they continue to interview him. She queried Manu about what questions they had asked him today and from what he told them and what she and Ives had already compared between the two of them, they all were asked similar questions. That convinced Lucy that Manu must be on the safe side now, she was certain he would be joining the project just as Ives and herself would be part of it. Sharing these thoughts and her conclusion with Manu and Ives, the three of them left the canteen in good spirits to enjoy their free afternoon; there were no more interviews scheduled for the rest of the day.

They decided to play some games in Lucy's room, heeding Bran's advice from the other day as Ives jokingly remarked. But half-way they were met by an official asking

Lucy to come with her. Lucy followed the lady to the meeting room where Carleen Nuratu was waiting to greet her. The door closed; they were alone. And then, to Lucy's surprise, the institute's president produced a device just like Bran had used it the other day, put it on the table and turned it on.

»I see from the way you look at this device that you have seen something like it before, is that right?«

»Yes, Madam President, I have seen such devices before, but not often.«

Lucy knew what she said was not true because she had seen such a device only once before and that was when Bran had used it the other day. But she considered this to be a harmless lie, because had she admitted that she had seen such a device only the second time she was certain that the institute's president would want to know when and where she had seen it the first time. And that she did not want to tell for sure.

»Ms. Kassius, I am sure you have noticed that security at the institute is paramount, there are almost no spaces in the Crowden Institute which the eyes and ears of the institute's security team cannot penetrate. But sometimes, certain things must be discussed in private and that is what these devices make possible. And I want this conversation between the two of us to be private. Once you have entered the institute, I will be the institute's president for you. But here I am just Carleen Nuratu, a close friend of your father, his childhood friend Carleen. When I first met you a long time ago in your parent's home, you were still a toddler... - may I call you by your first name?«

Lucy nodded. She had been watching Carleen Nuratu's expression changing as she spoke. Her face had somehow become softer, it seemed to Lucy that there was now less of the resolute Madam President and more of the woman Carleen Nuratu.

»Did you also know my mother?«

»Yes, Helen and I were friends. Your father introduced us. Your mother was a wonderful human being and the best musical historian I ever knew.«

»If you knew her so well, why did you not come to attend the rite of passage when she died?«

»Lucy, there are many things I like about this place. From a professional perspective, it has offered me the opportunity of a lifetime. But there is also the other side. I cannot

just leave my position or this place as I wish to. When your mother died, I was far away, thousands of kilometers from here working at a sister institute of ours at a project which did not allow me to leave.«

»I understand. Working in this institute must be like a scientist's wildest dream come true. But then there are all these security measures which we are just being introduced to. Also, this place seems to be a world of its own. Whatever great scientific discoveries have been made here, I have seen none of them published. The name of the institute is nowhere to be found on any publication... «

Lucy decided it was better not to mention that the institutes president had not even a single publication to her name since she was with the institute, that is, for almost thirty years. But to her surprise Carleen Nuratu now admitted just as much.

»You know Lucy, I have not published a single thing outside the Crowden Institute or its sister institutes since I joined the institute as a founding member some thirty years ago. And neither has anyone else working in the institute. But that does not mean that one cannot have a distinguished scientific career here.«

»What do you mean by that, a distinguished scientific career?«

»Well, as I said, we are not the only such institute associated with a city. Practically next to each oceanic city you will find such an institute. We are just as much a science community as the science associations of the city's represent a science community. And if you ask me next if there is an exchange between these communities, I can tell you, yes there is. It just does not happen through scientific journals.«

»I cannot tell you all of it right now, there is just not enough time for that. The reason I wanted to meet you today is that you must know that the door to my office will always be open for you. Once you begin working here you will have many questions. Most of them will be answered by the people you will be working with, your colleagues. But you may have some questions which they cannot answer and with those, you can always come to me.«

»Thank you, Madam President, I do not know what to say... «

»Well, you can stop saying Madam President when we are alone. Please call me Carleen, like your father did. When we are not among ourselves, I will address you as

Ms. Kassius and you will address me as Ms. Nuratu. Agreed?«

»Yes, certainly... - Carleen.«

»Good, and now I must be on my way, people are waiting for me. But not before I give you permission to tell your friends that all of you passed the security screening. The results of your health exams will be in by tomorrow, but I do not expect any surprises there. You can share all that now with your friends. Hopefully, we can conclude the contract negotiations with the city over the next days. Then you and your friends can sign your contracts after which the three of you will relocate from the guesthouse to your living quarters in the institute.«

Wow, thought Lucy, after Carleen Nuratu had left. It looks like I have a new friend. Heading back to her room she could not wait to summon Manu and Ives to tell them the good news.

Part II

Central

1

There was no one who could possibly tell how many compilations of oceanic history existed. Most would have thought there were just too many to count. No wonder, because in the thousands of years of oceanic human civilization the virtual bookshelves of city schools, libraries or universities had been filled with them. However, invariably none of these compilations, regardless of which one favored, never made mention of kingdoms, empires, tyrannies or anything of that sort. All these things could only be found in the history of humankind before the first millennium of what came to be known as the *Period of False Hopes*. More to the point, not only kingdoms, empires or tyrannies were unknown to oceanic civilization history, so were countries over which those could have held dominion. As it was, oceanic cities did not even have names. And why would they have needed names? There certainly was no need for street signs beneath the oceans indicating directions towards a city with a certain name. City names would have been meaningless as anyone ever approaching an oceanic city would see much the same, regardless of which city they approached. There was no skyline which one could recognize from afar and there were certainly no historical monuments or buildings associated with any oceanic city. Oceanic cities had coordinates, and an identifier associated with them consisting of a number and letter combination which would indicate when a given city originally was constructed and whether for example it was a two-layer or a three-layer city. In short, oceanic cities did not have names but serial numbers like any manufactured object and coordinates where this object could be found in the vastness of the oceans.

If there was anything peculiar about oceanic civilization history for those who were required to study it, boring would have been the adjective most would likely have used. Without kings, emperors, tyrants, oligarchs or other powerful individuals who seemed to have shaped history before the *Great Cataclysm*, whose names and deeds along with the corresponding dates students would have been asked to memorize, what else was there

left? Not much. Compendiums of oceanic civilization history were much more to the taste of statisticians than to the liking of people who would have reveled in history in the distant past. But that is an oversimplification and would not do justice to all those numerous hands which had compiled such compendiums of oceanic civilization history. It just so happened that the accomplishments highlighted in such histories were of a different nature than what histories of the past, that is, before the *Great Cataclysm*, used to focus on.

For obvious reasons countries had ceased to exist in oceanic city civilization. This does not mean, however, that there were no large-scale social structures that were larger than an oceanic city itself. For one, there existed loose associations of cities, some including less than a handful of them and others quite a bit more. Some tasks just exceeded the resources a single oceanic city could muster. Running the larger onshore industrial complexes and most of the major inland mining facilities, for example, required them to work together. Not even the largest oceanic city could hope to successfully operate such huge enterprises by itself. Likewise, developing the science and technology which would allow the initially quite primitive underwater cities to become the much more advanced oceanic cities of modern day required them to cooperate from the very beginning. Without the advancements of science and technology oceanic civilization eventually achieved, life in the seas would have remained primitive and most likely, people would have continued to search for ways to live on land again. With the latter being an impossibility, this would of course have resulted in an enormous waste of resources, it would only have prolonged the *Period of False Hopes*. Hence, there had been quite a few historians pointing out that for all the devastation the *Dark Sky Period* brought, it also cut short any hopes people may still have had for returning to a life on land. By necessity then, people had to focus their efforts on making life in the seas acceptable; and this is just what happened.

The coordination and management of such a gigantic undertaking required more than just a loose association of cities. When oceanic cities were still few, all of them were directly represented on the so-called oceanic city board. This body oversaw that the resources of all oceanic cities were used in such a way as to advance marine science and

technology. Eventually, the number of oceanic cities just became too large and decision making became too bureaucratic, inevitably slowing things down. The solution was the designation of several ocean sectors, initially seventeen in number, each of which was home to about an equal number of cities. The representatives of the respective ocean sectors were elected by the assembly of their city councils. Shortly thereafter, when a newly constituted oceanic city board assumed office, construction of separate structures outside of oceanic cities began. The motivation for that was seemingly one of the few catastrophes which ever befell an oceanic city. For unknown reasons and against all odds, a civil war had broken out in an oceanic city whose serial number and coordinates no one remembered anymore. The result of this civic conflict was as expected, within only days the city had been destroyed and its corpse sat at the bottom of the sea. There were no survivors. But there were several lessons the oceanic city board drew from this terrible incident. First, citizens were forbidden to possess any kind of weapon and security forces inside the city would only wear non-lethal weapons which could not pierce the city's external construction walls. Second, to each oceanic city would be added a city atom located outside the city, not physically connected to it and completely self-sufficient. These city atoms were to be constructed to withstand any direct assault with weapons known at the time and would house a security detachment. The latter was armed with stun guns and other non-lethal weapons which could incapacitate large crowds for some time if needed.

These separate structures outside oceanic cities were designed to be lifeboats and security measures at the same time. For thousands of years these were the functions they visibly served. There never ever was another incident such as that which had led the oceanic city board to take those two measures which were widely publicized and known to every citizen in any oceanic city. That there were no further such incidents leading to the complete and utter destruction of an oceanic city may however have been less the result of those two measures and much more likely due to a third measure. This third measure was implemented without anyone knowing about it except the few select members of a subcommittee of the oceanic city board. This subcommittee was tasked to find a quite different solution to the problem, a solution which eventually led to the establishment of

the children of the sea program. While compilations of oceanic civilization history made notable mention of the first two measures and their obvious successes they referred to the establishment of the children of the sea program in quite a different context. According to them, the children of the sea program was only part of a wider effort to ensure the genetic health of human populations forced to live in the seas. With respect to the spread of diseases the inherent constraints of oceanic cities worked in two ways. If there was for example a virus outbreak in a city it never could spread beyond it, the city itself became a perfect quarantine station; however, these same constraints made it almost impossible for anyone in an oceanic city to escape a spreading virus. The only viable solution seemed to be to prevent viruses from spreading at all and if they did spread, oceanic city populations had to be genetically prepared to fight them. Fighting potential diseases spreading in contained environments was the original motivation for oceanic cities to introduce a genetic screening program before anyone would be allowed to have children. The next step was then to augment the human genome with the objective of evolving a human genome core which would provide for a much more robust human immune system, significantly more capable of fighting diseases than it had ever been before. At that time birth rates were low, and cities struggled to maintain their populations at the level required for their cities to function. This lucky coincidence made the introduction of the children of the sea program look like a necessity. And indeed, it was a necessity for that reason, but it also was a necessity for quite another reason which history books remained silent about.

The third measure to address potential conflicts within and possibly among oceanic cities, which a subcommittee of the oceanic city board decided on and began to execute in complete secrecy, was to attack the problem of human conflict at its core. This committee concluded that over thousands of years of human history, physical measures to prevent or limit human conflict only ever worked for a certain time. There were just no physical means which could safely tame human nature for good. The subcommittee members were humble enough to realize that they could not succeed where so many generations before them had failed. Hence, a completely different approach had to be chosen. If one could not tame human nature to avoid human conflicts, then one must change human

nature, so such conflicts never arise in the first place. Changing the biology underlying human nature, ever so subtly, to reduce the potential for human conflicts would take a long time. Therefore, they began with simpler measures. In a sense, the problem of large human populations living in a rather confined space was not new. Space travel and space colonization had faced this problem before and more seriously because living space in space stations, spaceships or space colonies was even more limited than the living space in a typical oceanic city. Hence, it was only natural to employ the same tools which had been used in space travel to address the problem of humans having to share a small, confined space. Because the individual space afforded to any citizen in an oceanic city was quite a bit more than in space travel, much lower doses of psychotropic drugs needed to be used in oceanic cities. Of course, that any of this happened is not something one would have found in the history books of oceanic cities. Never again would there occur such a tragic event as the one which led to the implementation of these new security measures, two public, one secret. Before genetic engineering was mature enough to achieve this objective, it was the secret dispersion of psychotropic drugs in the drinking water of oceanic cities which made sure of that.

The children of the sea program and the mandatory genetic screening that all adult citizens had to undergo before being allowed to have biological children provided the perfect cover for executing the genomic research required to ever so slowly alter human nature to become less conflict prone. Specifically, the children of the sea program provided an excellent means because within a few centuries, most children in oceanic cities were children of the sea. Any subtle change to the human genome, which after long and tedious research, often taking decades, was finally ready to be introduced into the population could be spread through the children of the sea program. Nominally each city ran its own children of the sea program but that was only a façade. All such programs continued to be coordinated centrally and by that it was ensured that the genetic stock across the oceanic city civilization remained rather homogenous. The many minor changes made to the human genome over centuries and millennia, each by itself barely detectable, had accumulated to just a little more than two percent of the human genome being altered. Of course, there were other unforeseen developments which eventually had to be reined

in. Genomic research institutes in some cities had begun to make their own much more substantial human genome modification, some of which resulted in quite visible changes of human physiology. Even though any such changes remained always non-hereditary they were concerning enough for many to take a dimmer view on the children of the sea program. At some point this discontent became manifest in the emergence of genetic purist movements which almost simultaneously had sprung up in several cities. At that time, these millennia-old, separate structures outside the oceanic cities had long since ceased to serve as lifeboats but had become research sites coordinated by the oceanic city board. With the emerging extremist threat to genomic research, cities were relieved to see their genomics research institutes being relocated outside their cities, well beyond the reach of any extremists.

2

Alwyn Maar sat in silence. Thinking about the history of their oceanic civilization always made him wonder. He said something in the direction of the wall in front of him and the display embedded in it returned to being a part of the wall, just as it had been before he decided to look up a few things. Not in any of the historical compilations, of course, but in their own records. The records of Central. There was something peculiar about what had happened in one of their cities, a few hundred kilometers away from where he sat now. Their records showed nothing like it had ever happened before, nothing which could help them in possibly devising a plan to address what could be a smaller, or maybe even a larger calamity. What made this situation so different from the ones they had faced from time to time in the past and which they had always successfully controlled? He could not put his finger to it. They must tread more carefully than ever, he thought, when the face of his secretary Rean Nam appeared on the intercom screen.

»Sir, the envoy has returned. Would you like to see him right away?«

»Yes. Please ask him to wait in my office, I will be there shortly.«

Kanam Uwanu had been waiting for a few minutes in the chairman's office when Alwyn Maar arrived to greet him.

»Please, Envoy Uwanu, take a seat. Would you like some refreshments?«

»Very kind of you Mr. Chairman, some water would suffice.«

The chairman spoke something into the communicator sitting on his table and within a moment a glass of water arrived. The envoy took a few sips and then sat back in his chair waiting for the chairman to open the conversation.

»Envoy Uwanu, please tell me, how was your trip?«

»All in all, it was an uneventful trip and, in that sense, successful. However, what I learned during my stay at the Crowden Institute has me concerned.«

»In which way? Please elaborate Envoy Uwanu and be as detailed as you can. We have time and I must get as clear a picture as possible.«

»With your permission Sir, I will first lay out my observations without judging any of it?«

With the chairman slightly nodding in agreement the envoy began to describe the events as he was able to observe them since the Crowden Institute had been briefed on the discovery of the skull find. He had arrived at the institute a few after the institute's president had alerted them. When he arrived, he received a full briefing and from then on, he was able to witness things himself. That included of course everything within the walls of the institute. With respect to the city, his ability to observe was limited by the fact that it was inadvisable to go there himself. He would have been recognized immediately as an outsider. As the chairman knew all too well, outside visitors were a rarity and such a visitor arriving in the city just when such a surprising discovery had been made would have aroused suspicion. So, he had to rely on their informants in the city to report on what they could observe, which was unfortunately not much. The chairman's face did not betray a single emotion as he listened to the envoy's report. When after about half an hour the envoy had finished reporting his observations, the chairman looked at him as calmly as he had done throughout the envoys report.

»Thank you Envoy Uwanu. Now, I would like to hear your judgment about what you observed. Let's start with the institute, how do you judge the actions of its president and her administrative staff?«

»Certainly, Mr. Chairman. President Nuratu and her administrative staff have acted as we would have expected them to do so. I have complete trust in her judgment

in handling the situation. Frankly, if our legal advisers had listened to her, we would not be in the situation we are in now. Our legal advisers had insisted on all those change requests to the contract with the city despite president Nuratu explicitly warning them that with the city's mission chief present at these negotiations there was a substantial risk of us being exposed. The mission chief may have suspected that there must be an organization the Crowden Institute reported to but now he had to be certain of it.«

Here the envoy paused for a moment to give the chairman the opportunity to ask a question which he did not.

»Well Sir, I believe it is now only a question of time before the city finds out about the true function of the Crowden Institute. I am certain they will soon learn that we can visit the place through an access port on the utility level they were not previously aware of. How will we be able in the future to transfer people between the Crowden Institute and other places without the city knowing it?«

The envoy paused again to see if the chairman had questions. But Alvyn Maar only continued to look at him without his facial expression changing in any way.

»Mr. Chairman, the investigation of the skull has begun, and I believe the institute has everything under control. I do not expect that there will be any problems arising with respect to the skull. However, with everything that has happened, with Lucy Kassius being a member of the team working on the skull, with Bran Taliesin, the city's mission chief in charge on their side, being an old friend of Hakan Kassius, and with the inevitable discovery of the utility level access port, questions with respect to the disappearance of Hakan Kassius some thirteen years ago will surface again.«

Alvyn Maar had always liked this quality in Kanam Uwanu. He would never fail to give his honest best judgment and that was why he had chosen him as envoy to the Crowden Institute. Of course he was right. All questions about Hakan Kassius' disappearance would be asked again and this time there would be no way to diffuse them as it was possible with the city council chairman at the time of Hakan's disappearance. Peer Aksun and Bran Taliesin were quite different men. He knew Peer Aksun personally and had heard enough about Bran Taliesin to know that he was a formidable man, not to be trifled with. He would not give up until he had learned the truth, and neither would

Peer Aksun. However, he was not worried as much about the city as his envoy was. Men like Aksun and Taliesin were not their enemies, they were on their side, they just did not know it yet. What concerned him much more than the city council chairman and his mission chief was this council woman Sawarov.

»Sir? Mr. Chairman, shall I continue?«

»My apology Envoy Uwanu, I was just thinking about what you had said. I believe you are right. All of this will come up again and this time we will have to deal with it differently. But what do you think about this council woman Sawarov and her movement?«

»It is her and her movement which I believe represent the greatest danger for the Crowden Institute and us. We have been monitoring them now for quite a few years and the number of their followers has steadily increased. At the same time, they have become more radical. I would not put it beyond them to employ physical force to achieve their objective.«

»Do you believe they possess weapons?«

»None that we know about, Sir. But yes, they could possibly possess weapons. There seems to have occurred a split in this movement a while ago which few have yet noticed. The council woman has seemingly set up a separate faction which owes strict loyalty to her and much less so to the actual cause their movement claims to advocate for. It is this radical part which could become violent.«

»How many of them are there.«

»Maybe forty, maybe fifty, but not more.«

»Envoy Uwanu, thank you for your report and for sharing your judgment. I believe you may require some rest now; it has been a long trip for you. We expect you well rested at tomorrow's board meeting as we must have your full participation.«

When the envoy had left, Alvyn Maar called his secretary and asked him to set up a video link with the board's chief science officer in one of their secure facilities. He knew that they must act now. But for the board to approve any such action in tomorrow's meeting he needed the support of Mog Sinan.

3

From his study Alwyn Maar looked out through a large bull's-eye window. There was really nothing to see outside the window but the dark mass of the ocean. No sunlight made it down to the depth at which the city was located. He could have turned on the outside search lights to penetrate the darkness of the oceans just a little bit, but he usually chose not to do so. It was rare for the quarters of a private citizen to have such a window to the outside. First, because it was not necessary and second, because most citizens had little desire to stare into the darkness of the ocean. The walls of citizen's quarters were no ordinary walls but could display any kind of desired optical illusion. So why stare into the darkness of an oblique ocean when one could have the illusion of a whole colorful reef displayed with depth and liveliness which rivaled reality. Many, however, would not display maritime themes but rather images of how they envisioned what life must once have been on land. For Alwyn Maar, gazing through the bull's-eye window which threw back at him a faint image of his aging self, served an altogether different purpose. The weighty opaqueness of the ocean reminded him of all that he and his many predecessors had achieved despite the difficulties they had faced; and how much more had to be achieved by those who would come after him.

A knock on the door jolted the chairman out of his thoughts. He pushed a button and silently the bull's-eye window vanished behind its wall cover. The secure facility was only a few walking minutes away and when he entered, he could already see the familiar face of Mog Sinan, greeting him with a hand wave and a smile. When the secretary had left the room and they were alone, Alwyn Maar returned the chief scientist's smile with his own short greeting.

»Alwyn, you look tired. You did not get much rest, did you? But if it is any consolation, I have not slept for two days myself.«

It shows Mog, thought Alwyn and then gave the chief science officer a brief update about what he had learned from envoy Uwanu. Mog Sinan listened, asked a few questions and overall seemed not a little surprised. Which was good because that meant he must have heard similar things from his own sources. These did not include members of the team investigating the skull itself but quite a few of the other scientists who worked

around them.

»Good to hear that what your sources could pick up regarding the general development of the situation aligns with what envoy Uwanu reported. But now Mog, let's come to the science part of it. What have you and your people learned about the skull and what do you make of it?«

There was a moment of silence where it looked as if the chief science officer seemed to be uncertain as to how he should brake things to the board's chairman. But then, he knew Mog Sinan well enough to know that this moment of silence did not result from the chief science officer being unsure about how to express things, but rather the opposite. Regarding matters of importance, Mog Sinan always reflected on how to say things with as much certainty as possible before he would begin to speak.

»Alwyn, we are looking at the skull of a man who perished some twelve thousand years ago. And he was not one of our own. That much has now been confirmed.«

Alwyn Maar could see Mog Sinan lean back in his chair waiting for the board chairman's reaction. So, it was true. They always had suspected that somewhere in the vast interior of the continents, members of the human species likely survived. But they could never find any proof of that and after thousands of years no one really had believed any more that they would ever find such proof. Most still thought that some members of their species must have survived on land, maybe for quite some time. But with no proof of human life on land for the last sixty thousand years, it had become dogma that human life on land had perished a long time ago. The discovery of human fossils on land was not really something unusual. But until this skull discovery all such finds had turned out to be spurious; the human remains were either far too old, dating to the *Period of False Hopes* or even further back, or they turned out to be from one of their own.

»Mog, it looks like you and I and many before us have all been wrong. What else do we know about the skull?«

»We have first preliminary results from molecular clock analysis indicating a common ancestry some thirty thousand years ago. However, there is still a significant error margin, and this number could be off by a few thousand years in either direction.«

Molecular clock analysis assumed a rather constant rate of genetic mutations which

may or may not have been the case here. The board's chairman and its chief science officer were of course aware of these limitations. Mog Sinan must have guessed that the chairman was wondering about this just as he had done.

»Alwyn, the genetic difference which exists between the skulls DNA and the DNA of one of our citizens from before the adoption of the children of the sea program would be difficult to account for by some chance mutations. Also, the enlarged molars and the massive lower jawbone could not be the result of just one or two chance mutations. They must be the result of an evolutionary process taking many thousands of years.«

»You are right Mog, there can be no doubt that this skull leaves but one explanation. There must have existed or still existed a human species which split from ours many thousands of years ago, maybe thirty thousand years ago if that turns out to be the correct number.«

»You know Alwyn, we should not be surprised about this discovery. A long time ago, our species, for reasons unknown, became the only surviving human species, dominating this planet ever since. But before that happened many other human species existed. It could well have been one of these other human species coming out on top. Genetically speaking, they were not much different from us. To this day we carry some of their DNA traces in ours as some of these early human species, including our ancestors, were not separate species but subspecies which could still interbreed. Now consider the situation some thirty thousand years ago. A sparse human population on land, no other dominating species interfering with its evolution, something like that was almost bound to happen.«

»I understand all that Mog. So, are we looking at a new human species or at a subspecies?«

»So far, our DNA analysis tells us that we are looking at a subspecies. I am quite certain that we are genetically close enough for the two subspecies to be able to produce fertile off-spring.«

»Are there any other notable physical differences?«

»Most likely. There are slight differences in the cranial structure. When covered with hair, these would be barely visible, but they could indicate more significant differences

in brain structure.«

»In which way?«

»That we do not know. But again, differences like that existed between human subspecies before. You know as well as I do that the size of the average human brain is smaller than that of our distant ancestors. Similarly, some of our former cousins seem to have had larger brains. We never have found out what the significance of these differences in brain size was. It may well be that this new subspecies possesses a somewhat larger brain. However, we do not know what the evolutionary pressure behind this change in brain size or shape is and hence we do not know what purpose it could serve. It must serve some purpose or otherwise it would not have evolved. With the enlarged molars we have a good idea as to why those evolved but not for the change in brain size which we really cannot quantify yet at all.«

Alwyn Maar's background was physics and mathematics but like all scientists he possessed general training in biology and genomics as that was compulsory. But he was not a specialist in those areas and decades had passed since he had taken a course in anthropology and genomic archeology. But he always was a curious man. If he did not know something he would ask those who knew.

»That is interesting, Mog. What do you and your colleagues then believe may have been the driving force behind the evolution of such enlarged molars?«

»Most likely a quite different diet. With the molars this human possessed he could have chewed very tough fibers to the point where they become digestible. Hence, this human could live off things we could not. It would not be the first time such an adaptation has taken place. A few million years ago there existed a human species which had even larger molars than our specimen. Scientists back then nicknamed a fossil of that species the "Nutcracker Man".«

Scientist humor, Alwyn Maar thought, but he had to inwardly chuckle about it after all. Then he began to lay out to Mog Sinan what they must achieve in tomorrow's board meeting. The chief science officer agreed with the proposed course of action and after Alwyn Maar had answered a few clarifying questions, Mog Sinan promised the board chairman his support.

4

Oceanic city board meetings were usually boring affairs. It was the board's subcommittees who did all the important work, and it was the policies of the oceanic city board which determined what that work was about. Within those board directives, subcommittees and specifically the chairs of such subcommittees had considerable leeway as to how they would go about accomplishing what the board had directed them to do. For most of the board's history it had been the subcommittee for science or the one for industry which were most powerful but in recent times that had changed, and it was now the subcommittee for legal affairs headed by its chair Roan Quam which often dominated board meetings.

By professional standards, Roan Quam had been an excellent choice for becoming the leader of the legal affairs subcommittee. None of the other board members would think or say anything contrary. However, except for a few, most members of the oceanic city board believed he was far too ambitious for his own good. It was only a few years since Roan Quam had become the legal affairs subcommittee chair but as one of its members, he had for years wielded a substantial influence over the previous less head-strong chairperson. In the eyes of most of Roan Quam's colleagues on the board, character was of even more importance for a board member than professional qualification. Finding people with the proper qualifications to do a job was not that difficult. But finding someone able to weigh things carefully, explore them from various perspectives without bias, and then have the wisdom to decide what to do and what not to do, was hard and sometimes impossible. And it was because of the latter that Roan Quam, elected by his peers in the legal affairs subcommittee, became their chairperson and consequently their representative on the oceanic city board, carrying the title of chief legal affairs officer.

Roan Quam was aware that it was not just because of his age, that some board members did not see him as an equal. He was twenty years younger than the next older board member. Several board members were of an age that they could have been his grandparents. Clearly, they confused age with wisdom. The board's chairman Alwyn Maar, what else was he than the relic of a distant past? How could anyone expect him and the other octogenarians on the oceanic city board to be able to cope with a crisis

such as had now emerged. They should have retired long ago. As he looked at them slowly entering the board's meeting room one by one, he almost felt disgusted. Why could they not understand that their game of secrecy was over? Had they forgotten what many centuries ago their responsibilities were? How could they expect to stay in control of developments as they just were evolving with this skull discovery when at the same time they pretended not even to exist? No more of that. Finally, the hiding game was over, and it was he who had made sure of that. Once everyone had taken their seat and security had closed the door Alwyn Maar raised his gavel and opened the meeting.

»Colleagues, respected Elders, I have called today's extraordinary meeting because we face a development, the likes of which we have never faced before. Because circumstances did not allow us to inform you as to why this meeting has been called, I have asked our chief science officer Mog Sinan to prepare a summary which will give you all the necessary information. Please, Mr. Sinan, you may begin.«

With that, the chief science officer walked to the speaker podium to address his colleagues. He began by giving them the description of events the way the chairman and he had discussed it the previous evening. Factually, there was not much difference between what he told his board colleagues today and what he had told the board's chairman yesterday. If anything, he added even more detail plus a few explanations which would help some of the older board members to better understand the situation. When he was just about finished repeating this embellished version of what he had told the chairman already, he made one last point. Most likely, their existence may not be a secret anymore. Because of the strict negotiation instructions Central's legal team had given to Crowden Institute's legal counsel, against the express warning of the institute's president, it now must be clear to the city's representative overseeing contract negotiations between the institute and the city, that there was a third party involved. At this point, the chief technical officer firmly had his eyes on Roan Quam.

»They do not know yet who we are, but they do know now that we exist! I believe that this legal strategy blunder was no accident but deliberately caused by those in charge of directing legal affairs.«

Roan Quam was staring back at the chief science officer in disbelief as Mog Sinan

slowly lowered the hand which had pointed at the chief legal affairs officer.

»This is an unbelievable accusation! You have no proof of this whatsoever! I demand the immediate exclusion of the chief science officer from this meeting. This is libel, violation of our code of conduct and unworthy of a board member!«

Hearing the uproar following the chief science officer's and the chief legal affairs officer's mutual accusations, no one would have suspected that there were mostly senior citizens of advanced age in this room. It took a while until order was restored and the shouting voice of the chairman could be finally heard.

»I call everyone to order! This is no way to conduct ourselves. Anyone not immediately getting back to their seat quietly will be escorted out of the room!«

After another minute things had sufficiently calmed down and Envoy Uwanu entered the meeting chamber. His arrival was greeted with interest. Most of them knew the envoy well enough to realize the significance of him being called into this meeting. Envoy Uwanu walked up to the podium at which a few minutes earlier the chief science officer had been standing, pulling out the notes he had prepared.

»Colleagues, respected Elders! Envoy Uwanu returned yesterday from the Crowden Institute. I have asked him to prepare a report of his observations as well as of his personal judgment of the situation on site. Please refrain from asking the envoy questions and let him finish without interruption. When Envoy Uwanu has finished, he will leave so that we can discuss his report among ourselves.«

After this introduction, the Envoy gave his report and how he interpreted what he had observed. All of it did not take more than twenty minutes. Even though the envoy also reported that their cover was blown, there was no uproar this time when he told them why their existence was no longer a secret. Biting his lower lip, Roan Quam sat silently as the envoy left the room. He now had an idea as to what this meeting was leading up to. His plan for today's meeting would not work anymore, he had to come up with a new strategy. Something which would take advantage of the situation instead of being defeated by it. When the chairman invited his colleagues to offer their comments and opinions, they were vivid at what in their view was a clear betrayal by the chief legal affairs officer. He listened to them until they had exhausted their energies and had

vented their anger. Not even one of the board members had spoken up to defend him. They were solidly aligned against him. But in the meantime, Roan Quam had made his decision. With everyone looking at him and no one willing to speak anymore it was about time for him to address them. He must let them know.

»Fellow board members, you have been burying your heads in the sand for too long. The secrecy with which this body has veiled itself is no longer of any use to us. Quite to the contrary. It has become an obstacle, hindering this body from achieving what it must. Have you forgotten that when this body was most important to the development of oceanic cities it acted in broad day-light and not from a hiding place like we have been doing now for far too long? You believe this board and the organization which it guides must remain secret. Don't you realize that such a strategy will inevitably not only invite suspicion but must eventually lead to resentment, even hatred? As it is, there are already movements spreading in several cities which could only flourish because of conspiracy theories which the secrecy of this organization nourishes. Is it not obvious that the only viable path forward must be for our organization to emerge into day-light again? We must become trusted partners instead of a secret organization hiding in the darkness of the ocean. On some distant day in the future, we will realize that the discovery of this skull marked a turning point in the history of oceanic cities. The question we are facing now is whether we will take the right turn, leading oceanic cities to a better future, or will we again make the wrong decision as we did some thirteen years ago regarding the Hakan Kassius affair. The choice is yours. I have made mine.«

There followed a prolonged silence after which Alwyn Maar announced to everyone's surprise a ninety-minute recess. Unnoticed by Roan Quam, the chairman's secretary had approached, asking the chief legal affairs officer to accompany him to the chairman's office.

5

When Roan Quam entered the chairman's office, Alwyn Maar was already sitting behind his desk pointing to a seat on the other side of it as he saw the board member enter. With Roan Quam seated the chairman lost no time.

»Board Member Quam, it seems I underestimated you.«

The chief legal affairs officer was not quite sure if he had heard right.

»Mr. Chairman, isn't this just what you had wanted, all board members solidly aligned against me?«

»Yes and no, Board Member Quam. Yes, because I had to make sure that you would not be able to rally enough board members behind yourself to impede what must be done; and no, because I had not expected you to make my argument for what must be done.«

»Your argument Mr. Chairman?«

»I understand this may be difficult for you to swallow. At a younger age that would not have been easy for me either. But the fact is, once it was clear that our existence was revealed, there could only be one way to proceed and in your fine address you pretty much laid out what it would have to look like. You may be tempted to pride yourself that your actions have brought about this change. But you only could act the way you did because we let you. Do you really believe that we did not know what it was that you were trying to do in directing your legal team in this way? You have been doing this for quite a long time, hoping it would lead at some point to the precise result it has produced now.«

Roan Quam did not know what to make of what he had just heard. Did this octogenarian really know all the time what he had been up to? Had he only been a pawn in the chairman's chess game? But before he could find any answers to that the chairman offered them himself.

»You see Board Member Quam, a few of your colleagues on the board, including myself, came to the same conclusion as you some time ago. Being an organization operating in secrecy has not only lost its usefulness but has become an impediment. So, what was the best way to emerge in day-light again, as you so nicely phrased it just a few minutes ago?«

»I guess, using me,« offered Roan Quam.

»Hm, that was the result of it but not the intention. Once we figured out what you were after with your insistence on ridiculous contract demands, we quickly understood

that this was the best way to reveal our existence. Our objective was that cities discover our existence in a way that they do not perceive us as a threat, they must come to see us as an ally and not as an adversary. This process has now begun, and we must ensure that it is completed successfully.«

»And why Mr. Chairman are you telling me all of this?«

»Because I want you to understand that our long-term objectives are the same. Don't you understand, I want you as an ally and not as an adversary, Board Member Quam.«

»So, Mr. Chairman, what's in it for me?«

Alwyn Maar leaned back in his chair, flashing an ever so brief and faint smile.

»I knew you would ask this question. But please allow me to turn this around. What is it you want Board Member Quam?«

»Since you ask for it, I guess I must oblige. First, I will become the chief policy affairs officer. Overseeing legal affairs has suited me as far as it provided me with the tools I needed to bring about the change you seem now to agree with. However, legal matters are a rather dull affair, and honestly, I dread attending many more of those boring meetings my subcommittee colleagues seem to indulge in. And after overseeing the policy affairs for a while I then would like to succeed you in your office, that is, when you desire to retire.«

Roan Quam had stated his demand in a calm but firm manner while looking for changes in the chairman's demeanor. But he could detect none. The chairman seemed not surprised at all.

»I did not expect your ambitions to permit you to ask for anything less, Board Member Quam. You did not disappoint. Our chief policy officer will, as you know, retire in a few months. I assume you will agree with me that it will look much more natural that we wait until she does so. Then you can assume her office. As far as my succession is concerned, you must of course understand that I have no plans to retire anytime soon. But once I do, I am sure your credentials will be such that your colleagues on the board will no doubt elect you to become my successor.«

»Then, Mr. Chairman, do we have a deal?«

»That is what it looks like, Board Member Quam; if you agree.«

That was all too easy. The chairman could not really believe that he was that gullible. But he could find nothing suspicious hiding behind the veil of the chairman's staid looks. What was he missing? This old fox could not possibly give in to his demands so quickly. Sometimes, it occurred to board member Quam, it was best not to probe people for their motives but to confront them directly.

»Why, Mr. Chairman, would you agree to such a deal so easily?«

»Board Member Quam, don't you realize, we need you! We must have your cooperation. You as well as I know that any plan submitted to the board resulting in revealing the existence of our organization must be approved unanimously. We simply need your vote. That is, your vote for our plan which will be submitted for consideration once we are back in chambers.«

»And what would happen if that cooperation was not forthcoming?«

»Well, in that case I will have you arrested on the spot for treason. As you admitted yourself as much in the chamber today. You committed treason by taking deliberate actions to have the existence of our organization exposed. You must understand that there are consequences for such actions.«

»Which would be what?«

»Your deportation to life-long exile at one of our mining facilities in the vast interior of...«, said the chairman breaking off in mid-sentence to look something up on the screen embedded in his desk before he continued, »...what seems to be the continent which we once called Africa.«

»Then it looks like I do not have a choice. Do I, Mr. Chairman?«

»No, you don't. Board Member Quam, I believe we have concluded our conversation, and you have promised us your full cooperation in return for what you have asked for. Do we have an agreement?«

»Yes Mr. Chairman,« came the dry response from board member Quam.

As they left the office, Roan Quam noticed that two security guards were stationed outside the chairman's office. Maybe the chairman had not been bluffing after all and would have had no qualms to condemn him to a miserable life in a rat hole somewhere

in the vast interior of this miserable continent he had referred to as Africa. He had no choice but to play along, but he was sure his time would come.

With these thoughts running through his mind, board member Quam returned to the chamber, walking behind chairman Maar. To say that the board members who had waited for their return were surprised by the fact that chairman Maar and board member Quam were both smiling and seemingly were now on amicable terms, would have been an understatement and also would not have been correct. Chief science officer Mog Sinan seemed not to be surprised at all but among the bewilderment of the other board members about this change of circumstances no one had noticed. Once everyone was back in their seat, Mog Sinan presented the plan and after less than twenty minutes of deliberation the oceanic city board had approved the plan; unanimously.

6

That evening, Mog Sinan and Alwyn Maar sat in the chairman's study, each of them a drink in hand. A board member enjoying a drink was a rare thing but sometimes it happened, and this day was certainly one which merited a drink or two. The first objectives of their plan were achieved. Board member Roan Quam, who unwittingly had played a quite useful role in that, was now contained and the plan itself had become the officially approved plan of the oceanic city board. They had crossed the line of no return and had embarked on their voyage towards making first contact.

»We will need to keep tabs on board member Quam. I trust his ambitions will get the better of him and he will want to get involved in making first contact. Don't you agree, Alwyn?«

The chairman had walked over to the wall behind him where he pushed a button after which the cover in front of the bull's-eye slid to the side.

»You know Mog, for countless centuries our species has now made its home in the depths of this planet's oceans and for much of my adult life I have been staring out this window to remind me of that fact. Maybe Hakan was right after all?«

Mog Sinan was one of the few people one could talk to about these things. The chairman who had been staring at the ocean outside turned around, looking at his chief

science officer for an answer. But Mog Sinan shrugged his shoulders.

»Will we ever know Alwyn?«

»I hope so Mog, I very much hope so. Because if we don't, our species will be condemned to many more thousands of years of life in the oceans. And I am not sure if we will be able to fend off disaster forever. We must find a way back to life on land or our species will either stagnate or perish.«

»You think the situation is really so bad?«

»Probably even worse. When did you last time compare a citizen's genome to that of a person living in the *Period of False Hopes*? Did you see how many changes we have had to introduce during the thousands of years our oceanic civilization has lasted so far to squash the possibility of armed conflicts among our citizens? And what is the result of that? Yes, there were of course no more armed conflicts, no more civil strife of any kind. Except that is for this more recent development of people spreading conspiracy theories about the children of the sea program.«

»Conspiracy theories? Alwyn, you and I know both that if these people ever found out by how much we have altered the human genome they would find their suspicions fully vindicated. Don't you agree?«

»Of course, I do agree Mog, how could I not? But this is something we can deal with. It would only take two or three generations to revert to the genome of our ancestors. Have we not made sure that all the changes we introduced never became heritable? These people spreading conspiracy theories would surely take a victory lap knowing that as soon as we stopped genetic screening and terminated the children of the sea program, everything would go back to what it once was.«

»You say that, but I know you do not believe it and neither did Hakan. First, there is the fact that for thousands of years we have stalled human evolution. Is that not so? And then there is the little fact, of which we have confirmation now, that human life on land did not perish after all. There, human evolution never stopped. Isn't that exactly what Hakan suspected and why he wanted to explore the continents for pockets of human life.«

»It is a shame, Mog. Had a few hundred years ago some of our predecessors on the

board had the courage to approve such an expedition as Hakan thought to undertake, it may have still had a chance of success. Back then, we were still able to trace what was happening on land now we are very much limited in that. Who knows where Hakan's craft crashed, as it must have.«

»We likely will never know what happened to Hakan. Most likely he is dead, but we do not know that either. What I cannot understand to this day is that we never received a distress signal from his craft. You know I had my people check all satellite records we could get our hands on as well as the records of all ground relay stations which were then still working. There was nothing.«

»I know Mog, I still wonder about this myself. The only logical explanation seems to be that someone planted an explosive device on Hakan's craft so that he never had a chance to press the button activating the distress signal.«

»How much of all that do you plan to tell his daughter? She will ask questions.«

»I am not yet certain Mog. But I will not lie to her, she is Hakan's daughter.«

»And neither will I, Alwyn.«

After a few moments of silence Mog Sinan rose from his seat and put his hand on the chairman's shoulder.

»Alwyn, it is time to get some rest. We have quite a bit of work to do over the next days. Sleep well my friend.«

»You are right Mog. Let's get some rest. What would I do without you?«

As the chief science officer left the chairman's study, Alwyn Maar turned around and walked up to the bull's-eye, gazing out into the vastness of the ocean, his thoughts wandering. This ocean once had been their promised land, the secure haven rescuing humankind. Had it now become their prison?

Deceptions

7

»Are you certain, Kimal?«

»Absolutely! Our man in the city's utility services group is one hundred percent loyal and trustworthy.«

Eireen Sawarov had been listening attentively for the last twenty minutes to her security chief's explanations regarding his recent intelligence gathering efforts. How fortunate it was that she had chosen Kimal Abuno as her security chief a couple of years ago! She could not have made a better choice. It was only four days ago since they had met with the leaders of the other six districts in which their movement had already gained sufficient strength. At least enough strength that they had a sizable representation in each of those district councils even though they controlled none of them; not yet.

»How long has he, your man in the city's utility services group, been with us?«

»Oh, he has sworn allegiance to our cause several years ago. If I remember correctly, he has been with us for about five years now. But to be certain I would have to check the exact date of when he joined.«

»No need, Kimal, I am certain you know your man. But when did he learn about this access port to the utility level of the Crowden Institute?«

»He first learned about it indirectly because he himself has never been part of the team servicing the utility level of the institute. At first, he did not pay much attention to the stories people working on the team serving the institute's utility facilities had been telling. But his reports casually had made mention of these stories. Obviously, it did not take long for the strange nature of these stories to catch our attention. That happened some five years ago, not long after he had joined us. Back then, we asked him to continue gathering information but, in a manner, not arousing suspicion and possibly exposing him as one of ours. For a long time, he was not able to pick up anything new. But eventually there was one peculiar thing that he noticed. The city's utility service team

never seemed to enter the institute.«

»What do you mean by that? They must have entered it somehow.«

»It means exactly what I said. We could find no record in the transport manifests to and from the institute of them ever entering it, period. At the time we thought that the institute and the city must have established some kind of separate processing for the utility service team going back and forth between the institute and the city; the records of which we could not access. However, we now know that this is not the case. Recently, our man was able to overhear a conversation between two members of the utility service team, one of them a new guy who had never been to the institute's utility facility before. This new guy was asking his team leader questions like any newbie would. But his team leader did more than just answer the new guy's questions. She also told him a little about the institute's utility level, some of which must look quite different from the city's utility level. What our man thus discovered was that the city's utility service team never enters the Crowden Institute through the only access port we thought this research city had but rather through a second unknown access port at the utility level of the institute itself. Now we do not yet know the location of this access port at the institute's utility level, but it will only be a matter of time until we do. We now know what we are looking for and we will find it.«

»I am tempted to say what a stroke of luck, but I know better. With you Kimal, it never seems to be about luck but always about preparation and execution.«

»Even though,« replied Kimal Abuno with a pleased smile, »we always welcome a little luck helping us. But we never count on it.«

Eireen Sawarov was beaming her usual fake smile at Kimal but whenever she did so, for him there was underneath always something of a more genuine smile. She was sure that her security chief and his team would locate the access port to the Crowden Institute utility level quickly. That was not the problem. But how then access the institute itself from the utility level. If there ever was something like a secure facility, the Crowden Institute was it. Anyone who lacked the necessary security clearance markers in their bio identity stood zero chance of even opening the first door inside the institute's utility facility level.

»I guess you will need some luck in entering the institute from the utility level. You probably know the security measures the institute has implemented to protect itself from just such an unauthorized entry.«

»Yes, Eireen, I do. It is my job to know such things.«

Eireen Sawarov registered the faint trace of pride with which Kimal Abuno had spoken. That could only mean Kimal already had an idea of how to get one of theirs into the most secret chambers of this so well protected institute. The way Kimal explained it, there would be a substantial risk that their attempt to get into the institute could fail but there was also a good chance it may succeed. Two people were key to Kimal's plan, none of them being one of their own. But that was just why his plan might work. The first one was Manu Orontes, one of the three scientists who had been on the expedition and who were now working at the Crowden Institute. The other one was Kareem Niagato, a young engineer currently assigned to the city's utility department. As Kimal explained, what made these two people so important for the success of their plan was their bio-identity and the fact that one of them had been cleared to work in the institute while the other one had been cleared to inspect the institute's utility facilities.

The Crowden Institute used several security measures, internal as well as external ones, to protect itself from security breaches. First, they relied on the fact that to everybody's best knowledge there was just one access port to the institute. Screening visitors or employees going back and forth between the institute and the city was part of the transit process itself. If there were no second entrance port at the utility level, Eireen Sawarov's security chief doubted that they would ever be able to get one of their own into the institute. Then there was of course the individual security clearance one had to possess to get into the institute. But even then, anyone's movements would be limited to the specific areas required for doing one's job. These individual security clearances included one's verified bio-identity, which screening devices would register every time someone entered or left a room as well as more primitive devices such as thumbprints, retina scans and sometimes facial scans. The bio-identity consisted of a small capsule which was inserted below the skin of a person, usually in the lower arm. This capsule contained an edited DNA sample of the person which was part of a bio circuit. It was

a passive device whose power consumption was so minimal that bio electricity was more than sufficient to keep it running for ever. In addition to screening devices which read out a bio-identity, there were also more powerful writing devices which could invalidate a person's bio-identity at any moment anywhere within the institute. Hence, once an intrusion was detected or someone on the inside was deemed to act suspiciously, their bio-identity could be invalidated immediately, thereby practically arresting the person.

These are quite formidable security measures, thought the council woman. But her security chief, sensing her skepticism, now began to explain how they would be able to enter the facility despite such security measures. To manufacture a fake bio-identity required first access to an individual's molecule of life, her or his DNA. That was comparatively easy to get and Kimal's team had already obtained the samples it needed. Her followers in Manu Orontes parental group had been proven useful after all. Not quite in the way the council woman had imagined. When they were recruited to the movement's cause, the objective had been to raise Manu Orontes to become their tool. But recruiting Manu Orontes had failed several years ago when he was still a budding scientist. However, for sentimental reasons two of those people in his parental group had held on to some things from Manu Orontes childhood. Among them was the first milk tooth he had lost, a perfect source to retrieve his DNA. To obtain Kareem Niagato's DNA they had only to search the dormitory room of his girlfriend Lucy Kassius, one of the other scientists, where Kareem would sometimes spend the night. Finding a hair sample of this fellow with some dead tissue still attached took only a few minutes. There were of course also hair samples from his girlfriend which they could use to produce a fake bio-identity for her to access the Crowden Institute. However, Kimal deemed that she was too close to the mission chief, and it was less risky to use the bio-identity of Manu Orontes instead. But having Lucy Kassius fake bio-identity may come in handy at another time.

Eireen Sawarov understood this part of her security chief's plan. But how would they be able to obtain the necessary Crowden Institute security markers to fake these bio-identities? Not to mention the security capsule itself and the bio circuits it included. Must they not have access to the institute in the first place to retrieve copies of those

markers? Which they, however, could only do if they were already in possession of such security markers; or not? She did not have to ask the question because Kimal Abuno was already answering it.

»The difficult part of the plan is the retrieval of the security markers which we must include in the fake bio-identities. There is only one way to accomplish this.«

»And what would that be?«

»We must screen the real bio-identities of Manu Orontes and Kareem Niagato. That will be more difficult to achieve with Manu Orontes. Getting our hand scanner close enough for a read-out of Kareem Niagato's bio-identity should be simple.«

»What hand scanners, Kimal?«

»We have obtained the blueprints of the screening devices the Crowden Institute uses. You will not want to know how we did that, but we have them. Manufacturing a small, modified hand-scanner which can read out the complete modified DNA contained in a security capsule is already well underway.«

»But how will you be able to scan the security capsule of Manu Orontes? The institute will not allow any of the people working on this secret project to leave their facility while the investigation is ongoing. And what good is all this scanning without being able to put fake bio-identities into a security capsule?«

»No, they won't. We must get Manu Orontes to meet someone in the institute's guesthouse. For example, in the guesthouse canteen over lunch.«

»I see, Kimal. And who would that person be which Manu Orontes will be willing to meet in the guesthouse canteen for lunch?«

»We are still in the process of screening people for that, it may take a few more days before we can identify the right person.«

»Kimal, be sure to select the right person for this job as this must not fail! Since we will not try to get into the institute until we can be certain that the investigation has produced results you should have a couple more weeks. Remember, retrieving the results is more important than anything else. But what about the capsules?«

»We already have them. You see, the institute does not care to remove the capsules once someone stops working for the institute. They just deactivate them and that only

affects the bio-identity but not the bio-circuit around it. So, all we needed was to find two people who still carried such deactivated capsules, which we have. The tricky technical part will be to insert the security markers into the DNA and then to replace the deactivated bio-identities in the two capsules we now have with our fake bio-identities. We have already identified the right person for the job. She happens to be a researcher at the very department at which the three scientists now at the Crowden Institute have been working previously. I am sure she will do an excellent job, and the best thing is that she won't even know that she is doing this work for us.«

»It looks like you have it all planned out. All other security measures aside from the bio-identity are not an issue for us, correct?«

»These other security measures will not pose a problem. Thumb-, retina- or facial verification are all easy to fake and non-body related access devices are even easier.«

»Good Kimal. Please brief me again in a few days. And no word to anyone about this. We must continue to communicate about this only in person. As for the meeting with our other district leaders in two days, craft some kind of plan that will satisfy them and be a diversion for the city and the institute. They must not learn about our real plan.«

8

Bran was on his way to city hall. The information Ari was able to forward to him after their last remote conversation was just what he had looked for, thought Bran. It took Ari a few days to compile all of what he had asked him for. With it, he now held in his hands proof that there was a second entry port to the Crowden Institute at the level of its utility facility. But if he had learned about it so could others. The mission chief, late for his meeting with the city council chairman, accelerated his steps. When he entered through the open door of the office of the city council chairman, his secretary Fin pointed him to the adjacent room, Peer Aksun's office, where the chairman was already waiting.

»Sorry Peer, I am not in the habit of making people wait but something came up which I had to check before our meeting. It is important for what we must discuss.«

»No worries, Bran, I am sure you had good reasons, but apology accepted.«

»Peer, we now have irrefutable proof that this separate access port to the Crowden Institute exists.«

»I was almost certain that it must exist when you told me about it the first time. We could have had confirmation about that right there and then through my office. But as you rightly pointed out, that could have raised suspicion.«

»My investigations still may stir up some suspicion. Ari Niagato thought that he had been followed and he probably was right that it was not our people spying on him. Security has traced two people surveying Ari, both of whom are associated with Eireen Sawarov, or more precise with her security chief Kimal Abuno. We had expected this, and Han Nakamoto is quite certain Abuno's men did not gain any useful information. However, there is something else which Mr. Nakamoto alerted me to. It looks like Ari is not the only Niagato family member under Abuno's surveillance.«

»But who else could they be interested in?«

»From what this looks like they are likely even more interested in Kareem Niagato than his father.«

»But for what reason?«

»Well, that question is what kept me late for our meeting. Did you know that Kareem Niagato works in the city's engineering department? I suspected that this may be the reason he could be of interest to Abuno. So, I asked Han Nakamoto an hour ago to have his people look up the security clearance of Kareem Niagato.«

»With what result?«

»Kareem Niagato is part of the trouble shooting team in the engineering department. You know, only engineers who can think quickly and creatively are part of this small group. They are always part of an emergency response team regardless of what the specific problem is. Hence, they must, for example, possess security clearance for all parts of the utility level.«

»You mean he has access to the utility level entrance of the Crowden Institute?«

»Exactly.«

»That cannot be a coincidence. There must be a connection. But how could Eireen

Sawarov's people use Kareem Niagato to gain access to the institute itself?»

»I do not know yet, Peer. But Han Nakamoto has his people working on it. We will now be keeping close tabs on Kareem Niagato ourselves.«

»Do you have any idea as to why they are interested in Kareem Niagato rather than in any of the other engineers on this trouble shooting team of the engineering department?»

»I guess they stumbled on Kareem Niagato by accident. You may not know that, but he is Lucy's boyfriend, and I am sure Abuno's men screened everybody close to Lucy for potential vulnerabilities.«

»You may well be right. I did not know about Lucy having a boyfriend. We have not spoken for quite some time.«

»Peer, I need to ask you a question and please don't get me wrong. How is it that you as the city council chairman did not know that the city's utility department was serving the institute's utility facility?»

»You have every right to ask that question, Bran. The answer is simple. I did of course know that our utility department also services the institute's utility facilities. But I had no idea that they did so through a secret second entrance port on the utility level itself.«

»That is what I thought. But that also means this information was deliberately withheld from you and others in the city administration who should have known about this.«

»That must indeed be the conclusion, Bran. I have already asked for the documents and contracts related to the services we provided for the institute. Fin will go through them with a fine comb. I want to get to the bottom of this. But now let us get to something else. As it looks like, we will have visitors.«

Bran was looking at the chairman with some measure of disbelief. Visitors from other cities were a rarity. If there were any visitors, they usually were associated with the Crowden Institute but not with the city itself. Even if the latter was the case, meetings would usually take place in the Crowden Institutes meeting facilities. From what the chairman had told him, whenever he visited another city for some kind of

meeting those would invariably take place at the respective research institutes outside a city. As Bran thought about it, it occurred to him that he himself had rarely entered another city. Yes, he knew many people in other cities, but they had almost always met in one of the onshore facilities and occasionally on joint expeditions.

»That can't be a coincidence either. Who are those visitors?«

»When Fin presented me the meeting request I was just as surprised as you are now. And I do not believe anymore in such coincidences as you do Bran. The request came from a city I visited myself many years ago. It is one of our older cities in an ocean sector more densely populated than ours. Among the people listed on the travel manifest are two names I recognized.«

»And who are they?«

»Their names are Alwyn Maar and Mog Sinan. You likely do not know them, but you may have heard their names a long time ago. They were both colleagues and friends of Hakan. Alwyn Maar, just like myself served as his city's council chairman for many years. This is how I got to know him. But he retired from this position a long time ago and I believe is now associated with their external research institute, quasi a sister institute of our Crowden Institute, they call it the Haman Institute. As for Mog Sinan, he and Hakan studied together and authored many joint papers. He is a distinguished scientist, likely also working at the Haman Institute, and he has been a visiting scientist with the Crowden Institute for many years.«

»Do we know what Hakan's connection was to this Haman Institute?«

»I certainly don't. But I suggest you find out whatever connection there may have been. We expect them to arrive in about ten days.«

»Sure, I will find out what I can. Everything what I have learned from my contacts so far is that all these research institutes located outside our cities seem to be similar. They might focus on different science areas but are seemingly organized in the same way and as I suspect, all of them report to this same organization of whose existence we are now certain. Can you please ask your secretary to search for whatever documents he can find which mention the Haman Institute and I need to know the identifier of the city with which this institute is associated.«

»Sure, Fin will get this information for you. But before you leave, please tell me about the status of the skull investigation. Is there any news?«

»Yes, there is news, which I learned from Lucy when visiting her the other day. Last time I updated you a few days ago I told you that the skull belonged to a human male living around twelve thousand years ago. As I also told you then, this age estimate had been determined via a molecular clock analysis for which a reference DNA sample from an individual living during the *Period of False Hopes* was used. However, in addition, Lucy, curious as she is, also had submitted a DNA sample of herself to be compared against the DNA of the skull-individual. I guess she wanted to know how genetically different we were. To her surprise, the results she got indicated that there must have been next to no evolution on our side.«

»Please explain, I am not sure I understand.«

»Sure. To put it simply, the genetic difference between Lucy's DNA and the DNA from the skull was about the same as that between the skull's DNA and the DNA from an individual living during the *Period of False Hopes*. The logical conclusion therefore is that Lucy's DNA and the DNA of someone living in the *Period of False Hopes* must practically be identical.«

»I see. But how can that be? We cannot have been in an evolutionary slumber for many thousands of years. That is impossible, isn't it?«

»Yes. That is also what Lucy believes and therefore she has submitted a new DNA sample, this time from Manu Orontes because she thinks her DNA sample may have been contaminated. We are all curious about what result will come back this time.«

»Well, let's hope Mr. Orontes' DNA sample is not contaminated, if Lucy's ever was. What do you think the possible implications of the first result having been correct could be; or maybe even worse of sample testing being manipulated on purpose?«

Seeing in Bran's face that he had been already thinking about this himself the chairman did not wait for an answer but went over to his secretary's desk in the adjacent room, asking Fin to provide the things Bran was requesting. They would meet again in two days when the results from the new DNA analysis should be in. It was always better to have the facts than to speculate.

9

When Lucy contacted her and asked to meet, Carleen Nuratu was naturally curious about why Lucy wanted to see her. But Lucy did not want to tell her and just said that it was important. She arranged for Lucy to see her the next day, late in the afternoon. It was better to have some time to find out what this important matter may be about. So, on short notice, she had Fjodor Rees informally and silently whisked to her office.

»Mr. Rees, you know Lucy Kassius now quite well and you are closely monitoring the investigation. Has anything unusual happened over the last days, Mr. Rees? Was there anything out of the ordinary any surprises regarding the investigation.«

The way the young scientist looked at her the institute's president could already tell something must have happened.

»Mr. Rees, looking at you I know that something unusual happened. But for me to learn what that was you must speak to me. So please do!«

After a few more moments Fjodor Rees began to talk. Yes, something quite unusual had happened. Using molecular clock analysis and the DNA of an individual from the *Period of False Hopes* they had estimated that the individual to which the skull belonged must have lived some twelve thousand years ago. But then Lucy submitted another DNA sample, incidentally her own DNA, to compare against the skulls DNA sample. Unfortunately, she had not told him or anyone else about it before submitting the sample to the analysis lab. The result which the lab sent back within one day indicated that Lucy's DNA differed from the skull's DNA just as much as did the DNA of the individual which had lived towards the end of the *Period of False Hopes*. He could not understand those results, and neither could Lucy nor anyone else make sense of them. Lucy thought that her DNA sample may have been contaminated with DNA from this individual from the *Period of False Hopes*.

»Is that everything Mr. Rees?«

»No Madam President, Lucy had a new sample, this time from Manu Orontes, submitted to the lab for comparison with the skull DNA.«

»And when was that?«

»This morning, Madam President.«

»Thank you for being candid Mr. Rees. You may leave now.«

When Fjodor Rees had left her office, she called in her assistant.

»Eno, I must speak to Mog Sinan as soon as possible. It is urgent. Please see to it that something can be arranged for this afternoon.«

Eno Twait left the president's office as quickly as he had entered it. He had never received such orders from Madam Nuratu before and back at his desk he sent out a request for an emergency meeting to Mog Sinan of the Haman Institute; something he had never done before. When he was just about done with setting everything up on their side for a secure video link a seemingly somewhat excited man in his mid-forties walked in and headed straight for the door to the president's office.

»Wait, wait! You cannot just rush unannounced into the president's office.«

When the man turned around and looked at him, he could see that it was Mr. Ramanu, the head of their molecular analysis department. With his head somewhat glowing and looking down at the ground, he had not recognized him when he rushed in. There must be an explanation.

»Mr. Twait, President Nuratu has asked that I immediately report to her office.«

Eno Twait decided it was best not to ask questions and ushered Mr. Ramanu into the president's office, closing the door behind him.

»Please explain yourself, Mr. Ramanu. How could this happen?«

But despite the president's invitation to take a seat and her friendly invitation to tell her what he knew about the whole thing, Mr. Ramanu remained speechless.

»Relax Mr. Ramanu, gather your breath. The only thing that matters now is that you and I understand in detail what has happened with the DNA sample from Lucy Kassius which the molecular analysis department you are leading received two days ago. Do you understand what is at stake here?«

Slowly Mr. Ramanu collected himself. Carleen Nuratu knew him well. He was an excellent scientist and a good administrator. She never had any doubts about Mr. Ramanu's loyalty, she knew that this must have been as much a surprise to him as it was for her.

»Madam President, as soon as I had learned about the incident, I began to investigate what had happened. As you know, in our lab we always trace every sample and every person. So, we always know who handles what at any time. I thought it would be simply a matter of looking up the records to find out who analyzed the sample and sent the results back to Lucy Kassius. But unfortunately, that was not so.«

»What does that mean?«

»Madam President, there is no record of us ever receiving this sample or analyzing it. What our records tell us is that this sample never was submitted to the molecular analysis department laboratory.«

»You do have records of the whereabouts of the personnel working in your lab, of anyone entering or leaving it, and you know what they have been working on any minute during the last two days. Am I correct?«

»Perfectly correct, Madam President. I had all that checked. Every minute of every day can be accounted for by all personnel, and we know what each one was working on. According to our records of the past two days, there would not even have been time for anyone to analyze the sample in question. I do not understand it. I double and triple checked the records myself, but the result does not change.«

»Mr. Ramanu, you are in no way at fault here. It appears that your lab records have been tampered with. Now we must find out who did that. Security will take care of this. What I ask you, Mr. Ramanu, is to fully cooperate with security, they will need your help.«

When Mr. Ramanu left the president's office Eno Twait registered that, while still a little beside himself, he seemed much relieved. What an unusual day this was. But without wasting any more thought on the unusual things this day brought or on Mr. Ramanu being not quite himself, he went into the president's office to let her know the meeting with Mog Sinan would be two hours from now.

The institutes president asked her assistant not to be disturbed until the meeting, she would not see anyone else before she had spoken to Mog Sinan. After Eno Twait had left her office she sat back in her chair, closed her eyes and began to consider various possibilities. When she opened her eyes again, she was almost certain that she knew.

Neither the city nor the followers of Eireen Sawarov had access and means to manipulate the laboratories records. And of the two, the city did not even have a motive. There was no other explanation, this must have been an inside job.

10

With the video link being established and greeting pleasantries exchanged, Mog Sinan lost no time to ask the institute's president, to whom he referred as Carleen, what this emergency call was about. It did not take long for Carleen Nuratu to summarize for Mog Sinan what had happened. Neither did it take Mog Sinan long to understand the gravity of the situation and the full implication of what had happened. Mog Sinan's forehead wrinkles, while always there, had deepened considerably by the time she had finished her account of what had happened.

»What are your thoughts about this, Carleen?«

»It must be an inside job, Mog. Neither the city nor the extremists in the city have access or means to manipulate any of our records.«

»That is also what I believe. We must find out as quickly as possible who is behind this. Most important in that regard is to understand if this is something contained within the Crowden Institute or if anyone outside of it was involved.«

»By anyone from outside I assume you refer to someone from Central, correct?«

»Unfortunately, so. The records were probably manipulated by one of your institute's employees, but I fear the instigator of all this is to be found in Central.«

»Our security is already taking the molecular analysis lab records apart. Also, I will have all incoming and outgoing communication with Central over the past weeks checked. We must know who talked to whom.«

»Good Carleen, we will do the latter likewise on our side. Please also have all the entry and exit records for the utility level access port looked through. For someone knowledgeable it could be possible to enter the institute through this port without having to pass through the compulsory security screening.«

»But Mog, would we not pick up their bio-identities once they are in the institute?«

»Not necessarily Carleen,« came Mog Sinan's response after a brief silence.

»What do you mean by that?«

»Carleen, what I am going to tell you now must remain confidential, no one else at the Crowden Institute can know about this.«

»Mog, this sounds ominous! But of course, whatever it is, it will remain confidential.«

»What you must know, Carleen, is this. Masking capsules exist which the screening devices in your institute will not register, they will just ignore the person carrying such a device. Their use is strictly forbidden, and they have been out of use for a long time. They were part of the original security system for all institutes and were designed to enable emergency access to any facility within an institute without there ever being a record.«

Mog Sinan knew that it was hard to surprise the institute's president with anything. However, this time and very much against his own wishes, but unavoidably so, he had surprised her. Judging from Carleen Nuratu's expression, it was not a pleasant surprise. But the president's irritation lasted only for a moment.

»You are telling me, Mog, that someone can walk into our institute and leave it without us ever knowing about it.«

»Yes, unfortunately. But there is also a bit of good news. Very few people would have access to masking capsules and this access is strictly controlled. As I told you, to my knowledge no such device has been used for generations. The only reason I told you that they exist is that we must consider the possibility.«

»I understand. How long will it take you to check on your side if anyone has accessed such a device?«

»Not more than two or three days. What I recommend is that until we know for sure that masking capsules are not being used to access your institute you implement additional security measures. More of the traditional kind.«

»This is just what I had planned to do Mog, and I will get to it right after we are finished here. I take it there is no way to reconfigure our security systems such that those masking capsules could be detected?«

»That is not possible. The only way to achieve this would be to take your security system down for an extended period and reconfigure it. But in the meantime, your institute would be open to intrusion. It is better to take the risk that there might be someone in your institute using a masking capsule than to have your institute completely unprotected for weeks. After all, we do not know yet if such a masking capsule has been used in what happened in your molecular analysis lab.«

»I agree, Mog. . . «

»Do I hear a but, Carleen?«

»Mog, a DNA sample processed in our institute without there being any record of it is a grave issue. We must and will understand how this all happened. However, more importantly we must understand why this has happened. Who could benefit from such a thing?«

»You are right Carleen. Unfortunately, we have no idea yet what purpose this incident was supposed to serve. What could be the impact of increasingly widespread rumors that humanity has been in an evolutionary stasis during the eons of our oceanic civilization? That certainly would not serve any purpose for the city, and it would also not serve any purpose for the extremists. If people began to believe that contrary to the conspiracy theories of genetic purists human DNA has remained practically unchanged since the *Period of False Hopes*, who would still believe such theories. Must they not falter? That cannot be in the interest of these extremists.«

»True. Also, there would have been no harm whatsoever if the comparison between the DNA of Lucy Kassius and of the individual living during the Period of False Hopes had shown roughly a two percent difference. The average mutation rate molecular clock analysis assumes could have well accounted for that. Who would have questioned whether this two-percent difference had come about through natural evolution? Nobody.«

»You are correct. Someone must be seeking to bring attention to the general fact that human evolution was not allowed to proceed as it would have done naturally. This is not about our organization tweaking the human genome such that we can peacefully live together. Whoever was behind this is not concerned about the engineered change of roughly two percent of human DNA over many thousands of years. What this is about

is the ninety-eight percent of human DNA which we did not allow to evolve. All of this, if you will, must be about the evolutionary stasis of ninety-eight percent of human DNA, a stasis which was put in place by our predecessors many thousands of years ago.»

Carleen Nuratu did not answer as there was no question, she only nodded. This was also the conclusion she had arrived at. What she had to do now was not pleasant, but necessary. Screening thousands of people at the institute would not go unnoticed. But there would be other distractions which could draw some of the attention away from what was going on at the institute. At the end of their meeting Mog had just told her that a delegation from Central, an organization which officially did not exist, would be visiting the city. Mog and Alwyn Maar would be part of it. That was going to raise eyebrows and not just in city hall. Arriving at this very time, such visitors will also be suspicious to Eireen Sawarov, of that Carleen Nuratu was certain.

Back at her office, the institute's president sent a note to Mr. Ramanu directing him to make sure that the new DNA sample, now from Manu Orontes, must be processed immediately and correctly with the results being made available to Lucy Kassisus in full. Lucy had suspected that a contaminated DNA sample was the probable cause for the unexpected result she had received regarding the analysis of her own DNA. By providing her with the full and now correct results of the new DNA sample she will be confirmed in that assumption. It was unlikely that she would begin to investigate where her DNA differed from the DNA from the individual living in the *Period of False Hopes*. And even if she did that, it was even more unlikely that she would be able to make sense of these DNA changes. To her, they would be chance mutations occurring roughly at the natural rate without any further consequence. Tomorrow in the late afternoon when Lucy would come to see her, she would have already received the results and drawn this very same conclusion.

For the rest of the day the institute's president focused her attention on directing her staff to set in motion the security screening of the thousands of people working in the institute which they now had to undertake. All of it had to be done in such a way that it would not raise too many suspicions. Fortunately, the institute's quarterly security check was about to be due. They would just have to make it a more in-depth screening this

time and it would take a few days longer than usual. About the other security measures she had discussed with Mog Sinan, no one else but those who had to put them in place must know.

11

One month had passed since the three scientists had first moved into the institute's guesthouse and for some three weeks they had now been working at the institute. It had been three exhilarating weeks, Lucy thought, as she entered her room late in the evening. She was tired, that is what her body told her, but her mind did not really think so. But she knew herself well enough that if she did not get some rest now, she would be a mess in the morning. Never in her wildest dreams had she thought to ever work on something so exciting. She knew the history of her science well enough to understand that for many centuries nothing so exciting had ever happened in her field. Sure, there always had been discoveries and scientists always would find new ways to study more carefully what they thought they understood already well. But nothing could compare to this discovery and the opportunity to be part of the team working on the skull project, as they called it. She just felt lucky to be alive right now and to find herself at this important juncture in her science's history. She was right in the middle of it and at the thought of it she could not help but smile, just for herself.

Discovering the existence of a new human species, or more likely of a human subspecies, she wondered, how often does something like that happen? Never was the answer Lucy was giving to herself as she crawled into her bed. The age of new human species or subspecies discoveries was ancient history, buried under countless thousands of years. The human family tree had been known for a long time and for almost as long a time it had consisted of only one living branch, her species. All other branches of this human family tree were dead as the respective species and subspecies had perished long ago. And now, after thousands of years, this remaining living branch had split again. They were not the only existing human species anymore; they now had a cousin species. The human family tree they knew was likely rather incomplete. Scientists had known this for a long time. Discovering new species had always been a combination of luck and

dogged persistence in continuing to search the globe for human fossils. But at some point, those fossil finds became a trickle and eventually even that trickle dried up. Scientists continued to find bones, but all of them of more recent origin which could not help them in getting a more complete picture of the human family tree. The frustration about this situation eventually led to what in literature became known as experimental anthropology. There was much debate about this approach, many deemed it unethical and after some time it eventually was banned. But not before a few scientists had cloned ancient human beings from DNA samples. Because most of those samples were just DNA fragments, they had to be completed by slicing in the missing pieces using DNA from modern humans. Some thought the results were astonishing but most just thought them to be abysmal. All such human beings created in this way were sterile by design. When experimental anthropology was outlawed the remnants of such programs died with them once these human clones had reached their natural lifespan.

Everyone in her field of science knew about this experimental anthropology episode in their science's history but still, she had overheard some of her colleagues wondering what the human being of this new subspecies would look like if they cloned him from his DNA. Because the DNA extracted from the molars of this person was complete there would be no need to splice in DNA from their species, they could just clone the person from his own DNA. How could her colleagues, knowing what she was sure they knew about the experimental anthropology episode, seriously wish to clone this human being to whom the skull belonged? She could not understand it. The less so, because the facial reconstruction underway would give them an idea of what this new human subspecies looked like. Lucy could not help but think what her colleagues desired was nothing less than to be able to talk to this human being, by having a life conversation with its clone. She shuddered at the thought of it.

Fortunately, the Crowden Institute would not let them do any of it. Song-Ho, who was leading the facial reconstruction did an excellent job. He was a quiet and very capable scientist. And what she particularly liked about him was that he always turned to her first when he thought he saw something new or had an idea he wanted to discuss. Sometimes she believed she could see a little jealousy in Fjodor's eyes when Song-Ho

turned to her. But that was fine with her too. It meant she had his attention. With her not having seen Kareem for more than four weeks now she had begun to wonder what this would do to their relationship. Kareem must think of her as an absentee girlfriend. First, she was gone for five weeks, then back for a few days, only to be gone for another four weeks; and she did not know how many more weeks of not seeing Kareem would follow. Remote conversations were difficult as there was no privacy. Hence, whenever they talked, which was a couple of times each week, they could not really speak about what mattered to them. It was a strain on their relationship, Kareem must feel that as much as she did. Probably even more than she herself felt it, because for her, given the excitement of the work she was doing, time just flew by.

Brooding about her relationship with Kareem did not change anything, there was just nothing she could do right now. Better to think about what she was currently working on. Long ago it was the custom that the person discovering a new species or subspecies held the right to name it. Technically she had discovered the skull, but Manu or Ives could have discovered it just as well. They had taken turns digging at different spots. It was her luck to have been digging at the spot where the skull was hidden under just a few more layers of dirt, waiting for her to uncover it. She felt she would have to talk about naming the skull with Manu and Ives, they deserved as much a say in it as she did. But *Homo sapiens kassius* had a certain ring to it. Her eyes half closed; she was smiling. Her father would be proud of her. As for the unique features of this new human subspecies she was not quite certain yet. There once was a human species called *Paranthropus boisei*, which possessed even larger molars than their species. In this case, *boisei* indicated the name of the gentleman who had funded the expedition, a nice gesture by the scientists who discovered the fossil. In her case this would not work of course as it was the city which had funded their expedition and not any single person. There was really no one else related to the expedition to honor here, except maybe Bran; *Homo sapiens taliesin* sounded even better than *Homo sapiens kassius*. If she talked to Bran about this, he would just laugh at her, and rightly so.

On the human family tree, *Paranthropus boisei* was only a very distant cousin of their species, he belonged to an altogether different human species, presumably still more

advanced ape than man. The human species they had discovered, however, a subspecies of the species *Homo*, was a close cousin. Still, the evolution of large molars and a more massive lower jaw could well be due to this new subspecies experiencing similar evolutionary pressures as *Paranthropus boisei* once did. If to survive on land humans had to adapt to a different diet which included much tougher fibers, like many roots possessed them, large molars and a more massive lower jaw would have been a likely outcome. From what she remembered from pre-oceanic civilization history, the so-called *Dark Sky Period* seemingly had resulted in agriculture declining and eventually becoming impossible almost everywhere. This was one of the main reasons as to why their history books maintained that human life on land had ceased to exist. But their skull discovery now proved that this was not so. Human life continued to exist, however precarious that existence may have been. And it did so by evolutionary adaptations to a changing environment.

There was no real surprise there. The one thing that really did surprise her was that the human brain must have changed somehow too. Seemingly, this human skull must have housed a somewhat larger brain than what was typical for modern humans. Of course, brain size among modern humans varied and there was still a sexual dimorphism with females on average having just a little smaller brain than males. The brain of the male to whom the skull belonged however exceed the average for modern males by a little more than two standard deviations. While that could still be a statistical fluke there was something even more vexing which made that unlikely. This human subspecies differed not only in the size of the brain, but also in its shape. The relative sizing of brain lobes seemed to diverge from what was common in modern humans, specifically the occipital lobe was more prominent.

Another close cousin of modern humans on the human family tree also once possessed a somewhat larger occipital lobe than modern humans do. Incidentally, they also had larger brains than modern humans. This species, *Homo neanderthalensis*, also possessed a larger brain than the ancestors of contemporary modern humans at the time. These Neanderthals, as this human subspecies usually was referred to, did interbreed with the ancestors of the modern-day human species and therefore most modern humans still

carry a small amount of Neanderthal DNA today. This should be true for this new human subspecies they had discovered just as it was true for their own subspecies. As was the case with the Neanderthals, it would be difficult to learn what the consequences of such brain changes could be without having the ability to study a living human being of this new subspecies. Incidentally, this was another argument some made as to why one should try to clone this new species. But Lucy was intrigued more by the question of why than by the question of what. Why did this evolutionary change in brain size and organization happen, what had been driving it? Lucy's mind continued to circle around this topic for a while longer until eventually she was soundly asleep.

12

For the last two days, Roan Quam had, for the most part, been sitting in the comfortable reading chair of his study, analyzing the current situation. Bringing about the change in oceanic society which he believed was necessary for the human species to not just have a future, but to realize the future for which it had been destined, was like playing a multi-dimensional chess game against mostly invisible opponents. Everything at the board meeting had gone according to plan, well, almost everything. He had counted on being coerced into supporting the plan of chairman Maar, but not quite that publicly and not with quite the restrictions which followed the meeting.

A few days ago, the board's chairman, the chief science officer and a few others had left the Haman Institute, destination unknown. Or so they wanted everyone to believe. There was just one possible destination for them and Roan Quam was quite certain that he was not the only one thinking so. Their destination had to be the Crowden Institute, or rather the city next to which it was located. Roan Quam knew that both, the board's chairman and its chief science officer had known Hakan Kassius well. And, so he thought, they must have known Hakan Kassius much better than they had let on. While the chief legal affairs officer suspected that this was so for Alwyn Maar, he knew with certainty it was the case for Mog Sinan. The chief science officer and Hakan Kassius had studied together and had been colleagues ever since. Throughout their professional careers, Mog Sinan and Hakan Kassius had collaborated frequently, that much was clear.

One of the advantages of being the chief legal affairs officer of Central, mused Roan Quam as he relaxed in his reading chair, was that he could practically poke his nose in whatever matter concerned Central. No one would ever really ask questions as to why he needed this and that information, or why he was interested in a certain topic. The fact was that people simply wanted to avoid being pulled into some kind of legal discussion where no one could ever be sure where it would end. So, usually he pretty much got what he was asking for without having to answer too many questions as to why he was asking for something. Furthermore, by lucky coincidence, he had come into possession of masking capsules that allowed their wearer to move around in all the numerous institutes controlled by Central without this ever being recorded. Of course, his face being well known by many on the executive floors of these institutes, he had to ask others to clandestinely visit them for him and search for the things he was interested in. Fortunately, there was no shortage of willing and able recruits in Central's legal department who would volunteer to just do that.

He tried to envision what Mog Sinan's facial expression would be upon learning that the Crowden Institute had been breached in such a way that the only possible explanation could be that the intruders must have possessed masking capsules and the knowledge of how to use them. Just the thought of it brought a smile to his face. Roan Quam was sure that Mog Sinan had already instructed his people to go to the vaults and check the inventory for missing masking capsules. And he wondered - did Mog Sinan really expect to find any evidence for that? Probably not. The chief science officer was too smart to expect anyone able to remove something from the vault without being detected to leave their traces behind. But still, and Roan Quam had to smile again at the thought, they would not just have to count the thousands of masking capsules to make sure none were missing. They also would have to test every single one of them to see if it was a properly working masking capsule or had been replaced by a dud which looked exactly like a masking capsule but wasn't one. But even after doing all that, they would be none the wiser, of that he was certain.

With the Crowden Institute preoccupied with this obviously massive security breach they had experienced it was about time to reach out to this extremist movement which

had been fostering in the host city of the Crowden Institute for quite a while. From what his intelligence gatherers had been able to put together, this council woman Eireen Sawarov and the movement of which she was the leader, could now become quite useful. Clearly, these people were misguided and could not be trusted. One always had to be most careful when dealing with people who so obviously failed to grasp reality and could be duped into believing all this nonsense they went around preaching to the unconverted. But nevertheless, from his perspective they were doing many of the right things, even if it was for the wrong reasons. With a little help from his side, they could be successful in achieving their goal of entering the Crowden Institute, stealing all the information plus the skull and likely destroy all of it once it was in their possession. Why get your own hands dirty when there are volunteers to do the job for you? He already had practically everything in hand which he wanted to know about this skull investigation and its results. And while he helped these extremists to successfully prepare their heist, his people would continue to gather whatever information they could get about this investigation until it would be concluded in about two weeks. Then Eireen Sawarov's people can have their day.

Under the disguise of being disgruntled Crowden Institute employees, his people had made first contact with Sawarov's security chief a few days ago. This Kimal Abuno quickly understood how much better their chances of success would be if these seemingly disgruntled people from the Crowden Institute were able to procure such devices as they claimed existed. Initially Abuno had suspected this offer to be a trap. But a quick demonstration of a masking capsule using a working scanner of the Crowden Institute type which Abuno had already in his possession convinced him otherwise. On Sawarov's behalf, Abuno agreed that their organization would do what had been asked by them in exchange for the masking capsules. Everything was falling into place.

Just as he was thinking about how nicely he was setting up Eireen Sawarov's movement to be his cover-up, Roan Quam's thoughts were interrupted by the buzzing sound of his communication device. As he answered it a portion of the wall opposite the reading chair lit up and the face of his man in charge at the Crowden Institute appeared.

»Mr. Twait, what's up?«

»Sir, just touching base as scheduled to let you know that everything is working according to plan. Nobody suspects anything and the additional security measures taken are just what we expected.«

»Excellent Mr. Twait. Keep me posted and make sure our team lays low. Time is working for us now.«

Visitors

13

They had been traveling in this subsurface craft now for three days. But Alwyn Maar felt that he still had not adjusted to the constraints of space which this vessel imposed on them. The vessel's crew numbered twenty-seven because a minimum of nine sailors was needed to operate this craft during an eight-hour shift. And then there were seven passengers, three of Central's board members and four of its senior technical experts. Central's board chairman wondered how the others felt. None of them was quite as adjusted to making such a trip as the crew were. Mog Sinan probably had the most experience traveling in this way, but he could not remember when Aung Lasheen had traveled in such a subsurface vessel. Maybe she had never done so before because there was no real need for the board's chief policy officer to travel anywhere. She could do her job just as well working out of her office in the Haman Institute. Why had Roan Quam asked for her position? The job of chief policy officer was likely no less dull than the one of chief legal affairs officer. Maybe, he thought, I should ask Aung about that, as he walked into the dining area where at a small table the chief policy officer sat, studying some documents.

»May I join you, Aung?«

Aung Lasheen had been absorbed in some article she was reading but hearing the chairman's voice she put her reading device aside and invited the chairman with a smile to join her.

»I guess in this vessel we can hardly avoid running into each other all the time. What is on your mind, Alwyn?«

»Aung, I wanted to ask you something regarding your position as chief policy officer.«

»Well, that is a first,« Aung Lasheen responded now with an amused smile, »you have not asked me a single question about my position in all those years. But then, I

guess you must hurry up a bit now so I can answer your questions before I retire.«

»Well Aung,« said Alwyn Maar with no less humor, »I just never had to ask you a question because you always had the answers before I could get out my questions.«

»Alwyn, you are still a charmer, and you know it. So, what has changed now?«

»You see, shortly after our last board meeting, I told you about Roan Quam's interest in succeeding you as the chief policy officer. Since he voiced this interest, I have been trying to understand what his reasons for wanting your job could be. Do you have any thoughts as to why someone like the chief legal affairs officer would want your job?«

»Because you think my job is even more boring than board member Quam's current job? I am just teasing you, Alwyn. But from the looks of your eyes, I guess I am spot on, am I?«

»I can't deny it, Aung. But you know, such a question coming from me does not mean any disrespect, not for the office you hold and of course certainly not for yourself.«

»I understand all of that, Alwyn. No need for any excuses. And it is indeed a particularly good question which I have been asking myself. The positions of chief science officer or chief industrial officer come with much greater powers than either that of the chief legal affairs officer or the chief policy officer. Looking at it from that perspective, I guess even the chief legal affairs officer is quite a bit more powerful than the chief policy officer. Board member Quam's request to succeed me in my position makes little sense if we are only looking at how powerful any of these offices has been in recent times. So, I asked myself which of these offices could best serve the ambitions of board member Quam, which I believe are quite unlimited. For that, one must look at what each of these offices would nominally entitle him to. You see, on paper, the chief policy officer's power is only second to that of the board's chairman. It just so happens that the overall conditions of our civilization have changed in ways that many of the powers a chief policy officer nominally holds have become meaningless. Now, if conditions were to change again, closer to what they had been early on in our oceanic civilization, the position of chief policy officer could quickly eclipse in power the positions of chief science officer or that of chief industrial officer.«

Here Aung Lasheen stopped as she saw the chairman becoming absorbed in his own thoughts. And so, he was. Alwyn Maar, realizing that he may have underestimated board member Quam's ambitions, was diving into his mind searching for anything that might have escaped him over the past weeks regarding Roan Quam. But he came up empty.

»Sorry Aung, I believe you may have just given me the answer to my question. But please continue.«

»No Alwyn, now I would like to hear the answer from you. Please humor me, I will then tell you if it is what I would have told you.«

»How could I refuse you Aung? If I understand you correctly, what you are telling me is that the positions of chief science officer and that of chief industrial officer are more powerful than your office because they had retained their function across oceanic cities. All research institutes located outside of every oceanic city must answer the chief science officer. As must all kinds of industrial operations, onshore or in the continents interiors which are operated by city cooperatives. However, long ago we gave up on trying to coordinate city policies across oceanic cities and left policy determination completely to each city itself. At the time, in one stroke, your office lost much of its power because we just chose to stop executing it. But on paper that power still exists. So, if the current situation changed in a way which would necessitate policy direction and coordination across oceanic cities your office could indeed quickly become the most powerful one; only second in power to the position of board chairman.«

»See Alwyn, I knew you would have the answer.«

»But Aung, you also must know what that answer implies.«

»Of course, I do Alwyn, and this is what keeps me awake at night. Board member Quam must seek to change current societal conditions such that they change what are now only nominal powers of the chief policy affairs officer into real powers again. The only way he can achieve that will be through enormous social unrest. Now there are laid bare the true ambitions of board member Quam. Alwyn, will we be able to stop him?«

»Aung, we must, by all means possible,« was the chairman's response as he excused

himself and walked back to the guest cabin section. His cabin was likely the most luxurious one on this vessel if one could speak of luxury at all. The chairman's needs were simple, he certainly did not crave luxury. The comforts the room provided were completely sufficient, it was just quite small. Alwyn Maar was not claustrophobic by any means. But he had to accept that this sense of being imprisoned in the ocean which we sometimes felt when looking into the oblique depth of the ocean through the bull's-eye window of his much more spacious study, asserted itself more powerfully in this small cabin; even though it did not even possess a window at all.

The best way to not be bothered by the narrow confines of this room was to lie on the bed and to close one's eyes. And this is just what the chairman did. Lying comfortably with his eyes closed, the smallness of the room no longer could confine his thoughts, and he began analyzing the situation. After Aung Lasheen had pointed him in the right direction regarding the real ambitions of board member Quam, he was no longer in any doubt as to who was responsible for the events at the Crowden Institute. Mog Sinan was certain that it had to be an inside job even though the first check did not indicate that any of the masking capsules locked in the vault were missing. His people were still testing if any masking capsules had been removed and replaced by duds. But to verify this, that would take a bit more time. Mog Sinan had indicated that he did not expect to find any such duds sitting there instead of working masking capsules and neither did he. Roan Quam must have discovered a secret stash of masking capsules nobody else knew about or he must have found a way to make his own masking capsules. Like Mog Sinan, he thought it most likely that Quam must have discovered a secret stash of masking capsules. What would be Quam's next step? Alwyn Maar was certain that he was bent on finding a way to upset their visit to the host city of the Crowden Institute. Given the strength of the extremist movement in this city, it seemed to be the best choice Quam could make for beginning to disrupt the social fabric of oceanic cities. There were similar extremist movements in other cities but nowhere as strong as in this one. He had hoped that they would have time to sit down with the city council chairman and his most trusted council members. That would have made it easier for them to explain and for the city to accept the vital role of Central. Now they must seek to warn city council

chairman Peer Aksun as soon as possible so he could take action to calm any civil unrest before it may get out of hand.

With that realization Central's board chairman Alwyn Maar got up and walked to the communications room of the vessel where he handed the officer in charge a short message which he asked him to immediately send to city council chairman Peer Aksun in a classified container only the council chairman would be able to access using his bio-identification.

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Han Nakamoto sat in a small room with a young woman who could easily have been his daughter. She was one of theirs who had joined the extremist movement on their behalf quite a while ago. She herself was not able to procure much useful information but that was on purpose. Her mission was to remain quite unnoticeable, only being perceived as sympathizing with those genetic purist fantasies but not as a stern follower of the more extremist fractions of this movement. And she was one of a greater number of such agents who had infiltrated Taras Daley's organization on various levels. Their function was to transport valuable information back to city security and not to gather such information themselves. Saren Xian, Taras Daley's security chief and their man, could obviously not just walk into the office of the city security chief and deliver his report; not without arousing suspicion and blowing his cover. Saren Xian had to get out whatever valuable information he learned via the equivalent of a chain mail and the last link in this chain mail was now sitting in front of Han Nakamoto.

Eireen Sawarov and the movement leaders from six other districts had been meeting several times since the city council had decided to investigate the skull further and to do so in a way which excluded those trying to prevent this from happening. After each of those meetings, Han Nakamoto was debriefed about what had been discussed at those meetings, always by a different person who happened to be the last link of the chain mail at the time. This intelligence gathering had worked perfectly but something was wrong. Taken together, these reports just did not make any sense; and yet, Han Nakamoto was certain that his people had not been somehow fooled, what they told him about those

meetings must be true. But Han Nakamoto refused to believe that Eireen Sawarov would plot her move to upset the skull investigation in such a clumsy manner. She was far too clever for that. However, if this all was a ruse to mislead them, how could the six leaders of her movement from other districts go along with it? Everything that he had learned through Saren Xian about his private communications with Taras Daley indicated that the latter seriously believed that what Eireen Sawarov shared at these meetings with the other six districts represented the genuine plan. The only explanation Han Nakamoto could think of was that Eireen Sawarov was double-crossing the other district leaders. Nothing else made sense. But how did she do that? They had never been able to get someone into Eireen Sawarov's inner circle, eavesdropping on her had always been difficult. And now, as she was again a member of the city council, it was not just difficult but impossible. It was illegal and if they were ever caught eavesdropping on a member of the city council that would be the end of it, certainly of his career.

While these thoughts circulated through his mind the young woman had sat quietly, looking at the city's security chief. She knew the chief well enough not to interrupt his thoughts, and she also knew that there would be nothing more to discuss. And so, it was. Once Han Nakamoto had registered the polite smile which had appeared a few moments ago on the young lady's face, he thanked her and called his secretary who would ensure that the young lady would leave their secret facility in this district without anyone unduly noticing it. After a while Han Nakamoto himself left the place in the same clandestine manner and arrived about an hour later at the city security head office. There he went to his office, placed a call to the mission chief, left him a message and then sat back waiting for Bran Taliesin to arrive.

The mission chief had been on his way back from Crowden Institute when his buzzer notified him that an urgent message from Han Nakamoto was waiting for him. Reading it he changed his direction from returning to his flat to walking to the office of the chief of security. Things were seemingly coming to a boil he thought. According to Lucy, Manu and Ives, security measures at the institute had been tightened and the quarterly security check which was only due in a couple of weeks had been pulled in. Bran Taliesin had noticed that himself when entering the guesthouse meeting facilities and even more

so when he later entered the institute to meet with its president in her office. The three scientists believed that something must have happened that made it necessary to use this routine security check which was only due in a couple of weeks as a cover-up for something more serious. They could not put their finger on it but thought it might have to do something with the DNA sample of herself which Lucy had submitted, and which had come back with spurious results. A few days later, Manu's DNA sample came back with results as they would have expected them. Manu's DNA deviated from the DNA of the individual from the *Period of False Hopes* by about the expected percentage, indicating a similar mutation rate as present in the DNA of the individual to whom the skull had belonged. When he then commented that this was good because it confirmed their earlier hypothesis of Lucy's DNA having been contaminated, they did not really seem happy that their hypothesis had been proven correct. Questioning them about this, he found that they did not believe in their own hypothesis anymore. Based on discussions they had with colleagues since this incident with the DNA sample, something like that should not have occurred in the first place. Nobody, not even people working with the molecular analysis lab for more than twenty years, had ever heard about any such incident, nothing even close to it. Of course, he had to ask if this could not have happened during sample preparation but even before he had articulated his question, Lucy was already upon him. She was convinced that this could never happen to her. These were beginner mistakes, but not the mistakes that experienced scientists like her, Manu or Ives ever made. Clearly, he had roughed some feathers there but, in the end, they understood that he had to ask this question.

So, what if Lucy, Manu, and Ives were right and sample testing had been tampered with? This and the fact that the institute may not have yet known how this could have happened could at least explain the additional security measures. He could tell, even though she was trying to hide it, that Crowden Institute's president was being evasive when he asked her about the whole thing. She was all too casual about it. Talking to her convinced him that the three scientists may be right in believing that this was not about a routine security measure being pulled in for whatever reason. He could see that there must be a serious security concern behind all of it. But what could that be? Had

Eireen Sawarov's people somehow succeeded in breaching Crowden Institute security. But if so, why did they contaminate Lucy's DNA sample? That just made no sense. Stealing the skull and destroying any research results related to the skull investigation, these were objectives which would serve Eireen Sawarov's interests. But contaminating Lucy's DNA sample? His gut feeling told him that something quite serious must have occurred within the confines of the institute. But he was at a loss to see what that could be. Arriving at the city security station he pushed those thoughts to the side and entered Han Nakamoto's office.

»Han, what is the emergency?«

»Bran, thanks for coming right away. It's about Eireen Sawarov.«

»Have her people finally taken action?«

»No. Exactly not. And that is the problem.«

»But Han, isn't that good for us. We do not want her people to act, right?«

»Yes, but not in this way?«

»You mean that their way of not acting should be a different kind of not acting?«

»If you want to put it this way Bran, then yes. Listen, we know exactly what these extremists are plotting. You know that I practically get a readout of every meeting between Eireen Sawarov and the movement's leaders from the other districts. They are planning something but none of it makes sense. The level of incompetence which these planning meetings reveal is just not something one would ever expect from Eireen Sawarov. For some time, we believed that all of that was just a cover-up and that they only held these meetings to lead us astray while somewhere, in places where we could not monitor them, they would plan the real thing. But I am now certain that this cannot be the case. You see, one of ours is the security chief of Taras Daley, who is only second to Eireen Sawarov in power. Taras Daley has more followers in his district organization than Eireen Sawarov has in hers but since his district is quite a bit more populous, Taras Daley does not have a majority in his district. Hence, unlike Eireen Sawarov, Taras Daley does not control his district council yet. From all we know, he is no real match for Eireen Sawarov, but he certainly has ambitions to replace her as the leader of the

movement at some point. In fact, his ambitions seem to have gotten the better of him as he has been challenging Eireen Sawarov's leadership in recent meetings. So far with no success. From what we know through his security chief, which as I said is our man, Taras Daley understands well that their plan in its current state will result in nothing short of a big blunder. But it looks like this is exactly what he wants because the plan's failure will represent another failure of Eireen Sawarov's leadership. Combined with the council woman's earlier failure to insert herself in the skull investigation at the city council meeting, Taras Daley evidently calculates that this will be enough to convince the movement's leaders in other districts to support him in replacing Eireen Sawarov as the movement's leader. Taras Daley is simply gunning for a potential power grab. All of that taken together means that Taras Daley believes the plan being discussed at those meetings is the real plan and not some kind of decoy. Are you following my argument Bran?»

»Yes, Han I do. And just like you I cannot believe that Eireen Sawarov would execute a plan which a Taras Daley counts on failing.«

»Which leaves only one explanation. Eireen Sawarov is playing this close to her chest and must be double crossing the movement's leaders of the other districts.«

»Are Sawarov's people still trying to get close to Kareem Niagato? From what Carleen Nuratu told me, there has been no second attempt to get close to Manu Orontes.«

»See Bran, this is the other puzzling thing. Nowhere in the discussions during those meetings between Sawarov and the movement's leaders of five other districts was anything like that mentioned. There never was any notion of trying to use Kareem Niagato or any other engineer from the city engineering department's troubleshooter team to gain access to the Crowden Institute's utility level. And neither was there any notion of using one of the young scientists at the institute to get into the institute itself. This is why we at security believe that somehow gaining access to the institute through Kareem Niagato and Manu Orontes must have been part of Sawarov's real plan which she did not share with the movement's leaders in the other districts.«

»You have not answered my question yet, Han. Are Sawarov's people still following Kareem Niagato?«

»No, they are not. And in my opinion, this can only mean one thing. Sawarov's people must have found an easier way to access the institute than to somehow clone the bio-identities of Kareem Niagato and Manu Orontes.«

»But Han, this means that we are now completely in the dark. We have no idea as to how Eireen Sawarov's people plan to access the institute. All we know is that they most certainly will do so and likely soon.«

»Unfortunately, Bran, this is also my conclusion.«

The mission chief was about to say that they must brief the city council chairman and the Crowden Institute's president immediately but before Han Nakamoto could even activate his communication device to call the council chairman's office, the device was already buzzing. Fin, the chairman's secretary was on the line. The security chief must report to the chairman's office immediately. A few seconds later, the mission chief's communicator was buzzing. It was Fin again. The message was the same. The two men looked at each other and quickly left the security chief's office heading towards city hall.

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When Han Nakamoto and Bran Taliesin entered the chairman's office, he was already waiting for them. The chief of security and the mission chief joined the chairman at the small meeting table where Peer Aksun was still scrolling through a few documents on his reading device.

»Gentlemen, my apology for summoning you to my office in such haste. The situation is more serious than we had thought, and it requires immediate action.«

The mission chief and the chief of security, both leaning back in their chairs and waiting for the chairman to continue, had expected that much but the apparent calm in their faces could not hide a certain unease. It was the same kind of uneasiness Peer Aksun had felt when he opened the secure container on his communication device which had delivered Alwyn Maar's message. Looking at the mission chief and the chief of security, he rotated his reading device by one-hundred-eighty degrees and pushed it over the table towards the mission chief and the chief of security.

»Please read for yourself.«

Bran Taliesin and Han Nakamoto moved their chairs closer to each other and began to read the message the chairman's device displayed.

To the honorable Council Chairman Peer Aksun:

Greetings Peer –

We must accelerate the timeline for our meeting. Our vessel is about twenty hours travel time from your city but with maximum speed we will arrive within about 16 hours from the time stamp this note is marked with. You must increase city security and Crowden Institute security immediately such that no one can come and go without city security knowing about it. Once we arrive, I will explain everything to you in detail. You must act now!

- Alwyn

When they had finished reading and looked at the chairman, they did not have to ask the question which was on their minds as Peer Aksun already answered it.

»No, gentlemen, before you ask, I have no idea either as to what this may be about. But what I know is that Alwyn Maar would never send such a message if it were not of the utmost importance that we do as he asks. So, what security measures must we take Mr. Nakamoto?«

Han Nakamoto looked at the chairman. Peer Aksun was on a first name basis with both the chief of security and the mission chief and if they would meet one on one, they would always remain on a first name basis. However, as soon as there was a third person present and even when the chairman was also on a first name basis with that third person, he always insisted on formal address.

»Mr. Chairman, we must close all external transit hubs. To stop anyone arriving by aircraft is simple. We just will not allow landing platforms on our four transit hubs to be moved to the surface to receive landing aircraft. Closing our three ports for subsurface vessels will also be quick. What will take a little more time is to ensure that all emergency exit and entry ports are secured such that nobody will be able to use them.«

»How many of those exit and entry ports do we have?«

»There are nominally eighty-seven of them but a good number of them are out of commission?«

»What do you mean by out of commission, Mr. Nakamoto?«

»Sir, those are older ports which have become obsolete with the city's expansion over the past few centuries. They have been sealed off for a long time.«

»But could anyone still use them,« asked Bran, »are they still functional?«

»I do not know, Mission Chief. Sealed off means that the respective ports on the city side have been physically sealed, probably bolted down in some way. But the ports on the other side of those compression chambers are likely still functional. At the time, those emergency exit and entrance ports were built, their sole purpose was to be able to safely evacuate people and not any kind of vessel. In a rescue event, if someone would, after the required adjustment time, leave the recompression chamber properly equipped for an extended dive they would find inflatable crafts in a series of small chambers next to the door. Activated, each of these small inflatable crafts can carry a few people slowly to the surface so their bodies would adjust to the changing pressure. These crafts also carry provisions for a few days.«

»Mr. Nakamoto,« inquired the chairman, »what about the other exit/entrance ports which are not out of commission?«

»These are just larger and technically more up to date versions of the older decommissioned ones, Mr. Chairman.«

»But Mr. Nakamoto, can they be used not just to leave our city in the event of an emergency but also to enter it if one desired so?«

»Sir, in principle yes, that is possible. One can operate the transition chamber just as well for decompression as for recompression. But which intruder would like to be stuck for a few hours in a compression chamber we can monitor?«

»Oh, you can monitor them.«

»Yes Sir, as I said, they are technically more up to date.«

»If I may make a suggestion,« weighed in the mission chief, »it looks to me as if it would be sufficient to send patrols out to check if any of the decommissioned exit/entrance

ports have been tampered with and as for the regular emergency exit/entrance ports it should be sufficient to monitor if anybody tried to use them.«

»Mission Chief, this is also what I would suggest. What do you think Mr. Chairman?«

»The same as you, Chief Nakamoto. But there is one more thing. In the event an aircraft approaching our city does not have enough fuel on board to get to another city we must plan for an emergency landing procedure.«

»We certainly will make sure of that, Mr. Chairman,« answered Han Nakamoto, unable to hide the beginnings of a smile upon hearing the chairman's remark. Peer Aksun was always circumspect, but he should have known that his chief of security would not just let people drown in such an event. Chief Nakamoto's brief amusement was interrupted by the mission chief.

»What about our three ports for subsurface vessels? We should check what kinds of vessels arrived over the past months and which kinds of passengers they carried; most importantly if anyone stayed back after their vessel left again. Of course, we also need to check who else is to arrive but Alwyn Maar with his mission crew.«

»We will check these things Mission Chief. As for the ports themselves, we will just close them to any new arrivals. Different from aircraft, subsurface vessels approaching our city - other than that which carries Alwyn Maar - will just have to wait until this crisis is over before we allow them to dock in our ports.«

»Good,« said the chairman, »now what about the security of Crowden Institute?«

»Mr. Chairman,« began the mission chief, »I believe they already have a serious security issue to deal with. They will not admit it and surely will not tell us what it is, but I am certain something must have happened. Putting one and one together, it is likely nothing less than a major security breach. I was just about finished updating Chief Nakamoto when your message reached us. You do remember the issue of this spurious DNA sample testing. We both wondered at the time if this really was due to a contaminated DNA sample or someone tampering with DNA sample testing. I am now quite certain that the latter must be the case. There is no other explanation as to what is happening at the Crowden Institute. My best guess is that Crowden Institute security

has no idea how this sample tampering could have happened nor who did it. This is why they pulled in their compulsory quarterly security screening and now use it as a cover to find out what happened. I probed Carleen Nuratu with regards to this hypothesis and even so she calmly denied that any of this is true, I could sense the uneasiness with which she made that assertion.«

»Chief Nakamoto, what are your thoughts on the mission chief's hypothesis?«

»Mr. Chairman, I too believe that something must have happened at the institute which somehow must be related to what we are learning, or better, what we are not learning about Eireen Sawarov's plans. We do not know what that connection is. But it cannot be a coincidence that the Crowden Institute suddenly has a security breach where they are in the dark as to how it happened and who did it while at the same time we are now in the dark as to how Eireen Sawarov's people may try to get into the Crowden Institute.«

»Chief Nakamoto, Mission Chief, I believe it is about time that we change our policy with respect to how we work with the Crowden Institute. As of now, we are handling city security, and Crowden Institute is handling its own security. There is next to no cooperation between the city and the institute in security matters. While that may have been a nuisance in the past it has now become a serious obstacle to the security of the city as well as to the security of the institute. Given the clear and present danger to either one, the city and the institute must work together in addressing what could wreak havoc to the institute as well as to the city. Hence, I have decided to invite the institute's president to discuss this matter with us.«

»I concur Mr. Chairman,« said Mr. Nakamoto, »working together on security matters would very much increase our chances of dealing with the extremists who may well be linked somehow to what has seemingly happened in the institute.«

The mission chief nodded in agreement and with the chairman saying that this settled the matter Han Nakamoto rushed out the chairman's office to implement the security measures discussed.

»Peer, do you really think Carleen will even be able to agree to such a security cooperation. I am not saying she would not want to, but she likely must get approval

from you know who.«

»I guess Bran you mean approval from this organization which stands behind the Crowden Institute. Well, I do not know but somehow, I got the feeling that all of this will resolve itself once we sit down with Alwyn Maar and his delegation.«

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Han Nakamoto and Bran Taliesin were sitting in the observation lounge of the port facility where the delegation was about to arrive. Bran was not specifically fond of traveling in subsurface vessels as even the largest one aroused sensations of constrained space in him. The three nearby docks they were looking down on could hold the largest subsurface vessel any oceanic city operated. Oceanic cities could have built of course even larger ones, but they had drawn the line at a certain maximum length. Presumably, thought Bran, the pump-down times for port facilities capable of housing even larger vessels would have become too long. As it were, even with the massive pumps this facility possessed it would take almost three hours before the water level would be low enough in this sectioned off part of the facility where the vessel was to arrive, before its crew could safely climb out of it and step on the pier alongside which it would be berthed. Bran looked over to the security chief who was busy with his communicator. It was impossible to hide the arrival of such a large subsurface vessel, the best they could do was to make sure that only authorized personnel were working in this huge facility and that a safety cordon was maintained outside the facility. The safety of these unexpected visitors was Han Nakamoto's responsibility, and it seemed as if he finally was certain he would be able to get the visitors to city hall without anyone paying too much attention to it. Han Nakamoto looked satisfied. The tube had been cleared, all stations along the route from here to city hall had been closed. Not too many would even notice that the tube transport system in this section had been cordoned off because it had never been popular with citizens. Only a few people would try to use it and at this time of day even fewer would do so. Of course, this was not quite the welcome which a delegation as important as this one could expect from the city they were visiting. But Han Nakamoto was certain they would agree that safety was at this moment much more important than

comfort. And after all, the tube ride would be a short one.

As the two men sat silently following their thoughts, they could see that an enormous door at the end of one of the piers was ever so slowly opening. I took a little more than twenty minutes for the door to completely open and then another fifteen minutes before they could detect the faint outline of the subsurface vessel which was approaching the pier. After another half hour the vessel was inside the building, floating above the space between two piers. Now it would take more than three hours for the crew of the vessel working with the facility crew to lower the water level in the dock to the level of the pier while the vessel's captain would synchronously empty its water tanks. The chief of security and the mission chief could hear air rushing in as the water level began to drop. It was a long three hours for these two men, which they thought they could have used well to do other no less important things. But the chairman had insisted that both must be there during the whole docking process. When finally, water levels had dropped just below the height of the pier the chief of security and the mission chief walked down to where a gangway was already bridging the gap between the pier and the platform on the vessel's top where the hatch was about to open. The first to come out of the open hatch were two sailors, who did not go to the pier but began to help seven other people to get out of the hatch and across the gangway. After all of them were safely standing on the pier one of them began to advance towards where Bran Taliesin and Han Nakamoto, with some ten security guards, were waiting for them. Bran looked at the approaching group of people, but he did not recognize anyone of them, neither the three people in the lead nor the four others following them. When only a few steps separated them, one of the two in the lead stretched out his right hand at which moment the mission chief stepped forward his right arm outstretched and shook the hand of the delegation's leader.

»Sir, on behalf of our council chairman Peer Aksun, I welcome you to our city. You must be Alwyn Maar, Sir, how do I properly address you?«

»As you just did Mission Chief, as Alwyn Maar,« responded the board chairman with a broad smile, seemingly enjoying the little surprise he just had sprang on the mission chief.

»Mr. Maar, you have me at a disadvantage as you seem to know me, but I do not

know you. But please, let us drop official designations altogether. I am Bran Taliesin, as you surely know.«

»Indeed, even though we have never met, I do know you, Mr. Taliesin, and that is because your accomplishments are known beyond the bounds of your city.«

»Too kind of you Mr. Maar. But may I introduce to you our chief of security, Han Nakamoto.«

Alwyn Maar stretched out his hand to also greet Han Nakamoto and then introduced Aung Lasheen and Mog Sinan to the city's chief of security and its mission chief. Without any further formal greetings to follow, Alwyn Maar pointed to the four people standing behind himself, Aung Lasheen and Mog Sinan, identifying them as their senior technical experts in various fields.

»Mr. Maar, Ms. Lasheen, Mr. Sinan,« said the chief of security, »as instructed by council chairman Aksun we have arranged for your transport from this facility directly to city hall where the chairman will be waiting for you. I must apologize because space on this transport will be a little constrained as for security reasons we must use the tube transport system.«

»No apologies needed Mr. Nakamoto,« responded Alwyn Maar, »safety always will trump comfort. After the long voyage on this subsurface vessel, we are now kind of used to such constrained accommodations so a little more of that will not inconvenience anyone of us.«

»Very well Mr. Maar,« said the chief of security, »if your delegation would then please follow us to the tube system entrance.«

Alwyn Maar could not even remember when the last time was that he had used such a tube transport system. Long ago, transport tubes were the fastest and safest means to get around a city but nowadays most cities used them for the transportation of goods and only occasionally for people to get around. Modern oceanic cities had developed much more comfortable ways to get around within a city's perimeter so people rarely would use tube transport systems anymore. In each section of a tube vehicle only four people would fit in, two facing in the direction of travel and two in the other direction. Any tall person like himself would always struggle to find enough space for their feet.

Alwyn Maar could not help the thought that these transport systems must have been designed and tested by midgets as only tiny adults or small children could seemingly travel half-way comfortable in these tube vehicles. Fortunately, it did not take too long as they did not have to stop at any of the tube stations because evidently all of them had been cordoned off for their safety. After less than fifteen minutes they had arrived at the station next to city hall where they left the transport tube system through a secure exit which was only accessible to city hall employees. In another five minutes, Alwyn Maar, Aung Lasheen, Mog Sinan, Han Nakamoto and Bran Taliesin were sitting around the conference table in Peer Aksun's office while his secretary Fin led the four technical members of the delegation to another room where they were served refreshments. A few seconds later council chairman Peer Aksun came in, smiled and walked towards Alwyn Maar.

They must have known each other for quite some time thought the mission chief as he watched how cordially they greeted each other as Alwyn and Peer. The chairman had told them that he knew Alwyn Maar personally, but he did not tell them that he knew him that personally. When he briefly looked over to Han Nakamoto, he could see that the chief of security was surprised no less than he himself was. But when he thought about it some more, their council chairman and Alwyn Maar knowing each other so well and obviously being on very friendly terms, that could only be helpful. Peer Aksun seemingly also knew Aung Lasheen and Mog Sinan but by how they greeted each other, he knew them less well than he did Alwyn Maar. With everyone having been introduced and sitting around the small conference table in the chairman's office a brief silence descended upon them with three of them looking expectantly at the other three. It was Alwyn Maar who broke the silence.

»Well, gentlemen, I guess we owe you an explanation for all of this. I knew that a moment like this was unavoidable, it had to arrive at some point in time, all we could do was to push this moment out as long as possible. But still, that does not make explaining things easier. The best point to start will be to share with you who Aung Lasheen, Mog Sinan and I represent. The organization we belong to, of which I am the board chairman, Aung Lasheen is the chief policy officer and Mog Sinan is

the chief science officer, is an ancient one. Those working for it have been referring to it as Central ever since, not for centuries but for thousands of years. When this organization was founded a long time ago, its objective was to help coordinate the efforts of individual oceanic cities of which at the time there were still only few. Without such central coordination, something like our oceanic civilization developing would have had little chance of success. As oceanic cities multiplied and the resources they could draw on increased, the coordinating function which Central once had held became ever less important. Eventually the role of Central was reduced to coordinating the activities of the reach facilities located outside of each oceanic city and ensuring that onshore city cooperatives would continue to function smoothly. We know that you recently began to suspect that something like our organization existed and now you have confirmation of that. While we can debate the purpose, usefulness, or secrecy of Central I would ask you to defer this for now as something much more important is at stake. Something which we believe could endanger the very existence of oceanic civilization itself.«

Alwyn Maar had paused, looking at each of the city representatives sitting at the table and trying to judge how they had received the information he had just given to them. He had told them just a little more than they already knew, hoping this would be enough to get them focused on fighting the current and present danger. He knew that they would have many more questions once this was all over and that he would have to answer those. Peer Aksun must have read his thoughts.

»Alwyn,« began the chairman, »you must understand that we will have many more questions once this crisis has been averted. But for now, we must all focus on doing what is necessary to ensure the security of the city and the institute. Based on the note you sent we have already taken several security measures. Also, I reached out to President Carleen Nuratu as it is imperative that we coordinate security measures between Crowden Institute and our city. I hope you will support this.«

»Most certainly Peer. She already alerted me enroute to your proposal, and she has the authority to do whatever she deems necessary for the institute's safety including full cooperation with city security.«

»Excellent, Alwyn. Han Nakamoto and some of his people will be on their way to

meet with the head of institute security right when this meeting is over. I assume you Alwyn, Aung Lasheen, and Mog Sinan as well as your technical experts might welcome some rest before we get to work. Accommodations for your technical experts are ready and you Alwyn, Aung Lasheen and Mog Sinan will be my guests. Everyone in your delegation will have secure communication channels available around the clock wherever you are.«

»Too kind of you Peer. A few hours of rest will do as good, and we can then continue our discussions in the evening.«

17

One of the many ways in which oceanic cities differed from the land-based megacities of a very distant past was the simple fact they did not have hotel accommodation. As some had once put it at Central, citizens of oceanic cities did not travel, only their genes did. The only accommodations an oceanic city required were enough rooms for those traveling on aircraft or subsurface vessels. But because most sailors on subsurface vessels choose to stay in their craft's living areas while a vessel's cargo was loaded or unloaded and people traveling by aircraft were almost exclusively citizens in the employ of industry going back and forth between a city and its respective onshore facilities or mining operations in the continents interiors, there was no need for hotel rooms. Housing dignitaries from other cities usually also was not a problem as they invariably would stay in the guesthouse facilities of the research institute outside the city perimeter. Peer Aksun had thought it best that Alwyn Maar and his delegation would remain in the city and for that purpose he had made some room in his home to accommodate Alwyn Maar, Aung Lasheen and Mog Sinan. Juliet and Peer Aksun had thought about moving into a smaller flat for a while because they had no need anymore for the three additional bedrooms. Their adult children had moved into their own flats quite some time ago. But now, Peer Aksun was glad that they had kept the larger home as they just needed to make a few adaptations for his three guests which city personnel had finished the other day.

What a difference a few hours rest and a good dinner made, thought Alwyn Maar

as he looked at Peer Aksun and his partner Juliet Aksun, mission chief Bran Taliesin, Aung Lasheen and Mog Sinan.

»A most delicious dinner, Ms. Aksun and an even more enjoyable company! I must admit, it has become rare these days for myself, and I guess also for my friends Aung Lasheen and Mog Sinan, to be able to indulge in either of those two pleasures.«

»Truly kind of you to say so Mr. Maar, but please call me Juliet. Whoever eats with us in our home is a friend and so Ms. Lasheen and Mr. Sinan, please also follow suite.«

»I will do so with pleasure Juliet and please call me Alwyn.«

»With pleasure, Juliet. I am Aung. Thank you so much for your generous hospitality!«

»Please call me Mog,« added Mog Sinan who for the most had been quietly enjoying his dinner.«

Looking at the mission chief, Peer Aksun realized the slight awkwardness of the situation with everyone but Bran Taliesin on a first name basis with Alwyn Maar, Aung Lasheen and Mog Sinan. So, he quickly suggested that all of them should be on a first name basis in the Aksun home and with no objections to that their conversation continued through dessert. After jointly taking care of the dishes, the lady of the house retired to her bedroom, and the council chairman and his guests moved to the study. There they sat around a low table leaning back in their comfortable chairs, enjoying their drink. Peer Aksun's study usually only held two chairs, so city personnel had temporarily moved out some furniture and brought in three additional chairs which however made the room look quite a bit smaller than it was. But this also gave it more of a private air. Feeling that it was his duty as the host to get the conversation going, Peer Aksun came right to the heart of the matter.

»Alwyn, Aung, Mog, this room is even better shielded against eavesdropping than my office in city hall. City security has made certain of that. This is our opportunity to discuss things openly. Bran has my complete trust, just as Aung and Mog have yours, Alwyn.«

»Peer, why don't I tell you a little more about Central first? Maybe that will already

answer some of the questions you and Bran must have.«

With Peer Aksun nodding, Central's board chairman leaned back even a bit more, not looking at Peer Aksun or Bran Taliesin, but with his gaze directed seemingly at something distant.

»What I told you this afternoon, as little as that was, was a true reflection of the objectives which have always guided the actions of Central. However, taken in isolation, some of those actions would be difficult to understand for outsiders. Unless, that is, such outsiders had a profound knowledge of the challenges and difficulties our oceanic civilization had to face in its thousands of years of existence. . . «

»Alwyn, please forgive me interrupting you,« said Peer Aksun, »but that sounds quite mysterious, doesn't it?«

»Of course it does Peer. However, there are no better words for what I am trying to say. Isn't that so Aung? Mog?«

»I certainly would have as many questions as you likely will have Peer. Even knowing these things now for many years, believe me, I still have quite a few of them. It is likely best if you hear Alwyn out,« said Aung Lasheen.

»Unfortunately, that is so,« said Mog Sinan, »your reaction is quite understandable Peer, mine would be no different if I heard for the first time what Alwyn is about to tell you.«

»Peer, we have known each other for some time, and you know I am no mystic. The fact of the matter is that at Central we know about things which you will not find in the history books of our oceanic society, let alone being taught in our schools. When our distant ancestors began to build the first oceanic cities, they were confident that this would change the way human civilization functions for the better. And for the most part they were right. However, there are some things inherent in human nature which we take to wherever we live, be it on land or in the oceans. Hence, it was unavoidable that at some point in time our oceanic civilization would also be tested by human conflict. For some time, such inner-city conflict was manageable, but it was only a matter of time before disaster would strike. One of our oceanic cities eventually was destroyed, completely, and many thousands perished with it, there were no survivors. The result of

it was that next to each oceanic city a fortified structure was built which could serve as a lifeboat but also housed an armed security detachment; carrying weapons inside a city was outlawed. The fortified structures outside each city would later become the nuclei from which the research institutions rose which one now finds at these locations. However, there was a third and much more important measure. A decision was made to address the root cause of the problem. First this was done by dispersion of minute amounts of psychotropic drugs in drinking water, a practice which had been used in space travel to quell human aggression in confined environments. That, however, was only a short-term solution. The long-term solution was to alter the human genome ever so slightly to reduce human aggression. Because at the time genetic screening had already become obligatory, it was easy to introduce such changes into human populations. Central's role was to ensure that such changes remained limited and were only introduced once there was the certainty that they would produce the desired positive effect without other negative consequences. Generations after the introduction of these measures civil strife in our societies became unknown. Along with genome modifications introduced to make the human immune system stronger, the total changes made to the human genome of citizens amount to roughly the percentage amount which would have occurred due to natural chance mutations.«

Here Alwyn Maar paused, looking at Peer Aksun and Bran Taliesin, both of whom seemed to be absorbed into their own thoughts. They must think that these extremists were right after all, their citizens, they themselves, all had been tampered with. But Alwyn Maar trusted that while this would likely be their gut reaction on first hearing all of this, both men possessed better judgment. They would eventually understand why what was done had to be done.

»Alwyn, if I understand you correctly,« inquired now Bran Taliesin, »all those changes to our genome amount to little, just enough so that they could be justified as being due to natural chance mutations which we know occur at a somewhat constant rate. But that means that the rest of the human genome has been held in what amounts to an evolutionary stasis. Is that so?«

»Bran, I knew it would not take you long to get to the bottom of it. Yes, that

is so and that is also the probable cause behind the security breach at the Crowden Institute. Someone deliberately sought to bring attention to the fact that about ninety-eight percent of the human genome has not evolved since human civilization moved to a life in the oceans. This was never about this roughly two percent which have changed since Central began this effort. Consequently, this has nothing to do with your extremists as they, being genetic purists, would be concerned about the two percent of the human genome which changed and not the ninety-eight percent which did not change. Moreover, as you likely know, all those changes are fully reversible as they never were allowed to become heritable. Hence, anyone seeking to revert the human genome to what it was before humankind decided to make the oceans its home could do so. Now, that would in a way serve the extremist groups in your city, but I am quite certain they do not know anything about the objectives of those behind the security breach at the institute. However, they still may be useful to whoever is behind all of this.«

»Honestly, Alwyn,« said Peer Aksun, »it looks to me that whoever is responsible for this security breach in the Crowden Institute must be someone in your organization, in Central as you call it.«

»That is also what we think, Peer.«

»And do you have any idea as to who that could be?« inquired Bran Taliesin.

»We do not have proof yet, but Aung, Mog and I believe that it must be our chief legal affairs officer.«

»And I guess one of your board members, correct?« asked Peer Aksun.

»Unfortunately,« replied Alwyn Maar.

»Do you know if this person is acting alone or if he or she has allies in the upper ranks of your organization?«

»We do not believe that anyone else on our board is implicated in this. However, Roan Quam, as this is the chief legal affairs officer's name, must certainly have recruited people in his organization. Quite likely, he has his people placed in the Crowden Institute itself.«

»Peer, Bran, there is also something else you must know. As we sit here, your chief of security has already been briefed on this information and he and the head of the

institute's security should already have devised counter measures.«

»Counter measures against what, Alwyn?« came unisono the question from the council chairman and the mission chief.

»It is best if Mog briefs you on that. Mog, please tell them about the masking capsules.«

It took Mog Sinan only a few minutes to explain to the council chairman and the mission chief the nature of those masking capsules and what had transpired. When he had finished, the mission chief had realized why Eireen Sawarov's people had given up trying to procure access to the institute through cloning the bio-identities of Kareem Niagato and Manu Orontes. They had gained a much more secure way of clandestinely getting access to the Crowden Institute. No need to call the city's chief of security about this. Having received this information earlier than himself, the mission chief was certain that Han Nakamoto would have taken the appropriate measures. The rest of the evening Bran Taliesin updated Alwyn Maar, Aung Lasheen and Mog Sinan on their surveillance status of the extremists and what they thought was likely to happen next. As he did so, Peer Aksun remained mostly quiet, absorbed in his own thoughts about what he had learned tonight.

18

When the council chairman went to bed, careful not to wake up Juliet, he could not sleep for hours. Lying on his back, his eyes closed, he tried to make sense of what he had learned. The way Central's board chairman had presented it, it all sounded logical. But was it? And more importantly, was it right? Had they all been puppets in some twisted chess game whose strings were pulled by this organization which called itself Central? What was real in one's life and what was the result of some secret puppeteer manipulating the strings? Slowly his right arm moved to feel the warmth of Juliet's body. Juliet lying next to him, that was real, his life with her and their three kids, nothing there was manipulated, everything was real, a happy reality indeed, he thought. But what about the genome of their children being altered, just as Juliet's and his genome had been altered before? Did that make them different people? Would he have chosen

a different life if his genome had not been altered, would Juliet have? Would they ever have met in the first place?

Peer Aksun felt as if his mind was descending into a rat hole from where it would be difficult to emerge again. What was true about what he had learned in school? Wasn't the history of oceanic civilizations, as he and all the others had been taught it in their schools, not a lie, a gigantic lie? Had Alwyn Maar this evening not just admitted as much? The city council chairman could not but wonder about what else in these history compendiums would turn out to be a fairy tale, far removed from giving a true account of their society's history. The history of oceanic societies that students learned in the city's schools had been manipulated. That much was a fact. But how about the history of land-based human societies, all that they had been told about the time before the *Great Cataclysm*, the *Great Cataclysm* itself, the *Period of False Hopes* or the *Dark Sky Period*? What of that was true and what not? If Central had decided - and it must have been Central or its predecessors who did so - to manipulate the history books of their oceanic societies, who was to say that they did not do the same with the history of human civilization before it moved to life in the oceans. If they were willing to manipulate history in one instance there was no way of telling where they would stop.

His mind wandered back to the conversation he had with the mission chief in his study several weeks back. Now there could be no doubt anymore that he and Bran had seriously underestimated their own ignorance. Back then they had speculated about their ignorance regarding the vast interiors of the continental masses. Well, that of course was true. But who would have thought that they were just as ignorant regarding the history of their oceanic societies. What did they really know about it? Unlike Central, which via the research institutes attached to them had its tentacles in every oceanic city, they only knew their own city and little else otherwise. As the city's council chairman, he would be traveling every now and then but rarely ever to visit another oceanic city as most such visits were to onshore facilities of which their city was a cooperate member. Of the few other cities which he visited he had never seen much. On such occasions there usually would not be an opportunity to talk to anyone in the city itself but only to people invited into the guesthouse of the respective institute. Yes, there were big conference meetings of

city leaders in their subsector but that always took place in the same research institute, the Haman Institute. Presumably, it was the only research institute equipped with such large meeting facilities; and as he now suspected, it also might be the headquarters of Central. Or at least one of its headquarters because he found it hard to imagine that their subsector lying on the outskirts of their oceanic civilization should be home to the only such base for Central. Peer Aksun could not help the feeling of having been somewhat of a fool. He should have noticed that he never really learned anything about these other cities on such trips except for the project discussions which were all technical. His visits to the city's onshore facilities were even less informative as he only met personnel from his own city, which was usually supervising a portion of a facility and ensuring that the robotic workforce was well maintained and executed the workload according to schedule.

The only people in his city - and thinking about the city he also included the Crowden Institute - the only citizens who would know a little more about the reality of oceanic society were the institute's president and the city's mission chief. Bran's travels had taken him far and wide, but most of it was travel over land. He had always wondered about this, but the city's mission chief did not like to go on ocean bound expeditions, he much preferred to spend his time traveling on overland expeditions on one of the continents. He had always wondered why that was so. However, whenever he brought up the topic, always jovially of course, Bran had been evasive. Bran was clearly seeking answers. But answers to what? For many years he had thought that this was all about Bran trying to find out what really had happened on the day when Hakan disappeared. But in recent years there seemed to be more to Bran's search than that. The chairman could not put his finger on it but there certainly was more. Maybe Bran felt that something was wrong, not right in the sense of what they had learned today. As for Carleen, she must always have known about the existence of Central, in fact she must have been recruited by Central when the institute was founded. How much of what they had learned today did Carleen already know for a long time? All of it? Certainly, given the secrecy of the organization she could have never talked to anyone outside Central about it and he doubted that this would be a suitable topic for discussion within Central. If the current

emergency had not arisen, the chairman was certain that they may have never learned about what Alwyn had told them tonight. All of it would have continued just the same way for many more centuries, until, as Alwyn had frankly put it, the game would be over, and they could not hide certain things anymore without putting the very existence of their oceanic civilization at risk. Peer Aksun was convinced that Alwyn Maar was no puppeteer. His must have been a terribly difficult balancing act. Alwyn Maar's concern certainly was for the welfare of oceanic society and a long time before he assumed the leadership of Central the decision had been made that to ensure this welfare, citizens must be manipulated to a certain extent. What would he have done in Alwyn's position, given the choice which Alwyn constantly must face between deceiving people and the welfare of society?

And then there were Eireen Sawarov and her followers. Peer Aksun never liked her much because of what she stood for. It was quite unlikely that Eireen Sawarov knew anything about Central or what this organization had shared with the city today. But had this admission of Central today not vindicated the council woman somewhat? Clearly, nothing in this admission made the demands of Eireen Sawarov and the discontent she and her followers were stoking among citizens any more acceptable. However misguided the council woman and her conspiracy theories were, was she not proven right in some way? After all, the concern she and her followers voiced, that they all were being manipulated to become something that they did not want to become, did not sound so outlandish anymore. If the council woman ever learned what he now knew she would have a field day. With snap election forced by public discontent which she and her followers would certainly incite, she probably could be council chairwoman within a month. Not a very pleasant thought at all. But how could one prevent such things from happening if the truth ever leaked out? Maybe that is what this is all about, someone else using the council woman as a puppet. And was this Central board member Roan Quam pulling the strings? When the chairman finally fell asleep these gloomy thoughts slid from his conscious mind into his unconscious only to surface again in his dreams.

The Heist

19

Lucy had been watching Song-Ho for much of the last hour as her colleague was putting the finishing touches to the skull model. Song-Ho had not spoken a single word since she had entered. Even though he was conscious of Lucy's presence he remained exclusively focused on making some minor corrections to the facial expression of the human head in front of him. The human's head was still bald, and he had not attached eyebrows to it yet. For the most part, his work was guided by what the DNA of this human subspecies told them about his general looks. People had always been seeking to improve the looks of their offspring to correct for what they thought to be their own imperfect features which they did not want to pass on. Eventually, however, it was not all about looks but broadened into improving certain other bodily features through DNA modifications. The latter were of course different for males and females. But all of that happened in an age long gone by. The desire of a few – usually the wealthiest – to make their offspring smarter and stronger than the others undermined the structure of society much more than any material inequalities had done before. The result was that sometime towards the end of the *Great Cataclysm* such DNA modifications were banned and those who had been altered by just too much had to live out their lives on secluded islands where they eventually became extinct. At the time, genomics had not yet been sufficiently developed to evade some of the frequent side effects accompanying such DNA alterations towards smarter and physically stronger humans. The most prominent side effect was infertility. Hence, after being exiled it was only a matter of time before these super humans, as they called themselves, living on islands heavily shielded by marine forces from contact with the outside, would eventually become extinct. The knowledge about such DNA modifications was, however, not lost. Rather, science expanded this knowledge over time to the extent that thousands of years later Song-Ho had a fairly good idea as to what this human subspecies to which the skull belonged must have

looked like, just by studying its DNA.

The little which could not be extracted by DNA analysis, Song-Ho filled in using facial restoration techniques even more ancient than any of the DNA modifications used thousands of years ago to produce smarter and physically stronger human beings. That included things like judging the strength of muscles such as the ones which must have powered the massive lower jaw of that species so it could make use of its enlarged molars. The facial expression of this human subspecies was of course determined by its skull shape, or better a perfect replica of it, onto which muscle and tissue of the correctly calculated thickness were crafted. While the result of Song-Ho's work was completely guided by science, there were small aspects where he had a little artistic freedom. Like whether to give this human a stern or a friendly expression. In agreement with Lucy, Song-Ho had decided to give the human a little twinkle in the eye and to just ever so slightly raise the corners of his mouth that one could not help the feeling that this human was about to greet those looking at him with a welcoming smile, even though he never did. Seemingly being satisfied with his last corrections Song-Ho took a couple of steps back to look at his work from a little greater distance and then questioningly glanced over to Lucy.

»Marvelous Song-Ho, just marvelous. The way this guy is looking at me I cannot help but wish to be friends with him.«

»Really, Lucy?«

»Most certainly Song-Ho! You have done a wonderful job to bring him alive, figuratively speaking.«

»You know, Lucy, after reconstructing his face over several weeks, I almost feel as if I had known this guy. I can't help wondering what he would have thought had he known that some twelve thousand years after he died, people would be looking at a reproduction of his face.«

»I did not know that you were a philosopher,« said Lucy teasingly, but maybe it takes a little bit of philosophy to give him such a beautiful face. I just wish we could also give him a voice!«

»Well, Lucy, you know that this is impossible. If we had his vocal cords, then yes, we

could do that. But they just do not preserve for this long. Even under the best conditions, usually no trace of them is left after being buried for a few hundred years.«

»It is not so much the sound of his voice I would be interested in but rather more in what he would have to say to us. Now, Song-Ho, I guess I am the philosopher.«

With her last words almost drowning in giggling to which Song-Ho added his no less giggling laughter they only realized that Fjodor had entered the room once he stood in front of them.

»Hm, it looks like our new human subspecies is quite the entertainer,« said Fjodor, himself smiling from ear to ear, »what joke did he tell you?«

»We were wondering about what he would have to tell us if he could speak,« said Lucy who was first to recover from her bout of laughter.

»HE certainly is not able to speak,« said Fjodor, pointing to the facial reconstruction of their human cousin, »but his subspecies certainly could speak.«

»What are you saying Fjodor? For all that we know and do not know, members of this subspecies might well be around today, somewhere hidden in the vastness of a deserted continent.«

»Of course, you are right Lucy, this could or could not be the case. We do not know either way. But back to language capability. This subspecies possessed, or let me correct that, may still possess the same specific mutation of the FOXP2 gene as we do. No surprise there as this subspecies and ours have the same ancestor. Guaranteed, this FOXP2 gene is only the prerequisite for a species such as ours to possess the kind of speech capability we have. But a comparison of all the other language genes between our species and this human subspecies shows that they are pretty much identical. And after all, why in the first place should this human subspecies have lost the language capability its ancestors possessed? So, I believe it is safe to say that this human back there, if he were alive, could talk to us in the same way that we could talk to him. Provided of course that we spoke the same language, which for other reasons seems quite unlikely. When people are isolated for a long time, not just genes drift but language also drifts. Most likely, if descendants of this human being were still around today, they would speak a language as incomprehensible to us as ours would be to them. But look, I have not come

here to talk to you about the language capability of this human subspecies. Ives and I have some new results that we wanted to share with the team.«

As an added security measure, meeting invitations were no longer sent through communication devices. Seemingly, as Lucy had offered as her explanation of this to Manu and Ives when they were told about this change, the institute feared that using communication devices was not secure enough anymore to schedule meetings. Walking around and telling people to attend a meeting was a bit more cumbersome but, in this way, it could be ensured that only those who were invited knew about a meeting taking place. And as Manu had observed, the nice side effect of this new way of inviting people to a meeting was that everyone being asked to attend invariably showed up. Evidently, it was more difficult to turn down a meeting invitation delivered in person than to ignore such an invitation delivered through a communication device. When they walked into the meeting room everyone else was already present with Ives seated in the front of the room ready to share his latest results.

Ives got up from his chair, looked around, nodded to a few people, smiled at Lucy and then began. Right at the beginning he surprised his listeners by telling them that he would not be talking about the sediments in which the skull had been found. Whatever they could have learned about those sediments they already knew. No, this time it was not the sediments which would be the center of attention but the teeth of the human skull they had found. The enlarged molars and dental wear patterns ground into the upper and lower teeth bite already had told them that this human had been sustained by a hard fibrous diet. Ives then gave them a brief overview of how dental analysis had been used in archeology for a long time, for example to trace the spread of agriculture during the early history of their species. Since then, he told his audience, this technique had been much improved notably through the introduction of mineral fingerprinting, also a long time ago. Provided someone had not moved around too much in their lifetime, modern day analytical methods could, using this mineral fingerprinting method, practically pinpoint the location where such a human had spent his life. As it turned out, this mineral fingerprinting analysis indicated that the human to whom the skull belonged must have lived for most of his life in a central mountainous area of the continent once known as

Africa. This location, being more than one thousand kilometers removed from where the skull was found, the question was of course how the skull got there. Reviewing geological, hydrological and topographic map data for the last twelve thousand years which connected what must have been the home region of this individual with the site where its skull was discovered, they found the most likely explanation. Some twelve thousand years ago, heavy seasonal rainfall most likely turned what usually were small creeks or for much of the year even dry riverbeds into streams. It was the sediments deposited by one of those streams in which the skull had been buried. Ives had watched how during his presentation the facial expressions of most of his audience had changed from just being interested to being surprised and as far as he could tell, pleasantly surprised.

»How certain can we be that this location you identified as the individual's home is really that?« was the first question raised by several in the audience at once.

»Very certain,« came Ives' confident answer, »there is no other geological match to the mineral fingerprint of this ancient human on the whole continent. So, unless there existed an even better match which somehow magically was swallowed back into Earth, we have identified this human's homeland.«

»When do you think this skull was somehow transported from where this human died to where it was found, pretty much after the individual had died or much later?«

This question, coming from one of the older scientists of the institute, Ives handed to Manu as he was more of an expert regarding such things.

»We cannot really say for sure because there are a number of factors we have to consider,« Manu began. »First, there are the burial customs of the people this individual belonged to. If their custom was to bury their dead in shallow graves, the bones of this individual could have been carried away only a few generations after he had died, maybe even earlier. If on the contrary, these people had the custom of interring their dead at a much greater depth, the skull would likely never have made it to where it was found. Then there is the age of the sediments in which the skull was found. The youngest age we could attribute to these sediments is around ten thousand years. Hence, at maximum, transporting the skull from the individual's homeland to the site where it was found could

have taken around two thousand years. But it could also have been only one thousand years or less, we do not know that.»

There was no more question after that for Ives or for Manu and it was time for Fjodor to give his update on the latest result from the DNA analysis of this individual. Before revealing these latest results Fjodor however touched on what was called DNA based physiological reconstruction. It was the holy grail of genomics to reconstruct a human's physiology from DNA data, in essence seeking to create an artificial homunculus whose every little detail could be inspected almost as a real-life organism using hologram techniques. Over time, considerable progress had been made, much of it learned initially through crafting individual organs to be used in organ transplantation. Much of a human's physiology could in such a way be reconstructed. And this technique had also guided Song-Ho in the physical reconstruction of the face of this human individual. But one part of the human body remained problematic in such reconstructions - the human brain. Despite the great difficulties involved, scientists had never given up on their efforts to also be able to construct virtual human brains from what one could refer to as the brain's DNA blueprint and were rewarded with some progress. Progress, which according to Fjodor was sufficient to enable them to reconstruct the brain of this human subspecies. There was complete silence in the room after he had claimed so, the silence of doubters and the silence of those who hoped Fjodor was right. Unfortunately, he had to disappoint both a little. Yes, Fjodor continued, they had learned something new about this human's brain using DNA based physiological reconstruction; and no, it was not enough to give them the complete picture. After this somewhat lengthy introduction Fjodor moved towards sharing their latest DNA analysis results. They now had a good idea as to the functional difference of the enlarged occipital area of this person's brain compared to their own. Seemingly, this human subspecies must possess superior imaging processing capabilities, enabling this species to make sense of things which would be barely visible to an individual of their own species. A joker in the audience threw in the question of whether that human had natural night vision. To which Fjodor, with equal humor responded that this was quite likely the case. It was not just that the occipital region of this subspecies brain which was enlarged and likely could process images more

efficiently than their brains could do. He also must have had different light receptors, much better adapted to see in the dark than those of their own species.

There were no questions for Fjodor as everyone in the audience was somewhat self-absorbed into their thoughts. Nobody noticed that with Fjodor moving back to his seat Manu was again in front addressing the audience.

»To say the obvious,« Manu began, »there must be a connection between the results reported by Ives and Fjodor. Why would a human being need a much better night vision, not to speak of improved imaging processing capabilities. The logical answer is of course that human beings living below the surface in subterranean homes or humans living inside of mountains would need such better night vision – if they had no way to sufficiently illuminate their otherwise dark homes. If that were so, then this human skull which we discovered belonged to an individual of a civilization not possessing the technology to create artificial lighting. Whatever else should characterize this civilization, it was technology-wise still primitive, or at least must have been in such a state for a long time, long enough for such evolutionary changes to evolve.«

Manu's last remarks concluded the meeting but not the discussion which had ensued among the scientists about what they had just learned. Again, Lucy could only wonder what an exciting time it was to be a scientist and be part of all this.

20

»Are we ready, Kimal?«

»Yes, we are Eireen. We can move the moment you order us to do so.«

»Excellent Kimal. The skull investigation should be completed in a few days and then we will move. But until then, we need to soothe our comrades in the other districts and more importantly, we must find out more about our new friends.«

»I am concerned that Taras Daley will become too suspicious for his own good,« said Kimal with a somewhat wry smile.

»No need to worry. Daley has swallowed the decoy, hook, line and sinker. Did you not see his salivating face when in yesterday's meeting he sugar coated the ingenuity of "my" plan. He wants to believe that our decoy is the real plan because he knows that such

a plan must invariably fail and as it does, it will be his pretext to ask for my resignation. His ambition is blinding him, just as I had expected it would do.«

»Yes, I saw that. But Eireen, how will we handle him once we have acted, and he finds out he has been duped all along?«

»With our plan being successfully executed, I will be untouchable, there is nothing he will be able to do. Have you noticed the distance the other leaders are keeping from him as well as from us. Why do you think they are behaving this way? Because they are waiting to side with the victorious party and that will be us. With all districts on my side, it will be my turn to either cut down Taras Daley's ambitions to size or replace him completely. There won't be much he will be able to do to prevent that. But back to our new friends, what do we know about them?«

»Very little Eireen, or frankly nothing.«

»Could you trace the person who made contact with you?«

»Not yet. When we were first contacted, we were not prepared. But then when the meeting took place to test a masking capsule we followed the woman who had brought the capsule. Unfortunately, she entered an area where only city employees could get into, and we lost her there.«

»Well, that at least tells us that this person must have some kind of clearance from the city to get into such a restricted area. Maybe the person is a city employee?«

»We are already checking that, Eireen.«

The council woman was silent for a few moments. She must be on to something, Kimal Abuno thought, because the way she was currently looking, this very typical concentrated facial expression of hers, usually preceded Eireen Sawarov coming up with a new approach which possibly could lead his investigation regarding their new friends in a new and fruitful direction.

»Kimal, what about the delegation which arrived in the city a few days ago, any news there?«

»We do not know yet who they are because we cannot get close enough, but we know where they come from. One of our people at the port facility has managed to look up some of the documents regarding their vessel. It said nothing about the passengers

but piecing together some of the data in those documents we are now quite certain that this vessel came from Haman Institute.«

»The Haman Institute you say. And you are certain, Kimal?«

»Yes, why do you ask Eireen?«

»Didn't you know that Hakan Kassius had been associated not just with the Crowden Institute but also with the Haman Institute?«

»No Eireen, I did not know that.«

»Well, then you probably do not know either that the Haman Institute is considered the senior of the two institutes. I think all of this has to do with the recent security breach at the Crowden Institute which you told me about.«

»You mean our new friends offering to help us as well as this delegation from Haman Institute arriving in the city are related to this security breach?«

Yes Kimal. Of course, I do not know that this is so, but I have a strong hunch.«

»Could that mean our new friends are also associated in some way with this Haman Institute, or not?«

»Quite likely. But I am sure Kimal, you will find out if that is so. For us, it is more important to know our friends than it is to know our enemies. If, however, our new friends are in the Haman Institute there is no way for us to get close enough to them to understand who they are and how much of a friend they really are. Our only option is to lure them to our city. Kimal, we must find a way which will force our new friends to visit us. As for the delegation from the Haman Institute, I am quite certain that they are not our friends, but we also need to know more about them. I have an appointment later today with the council chairman where I will probe him regarding that delegation. I am sure he will squirm a little and be evasive as he can, but I still must try.«

»We know that three of the delegation, two men and one woman are Peer Aksun's guests, and the four others are staying at a secure city facility. We tried to eavesdrop on their conversations a few days ago but seemingly the chairman's home must have received upgrades from city security, hardening it against eavesdropping.«

»Were you able to get a visual on these three people staying in the chairman's home?«

»Yes, Eireen. As I said, two are men and one is a woman, all three of them must be in their late fifties or even in their early sixties.«

»Then it looks like the Haman Institute sent not just a delegation but some of their senior executives. That is good to know. Kimal, you must leave now, I need to prepare for my meeting with the council chairman. We will see each other again later tomorrow.«

As Kimal Abuno left her office, the council woman went back to her desk and began to look through several documents on her reader which she earlier had retrieved from city archives. If anyone could have looked over her shoulder, that person would have realized that the council woman was looking through travel documentation of city personnel, and especially seemed to be interested in anyone having traveled to the Haman Institute over the past years, or to be precise, since the disappearance of Hakan Kassius. After working through the documents for roughly an hour she leaned back and a few moments later she was on her way to meet the council chairman. She was in a good mood.

The council chairman was already sitting in one of three comfortable chairs spread around a small low sitting table which he used for one-on-one meetings. When the council woman was led in by his secretary, she could see that it was not just her who was in a good mode. The council chairman greeted her with what looked much more like a genuine than a social smile. Sensing the chairman's good mood her defenses immediately went up as she sat down.

»Council Woman Sawarov,« began the chairman, »it has been several weeks since we last saw each other. How are you?«

What is he up to with all this friendliness, he can't really mean it, can he, went it through Eireen Sawarov's mind.

»Chairman Aksun, it has been precisely seven weeks since you shut me out at the council meeting from being briefed on the skull investigation.«

»Council Woman Sawarov, you know I have no personnel agenda there. The council would be happy to share whatever information there is on the skull investigation. It is certainly not you but the people around you which we cannot trust.«

»But Chairman Aksun, it is those very people you seemingly mistrust who elected

me to represent them, and they have a right to know. Frankly, I as a member of the council have the right to know! Do you not agree with that?»

»Not at all Council Woman Sawarov. But you see, your people leak sensitive information, and we cannot have any of that or there will be chaos. Everything with respect to this skull investigation is confidential, the city council has decided so. You were there. And confidential means such information will only be available to those who will keep it confidential.«

»Are you insinuating that I am leaking confidential information!«

The council woman was leaning forward, beaming her fake smile frontally at the chairman who could sense anger pouring out of these dark eyes looking at him. It is such a shame, he could not help thinking, that in some ways this woman was likely one of the smartest people he had ever met but her mind was clouded with righteousness, preventing her from becoming the person she could be. Had she only known that she was half-way right, he wondered how her facial expression would change.

»Chairman Aksun, is everything all right?«

»I apologize Council Woman Sawarov, my thoughts wandered. Where were we?«

The council woman was somewhat at a loss, she never had seen the council chairman this absent minded.

»You were accusing me of leaking confidential information!«

»Oh, yes. But Council Woman Sawarov, I am not accusing you to leak confidential information. We have proof of it. Mind you, we cannot relieve you of your office because of that but it gives us sufficient grounds to exclude you from receiving confidential information in the future.«

»What proof do you have!«

The council woman had almost shouted these last words at the chairman, but she knew that he had already beat her. It is always best to cut one's losses, she thought, but admit to anything she would not.

»Please Council Woman Sawarov, spare both of us the embarrassment of having to show you what you must know you did. Instead, please tell me why you came to see me. I assume this is no courtesy call, or is it?«

»This is no courtesy call; you are correct Mr. Chairman. We have visitors in the city, a delegation from the Haman Institute as I have heard. Why are they not being introduced to council members?«

»For the simple reason that their visit to the city is private and that their official visit is to the Crowden Institute and not to the city. If you wish for an official introduction you must turn to Crowden Institute's president.«

»And Mr. Chairman, whom is this delegation visiting in private?«

»Well, Council Woman Sawarov, that would be me. They are friends of mine.«

»Friends of yours Mr. Chairman, from the Haman Institute?«

»Council Woman Sawarov, I am sure you already know that I have visited the Haman Institute several times in my official function as the council chairman of this city. Is it so unusual to have friends in the Haman Institute?«

»Well, nobody else seems to have friends there. You would not bother to tell me the names of your friends, would you?«

While the chairman had expected that she would eventually ask for the names of the visitors the audacity of this woman to always extend herself to the point where she must know that it was obvious to anyone why she wanted to know those names still surprised him.

»Unfortunately, Council Woman Sawarov, I cannot give you the visitor names as they have asked to treat their visit as completely private. I fear they must have heard about your movement and being scientists, they prefer not to become targets of your people's righteousness. And I must warn you not to interfere with them in any way. Right now, your office still protects you but if anything happened to these visitors and it could be traced back to you, you and your key people would have to leave the city.«

»You are threatening me with exile Mr. Chairman.«

»Nobody is threatening you Council Woman Sawarov. We both are subject to the laws of this city, and they are quite clear in that regard.«

»Thank you, Mr. Chairman, for your time.«

Council woman Sawarov was already half-way out the door when she spoke these last words in the direction of the chairman. She clearly felt that there was something

different with chairman Aksun, but she could not put her finger on it. She had not really expected that he would tell her who the visitors were. Kimal Abuno would have to find that out one way or the other. Why was the chairman friendly to her in a way he had not been before? At moments it seemed to her like he had talked to a different woman sitting there but there was no one else but she herself. Strange.

After the council woman had left his office chairman Aksun could not forget the anger he had seen in the council woman's eyes the moment when she had lost her emotional control. This woman might be more dangerous than he had been admitting to himself. There may be precious little time left to stop her.

21

A couple of days after the council woman had left the chairman's office wondering about what had changed with council chairman Peer Aksun, Taras Daley was waiting in the interrogation room of city security for someone to give his statement to. It had not been easy to arrive here unnoticed, but his security chief was up to the job. He could not help thinking that Saren Xian was a lucky pick for his security chief; he could not have chosen better. For a long time, he had to listen to Eireen Sawarov's complaints about his inability to recruit a capable security chief. She clearly thought highly of her Kimal Abuno and had he not known better he would have thought that she had an affair with her security chief. One of the first jobs he had entrusted Saren Xian with was to monitor both but unfortunately, he could find no evidence substantiating an affair between Eireen Sawarov and her security chief. At the time that was quite a disappointment as he had already envisioned himself at one of their meetings, accusing her of such a relationship with her security chief in front of the movement's leaders. For a moment, this disappointment had tempted him to replace Saren Xian, but he was quite happy now that he had not done so. Saren Xian had proven himself to be quite the equal of Kimal Abuno, if not more.

Distracted for a few minutes by such thoughts, Mr. Daley's mind returned to where he found himself momentarily. Looking at his watch he became concerned, maybe even a little angry. They obviously knew who he was, that much was clear to leader Daley,

so why did they make him wait? Maybe he had happened to arrive at city security at a particularly inconvenient time when no sufficient authority was available to listen to him. But leader Daley was mistaken, because while he was sitting there, microphones and cameras recorded everything. Behind a one-way mirror, the chief of security was about to brief the mission chief who had hurried to the city security office on short notice.

»What do you think this is all about Han?«

»He walked into our facility about an hour ago and has not said a single word since then but that he wants to talk to the chief of security only and to no one else. Frankly Bran, I have no idea why he wants to talk to me. But clearly, he will only talk to me, I mean to me alone. I thought it was best you listen to our conversation. Maybe you will be able to make sense of it.«

Han Nakamoto entered the interrogation room with the kind of gravity which was the due of a chief of security. Judging by the facial expression of leader Daley, he had clearly registered who had come to see him.

»Finally, Security Chief! I already thought you were caught up in some important business of yours and would not have the time to see me.«

»Chief of security, Mr. Daley, it is chief of security and not security chief. And yes, it took a little time to free myself from other duties. Mr. Daley, what is so important that you must speak to me and not to one of my officers?«

»Because it is a delicate matter Chief of Security. Too delicate to discuss it with anyone else but yourself.«

»Mr. Daley, please leave it to me to judge the importance of the matter you are referring to. So, what is this about?«

»I am sure, Chief of Security, that you know about my affiliation with a certain movement which brings me in frequent contact with council woman Eireen Sawarov. Well, while there are certain things Ms. Sawarov and I agree on there are other where we do not agree. And it is with regard to one of those matters where Ms. Sawarov and I disagree, that I must talk to you.«

»Please continue Mr. Daley, you have my attention.«

»Very well Chief of Security. You see, one matter where Ms. Sawarov and I disagree

is about the means we must employ to achieve our objectives, with which - I am confident - you are familiar with. Isn't that so?»

»As your movement makes no secret about that, yes, in a general outline, we do have a good idea what your movement seeks to accomplish Mr. Daley.«

»I thought so, Chief of Security. And by coming here I want you to understand that I am not betraying our movement as I fully support those objectives. However, I do not approve of the means Ms. Sawarov intends to employ to bring us closer to the realization of those objectives. You must know, I am a peaceful man, and I abhor violence.«

»So, are you concerned that there will be violence, Mr. Daley? Can you be more specific?»

After this invitation to betray his fellow leader Mr. Daley gave a detailed account of the plan, which he believed the council woman would be executing within the next days. Han Nakamoto listened carefully to Mr. Daley but could not detect any differences between what Taras Daley told him and what they already had learned through the services of Taras Daley's security chief. The chief of security acted as if he was hearing all of this for the first time. When Taras Daley had finished, Han Nakamoto said nothing at first and then continued to say nothing, but just kept looking at Mr. Daley who eventually could not endure the silence any longer.

»Why don't you say anything Chief of Security? Is all what I told you of no interest to you?»

»Not at all Mr. Daley,« came Han Nakamoto's response after a few more moments of silence. »I am just wondering what the reasons could be for you to tell me all of this.«

»The reasons for telling you? Did I not tell you that I abhor violence?»

»Yes, you told me so, Mr. Daley. But I very much doubt that this would be sufficient reason for you to betray your movement.«

»Chief of Security, I am betraying Eireen Sawarov but not our movement. It is Eireen Sawarov who betrays our movement by planning such violent action and not I!»

»That may well be so Mr. Daley. But who would believe someone who betrays those he has sworn allegiance to?»

There was silence again as Taras Daley's mind was desperately working to find an appropriate response to Han Nakamoto's question. Eventually, Mr. Daley's facial expression could no longer betray the appearance of a tentative smile. Seemingly something had surfaced in his mind, something which he now happily grabbed.

»Chief of Security, don't you see, this is all semantics. When something bigger is at stake, when lives are at stake, one must make difficult choices. I had to choose between Eireen Sawarov and the movement, and I chose the movement.«

»But Mr. Daley, is Eireen Sawarov not the movement, are they not one and the same?«

»Looking at it as an outsider, Chief of Security, maybe that is what it seems. But I assure you, this is not so. Even though Ms. Sawarov certainly would wish this were so.«

»Mr. Daley, for the sake of argument, let us assume for now that your motivation to come here is as you say. What is it then which you expect in return for informing us about Ms. Sawarov's plans?«

»Chief of Security, if you can ensure that there will be no bloodshed, and nobody will be hurt this will be my return.«

»Mr. Daley, to be honest, I am a little surprised by you being so altruistic. Are you sure that is all there is?«

»Most sure, Chief of Security, most sure!«

»Well then, so be it. I must thank you Mr. Daley for your service as a citizen. Not everybody would do as you just did, act for the better of the people.«

Without noticing the irony in Han Nakamoto's voice. Taras Daley left the security office being convinced that he rendered city security a service for which he would at some later time be able to call in some favors while at the same time making certain that Eireen Sawarov's plan would not just most likely fail now but must surely fail.

»What do you make of it, Bran?« asked Han Nakamoto as they made their way to his office.

»He did not tell us anything we did not already know,« replied the mission chief, »that may have been intentional or he himself may not know more.«

»And which way are you leaning?«

»Frankly Han, this guy is an intriguer. He probably would betray his own mother if it suited his purposes. He is quite cunning but from what I have observed, not equally intelligent. I can see why council woman Sawarov does not trust him and why she possibly is trying to rid herself of him. Don't you agree?«

»As it is Bran, I very much do. He is, as they used to say, an opportunistic slimeball. And you have not seen half of what this man is capable of, you should listen to Saren Xian one of these days. But back to this interview. Unfortunately, we find ourselves in the same spot as before. We still have no idea what the real plan of council woman Sawarov is.«

»We may not know anything more about Eireen Sawarov's plan. But Han, we are not in quite the same position as before because now we are certain that Mr. Daley wants to upset Eireen Sawarov's plan at all costs even at the cost of having to betray his movement. That is something which we can use once Ms. Sawarov's plan succeeds, which it must, as you and I know. How far are we in our preparation to ensure the council woman's success?«

»Everything is in place Bran, and if everything works out, nobody should come to harm.«

»Perfect, Han! Then we must have everything in place to protect Mr. Daley and ensure that he continues as the movement's leader in his district despite Ms. Sawarov likely moving against him once her heist has been successful.«

»We will be ready for that. But there are a lot of moving pieces on the board, and we may not succeed in splitting the movement in this way.«

»But try we must Han, try we must!«

»We need to hurry Bran; we are late for our meeting in the Crowden Institute. I know you don't like it and neither do I, but we must take the tube to get there on time.«

22

When the city's mission chief and its chief of security entered the meeting room in the institute's guesthouse everyone else was already seated around the table. The city council chairman, the institute's president and the three representatives from Central. It was the same meeting room in which several weeks earlier it first had occurred to the mission chief that an organization such as Central must exist. On the table sat two of the devices the city and the Crowden Institute used to protect private conversations. Meetings in this guesthouse meeting room were now safer than meetings anywhere inside the Crowden Institute itself. In the guesthouse security was taken care of in a good old-fashioned way and currently, there was nobody anywhere in the guesthouse other than the people in this meeting room and enough security personnel to guard all entries. Since one could not really be sure anymore of who could be trusted, no support personnel were present, not even the secretary of the institute's president. Over the past several days all of them in this room had become acquainted with each other, formal greetings were discarded as everyone was on a first name basis with everyone else. After Han Nakamoto and Bran Taliesin had taken their seats, the city council chairman thanked everybody for their hard work since the city and Crowden Institute had joined their forces and gave Carleen Nuratu the floor.

»Thank you, Peer, I will make this as brief as possible, but it still will take time. So please, do not hesitate to interrupt me with any questions you might have. I will start by giving you an update on the skull investigation which as of yesterday has been successfully concluded. We are now certain that this individual whose skull was discovered a little over two months ago has lived some twelve thousand years ago. But not where the skull was found but a further thousand-one-hundred kilometers inland in a mountainous region located deep within the continent formerly known as Africa. This subspecies has evolved unique capabilities which makes it highly likely that the people to whom this individual belonged must have spent much of their lives either underground or inside the dark caves of mountains, or both. The diet of this individual indicates that his people were not meat eaters so they must have had other sources of protein which we however could not identify as there were insufficient traces to do so. Our scientists believe that, at the time

this individual was alive, his people belonged to a technology-primitive species. However, there is evidence that individual members of this subspecies had similar or even better cognitive abilities than our subspecies.«

»Carleen, what makes your scientists believe that this human subspecies might have been, cognitively speaking, superior to ours?« asked Alwyn Maar.

»They came to this conclusion because of the enlarged occipital region of this human's brain. The advanced imaging processing capability this indicates to our scientists could well make these people better problem solvers than we are. Alwyn, just consider how our cognitive capabilities might improve if we had an additional processing capability helping us to make sense of complex images or configurations which otherwise would be meaningless to us.«

»I see Carleen, this may indeed then be so,« said Alwyn Maar.

»Because we did not find any other bones, we have no direct evidence about what these people may have looked like, how tall they were or how strong they were. However, DNA based physiological reconstruction tells us that individuals of this human subspecies must on average have been a little shorter than our species but also quite a bit more muscular. Of course, if this species belonged to a technology-primitive species, greater physical strength is to be expected but it looks like a bit more than that must be the case. This individual possessed not just a physically better trained body but a genetically stronger one.«

»You know Carleen, of which species this reminds me,« interjected Mog Sinan.

»I do Mog, and just like you our scientists also initially believed there might be some evolutionary parallels to the human species usually referred to as Neanderthals. But they concluded that it was more a case of evolutionary analogies than evolutionary parallels. They argue that given the same kind of environmental constraints, evolution will tend to find similar solutions. You know, until our modern ancestors arrived in force on the scene, the Neanderthals were a quite successful species, very much adapted to their harsh environments for hundreds of thousands of years. They did not become extinct because modern humans were the better solution to an evolutionary challenge. They became extinct because their environments only supported small populations, essentially, they

faced a genetic bottle neck. With modern humans moving into their settlement areas in large numbers as environmental conditions improved, they just died out or were merged into the much larger population of modern humans. Of course, modern humans may have played a more sinister role in the demise of the Neanderthals, we will never know for sure either way. But again, their small population size was the reason they ultimately lost out against modern human conquest. It was inevitable that they would disappear even if everything had proceeded peacefully, which most likely never happened.«

»With Neanderthals surviving for hundreds of thousands of years in most challenging environments,« thought Bran Taliesin aloud, »I must wonder if those people to which this individual belonged still exist.«

»And you are not alone in wondering about this, Bran« came Carleen Nuratu's response. »Our scientists wondered about this as well and they do believe that there is a good chance that members of this human subspecies still may populate the area from which this individual came. First, this area, as far as our limited sources regarding its soil and vegetation permit such a conclusion, is large enough to easily support several ten thousand people, if not more. Second, this area is like a vast island in the inner regions of this continent surrounded by what for the most is little else than deserts or barren rock extending around it for hundreds of kilometers. If we were in a different situation, I would immediately ask for an expedition to be led towards this area to know for sure but that will have to wait until we have mastered the current crisis. That basically concludes my much-abbreviated version of our scientists' report, the full version of which you all have on your devices for closer inspection anyway. Are there any other questions as to the conclusion of our scientists?«

As there were no more questions, the agenda moved on to the next item which reported on the joint security investigations and preparations of the city and the Crowden Institute. The institute's president had chosen not to bring the security chief of Crowden Institute to the meeting. So, Carleen Nuratu and the city's chief of security Han Nakamoto took turns in laying out the status for the others. As they explained, city security first had silently mobilized its reserve forces and every Crowden security officer now had been partnered with a city security officer. If there was any security leak within

Crowden Institute security itself, this measure would have surely addressed it as none of the institute's security officers now moved around alone anymore. In a second step a small task force composed of city experts and institute scientists, all of whom had been thoroughly vetted before, had developed a tool which has been uploaded to Crowden Institute's central computing facility and from there to all computing devices inside Crowden Institute. It was impossible for anyone to access Crowden Institute devices without proper authorization and for anyone accessing them with authorization their action could be monitored closely and in real time. Third, all Crowden Institute personnel which had been going back and forth between the institute and the city over the past half year had been checked, their contacts in the city had been identified and vetted for possible security vulnerabilities. It was the latter which had revealed that Eno Twait, the secretary of Carleen Nuratu, had met a city utility employee several times. As it turned out, this city utility employee was a member of the city's utility team servicing the Crowden Institute facilities. As the secretary of the institute's president, a part of Mr. Twait's responsibility was the scheduling of meetings for her and her immediate staff which also included the institute's legal counsel. Records indicated that Eno Twait had been in conversation with Central's board member Roan Quam several times, allegedly to arrange meetings between the board member and the institute's legal team. However, as the institute's legal counsel indicated, this was quite unlikely as board member Roan Quam rarely spoke to him directly but almost always through his subsidiaries. Carleen Nuratu and Han Nakamoto were quite certain, Eno Twait was their man. He must have been responsible for the security breach, and he must have handed the masking capsules to the utility employee. On inspection, no masking capsule could be found in the possession of Eno Twait. He must have passed it on as one of the masking capsules which Eireen Sawarov's people now had. As for the city utility employee, she did not yet know that they were on to her. She likely would play a critical role in the planned heist and because of that her arrest was delayed until after this heist had been successfully executed. Here Carleen Nuratu and Han Nakamoto paused to see if there were questions.

»Carleen, how certain can we be that your secretary was the only one in the institute involved in the security breach?«

The question had come from Peer Aksun, but it was a question which everybody around the table had. Except seemingly for Han Nakamoto who instead of the institute's president began to answer the council chairman's question. The latter looked a little surprised at his chief of security, mostly because he answered the question and not Carleen but also a little because the chairman still had to get used to the fact that his chief of security addressed him as Peer at official meetings and he himself addressed his chief of security as Han; even though privately they had been on a first name basis for years. Maybe sensing this uneasiness Han Nakamoto chose a third option.

»There is nothing like a hundred percent certainty in such cases, but we are confident that there is no other traitor but Eno Twait. He may well have used others in the institute to serve his purposes. But those could not know that what they were being instructed to do was not sanctioned in any way by institute authority as Mr. Twait must surely have claimed it was. With Twait removed, none of them would be a danger.«

»Well, that settles that then,« said Alwyn Maar. »Honestly, all we know about board member Roan Quam is that he would not have used multiple contacts in the institute as with each contact the risk of becoming discovered would have significantly increased. For all his ambitions, board member Quam has always been most careful in minimizing risks. And that is part of what makes him so dangerous.«

»Carleen and Han, how about our preparations for the heist. Just before this meeting Han mentioned to me that everything is in place now. Are we sure we have all bases covered?«

»I do believe so Bran,« came Carleen Nuratu's response, »but I better leave the answer to this question also to Han, he has become as much our chief of security as he is the city's.«

Anyone who would have been quick enough to see Han Nakamoto's reaction to this compliment would have recognized the brief semblance of a proud boyish smile on the face of the city's chief of security. But as nobody was that quick, they all missed it, and Han Nakamoto gave his answer in the same serious manner as he always did. First, he told them that everything regarding the skull investigation had been secured such that there would be no damage to it. However, not before they did have everything

duplicated in such a way as to make it look like it represented the original, including the beautiful facial reconstruction by one of the scientists which they could find in the skull investigation report. All possible entrances and exits that intruders could use to steal the skull investigation results were cleared and visual and audio tracking measures were added to cover every detail of the expected robbery in real time. They were prepared, fully prepared.

»But if I were the intruder and found everything going so unexpectedly smooth, I might become suspicious that something was wrong, don't you think?«

The question had come from Bran Taliesin and of course, thought the chief of security, he was right, as he usually was.

»It won't be quite as smooth as I described it. We have inserted a few minor obstacles, none of which will seriously challenge such intruders but sufficient to not raise any suspicion on their behalf that their heist, unbeknownst to them, was being a guided one.«

»Do we know when they will act?« asked the council chairman.

»Given by what the security chief and I just learned prior to this meeting,« responded Bran Taliesin, »we can be quite certain it will happen within the next three days.«

»It looks to me,« said the council chairman, »that with respect to the city and the Crowden Institute we have done everything to prepare as best we could. But we do not know yet what the plans of board member Quam are following the heist. Or do we know something about it, Alwyn?«

»Peer, we do know a little more, although only indirectly,« came Alwyn Maar's reply. »Aung, would you please explain?«

»Certainly Alwyn,« began Aung Lasheen. »While my office carries no real power anymore to help coordinate oceanic city policies, I still have good contacts in almost all cities in most sectors. What I learned, reaching out to some of those contacts, is that board member Quam has extended his feelers towards several of these cities. It just so happens that the extremist movement is strongest in your city. With the added incentive of the skull investigation board member Quam may believe he can use the extremist movement in this city to achieve his objectives. The impression I got from hearing about

some of the reactions of extremist movements in other cities to the probing of board member Quam is that the seeming alliance between him and the extremist movement in your city is anything but. Board member Quam is seeking to use the leaders of the extremist movement in this city for his purposes and they are using him for theirs. What we have is a temporary alignment of interests but not an alliance. Frankly, I am more concerned about Eireen Sawarov getting the better of Roan Quam than the other way around. Roan Quam's objective is to incite public unrest, essentially chaos which would require outside interference which he believes he could bring about then. Your council woman cannot be interested in that. She must be interested in gaining power and ruling the city but as a functioning city which she can shape to her purposes. Chaos does not serve her interests at all.«

»But she possibly cannot hope to get control of the whole city,« objected the council chairman, »she only controls one district now and her movement has a substantial number of followers in another six districts, not more. That leaves twenty-two districts she surely cannot control.«

»Peer, I am quite certain that the council woman is as aware of that fact as you are,« came the soft response from Aung Lasheen. »For all I have learned about her, which is quite a bit over the last days, she is a realist. She would likely be perfectly happy to control only a few districts; in the beginning. Eventually she will seek control of the whole city, but not now.«

Looking firmly at his chief of security and then at his mission chief, the council chairman made it clear that the city must do whatever was required to avoid armed conflict in case council woman Sawarov would seek to usurp power. If she tried to seize the districts where her movement might be strong enough to assert control, they may not be able to prevent that, but it must happen in such a way that there would be no bloodshed. After a few more clarifying questions and agreeing on the next steps the meeting was adjourned the council chairman, his chief of security and his mission chief hurried off. There was not much time left to plan for such eventualities as the council chairman had just outlined.

23

After escorting the city's representatives out of the institute's guesthouse, Carleen Nuratu returned to the meeting room where Alwyn Maar, Aung Lasheen and Mog Sinan had been waiting. There was more to discuss, things which it was better for now to discuss among themselves. The city was busy with averting a crisis and involving its leaders with issues internal to Central would only be a distraction from the more important things they had to focus on. They would soon learn enough about them anyway. The devices on the table protecting the privacy of their conversation were still on.

»Do you believe that these gentlemen who just left us seriously will believe that one rogue individual at Central, however powerful, could have instigated all of this.«

It was Carleen Nuratu who had asked the question and who was now looking at the others, waiting for their answer.

»Carleen,« said Alwyn Maar, »you know them much better than we do so you must be the judge of that. In my humble opinion I would be surprised if they believed that. And I can tell you for certain that I would not believe it for a minute. Board member Roan Quam is not acting alone, he must have allies, but we do not know who they are; not yet. But aside from that question, to which we must know the answer, there is another even more important question which, however, I cannot answer either. Why would board member Quam risk the existence of our oceanic civilization. This is only something a madman would do, and board member Quam may be many things, but a madman he is not.«

»Alwyn, I am bothered by the very same question.« Mog Sinan was slightly rubbing his forehead as he spoke, as to ease out an answer which evaded him. »Board member Quam's actions,« he continued, »are not those of a madman but the ultimate objectives he seems to pursue are those of a madman. Could it be that we are misjudging what board member Quam's ultimate objectives are? Should we not be looking elsewhere for the ultimate motives which guide board member Quam's ambitions?«

There was silence as Alwyn Maar, Aung Lasheen and Carleen Nuratu were digesting what Mog Sinan had just said. Obviously, the chief science officer was right. But then, what could those other objectives be? They looked at each other but as much as they

thought about it, they could not point towards anything else. Minutes passed with all of them sitting back in their chairs and thinking. Eventually, it was Aung Lasheen who began to speak.

»What if it was all about timing and not about any insurrection at all?«

»What do you mean by that, Aung?« asked Carleen Nuratu.

»Well, did we not think that board member Quam chose this city because of the strength of its extremist movement? And,« continued Aung Lasheen, »did we not assume that the skull investigation was just a useful pretext for board member Quam to get these extremists to do his bidding?«

Carleen Nuratu, Alwyn Maar and Mog Sinan all looked at each other and then looked again at Aung Lasheen, nodding their heads in agreement.

»However, what if this all was about the skull find and its implications from the beginning?« asked Aung Lasheen, now almost a little triumphantly.

»Then what?« responded Mog Sinan.

»Did we not just learn a little over an hour ago that your scientists, Carleen, think it is very likely that this human subspecies still exists in this enclave?«

»Yes, but...«

»No buts here, Carleen! This skull find is the first evidence in many thousands of years that proves human life on land is still possible!«

»Aung, you are saying that board member Quam is acting now because he has learned that after all, human life is still - or again - possible on land?«

»Exactly, Alwyn! Board member Quam's objective was never about causing civil unrest to the extent that it could destroy our civilization. He is trying to use these extremists for quite a different purpose.«

»If that is so, there are three possibilities we must consider,« jumped in Mog Sinan »First, Roan Quam could try to force our civilization back on land. He could also try to end any possibility for life on land for good. Or he could seek something in the middle, some moving back on land and some stay back in the oceans.«

»And we must remember that Board Member Quam's recent actions are the result of much more careful planning,« added Aung Lasheen. »Those who have been doing this

planning must have felt it necessary to act now that there is prove of life on land existing long after that was deemed impossible.«

»A further restriction,« added Alwyn Maar, »must be that, given our recent investigation into our own organization, we can exclude that board member Quam's allies can be found within Central. Would you agree with that?«

Alwyn Maar was looking at Aung Lasheen and Mog Sinan who after some thought nodded their heads. Carleen Nuratu could of course not have an opinion regarding Alwyn Maar's comment as such interna were not shared outside the innermost circle of Central. But the institute's president thought instead of something else that, also barely noticeable, quite a while ago had triggered her curiosity. At the time, they had been approached by the representatives of one of the city cooperatives who operated several large onshore facilities as well as a couple of mining operations further inland. What had triggered her curiosity was not so much the kind of service these representatives sought to negotiate on behalf of their city cooperative. Such requests from industrial outfits were quite common. It was a comment from the institute's legal counsel who, when he brought her the contracts for her signature, had commented on the unusual swiftness with which these negotiations had been concluded. Seemingly, this contract had been acceptable to the city cooperative without the usual weeks-long haggling over Central's terms and conditions. Could this be important? As Carleen Nuratu considered this incident, arousing her curiosity back then and now again, Alwyn Maar, Aung Lasheen and Mog Sinan were observing her in silence. From the looks of it, Carleen Nuratu was busy thinking about something else altogether and so they continued to wait in silence until the institute's president seemingly had concluded her train of thought and looked at them again.

»Carleen, something else is on your mind, isn't it?« inquired Alwyn Maar.

»Yes Alwyn. I am not sure if it is of relevance to what we are discussing now but it is something peculiar I think you all need to know. About half a year ago, our institute was approached by a city cooperative from the northern adjacent sector. Nothing unusual about this. It happens quite frequently that city cooperatives outside our sector require our services as we specialize in a few which I believe are not available

in their sectors. They were interested in our analytic capabilities regarding certain rare earth elements as they were evaluating a new site for ore mining. Nothing unusual about this either. It was not what they were interested in contracting from us which triggered my curiosity. Rather, it was a remark our chief legal counsel made when he brought me the contracts for signature. He was surprised by the speed at which the contract negotiations had been concluded. I guess you are aware of the terms and conditions which Central seeks to impose in its contracts. The usual results of this practice are rather unpleasant and protracted contract negotiations at the end of which Central most often will have conceded most of those terms and conditions. Evidently, according to the legal counsel none of that happened in this case as the contract had been accepted and signed by the city cooperative within days.«

»Do you remember the name of this city cooperative?« asked Mog Sinan.

»No, I don't, Mog, but this is something which we can look up quickly. However, it may not just be the name of the cooperative which could give us a new lead towards finding board member Quam's allies. I believe it could be as much the process. What if this was not a one-time occurrence but we could find other cases where contract negotiations between external partners and Central had been completed at unusual speed? And I am not just thinking about the Crowden Institute here but about all research conducted under the umbrella of Central. If we could, let's say for the last five years, filter out contracts where the negotiation for terms and conditions was concluded in say less than two weeks, we may find what we are looking for. At minimum, we should likely get a very good picture of board member Quam's network outside his legal affairs department.«

»Carleen, I seriously believe you are on to something,« said Aung Lasheen.

»Indeed,« said Alwyn Maar, »we must get this underway as soon as possible. But how can we do this without immediately raising board member Quam's suspicion. People in the legal affairs department will surely take notice if suddenly contracts over the past five years are being reviewed in this way and in little time they will be aware of what is going on.«

There was silence again, but not for long. And before he spoke, Mog Sinan looked

at Alwyn, Aung and Carleen with a knowing smile.

»Well then, Alwyn, Aung, Carleen, I suggest that we approach this from the other end. Let's ask our chief industrial officer to undertake such a contract review. Anyway, it is the cooperatives which so willingly agreed to the terms and conditions of Central's legal affairs department which interest us most. I am quite certain our chief industrial officer can ensure that such a contract review can be undertaken in his department without board member Quam noticing anything at all.«

»Mog, we will do just as you say,« replied Alwyn Maar, »as soon as we are back at the council chairman's home, and I have a secure communication channel set up I will reach out to our chief industrial officer to get this contract review underway.«

With this decision Alwyn Maar adjourned the meeting but not before thanking Carleen Nuratu for having given them probably the best lead towards identifying board member Quam's network and hopefully also his allies.

24

Eireen's order had reached him a few hours ago and everything had already been set in motion. Kimal Abuno was slowly pacing his office. Tonight was the night! Thousands of years after human civilization had moved to a life in the seas humans still lived by the circadian rhythm. But what are a few thousand years of life in the oceans compared to the millions of years their species had lived on land? Now, Kimal Abuno thought somewhat bitterly, another human species may be living on land while they were still hiding in the oceans. He would have wanted nothing more than to go on this mission himself but that was not possible. It was already difficult enough for him to evade city security surveillance. Had he been part of tonight's mission he would have attracted undue attention to it. He had chosen his best three people for this mission. Sid Nadar, Gor Orlov and Sam Galeen would certainly be up to the job. There were always risks, known and unknown. But he knew that the three of them would be able to improvise. Funny, he thought, three letter first names must have been in fashion with the children of the sea program some twenty years ago as Sid, Gor and Sam were all in their early twenties. Or maybe not because he now remembered that Sam was short for Samantha.

Were Sid and Gor nick names too? He could not remember. Keeping a professional distance was important in his business. Only knowing about the important things which mattered for an agent was what counted. Anything more equated to more risk, for the agents and himself.

After procuring the masking capsules, getting into the Crowden Institute would not be a problem. The most dangerous part of the whole operation was the transport from the city to the utility level of the institute and then back from the institute to the city. Recently, city security had begun to monitor access to all exit and entry ports of the city. But they had no plans to use any of those. Getting divers to the institute and back would have been impractical to begin with. They always had planned to only use transportation between the city and the institute, which would not arise suspicion. One way to transport Sid, Gor and Sam to the institute and then back to the city were of course the city vessels scheduled to go back and forth between the city and the institute for routine utility maintenance work. But that happened only once a week and Sid, Gor and Sam could not possibly hide somewhere at the institute's utility level for a week before returning to the city. They had to find another way to get them back. And they did. The city had a substantial number of small vessels, many of which were at the disposal for city districts to check the structural integrity of new and old construction within a district. City districts routinely did use those vessels for such purposes and these resources were available on demand. Like for example if a city district council asked for them or more specifically, the district council member responsible for construction projects within the city district asked for it; and in Eireen Sawarov's district, this council member was their man, or better woman. This return transport for Sid, Gor and Sam was now at the ready and it would dock at the city utility level at four in the morning and bring back their three agents directly to a port in their district which their district council woman in charge of construction controlled. A few weeks ago, the district had begun to launch inspection vessels during the night so a vessel operating at night hours to return the three agents would be less conspicuous.

As Kimal Abuno sat in his office enjoying a late breakfast, the city utility employee who had earlier handed him the masking capsules led Sid, Gor and Sam onto the utility

department vessels. The vessel would not leave the city for another couple of hours, but it was time to lead Sid, Gor and Sam to the small compartment in which they would have to stay for roughly the next three hours. There was little room in the compartment this city utility employee shoved them into, but they had no choice. Before she closed the door, she handed them a little device telling them to only open their compartment and leave the vessel when the light on the device began to flash. Then she left, closing the compartment door behind herself. Sid, Gor and Sam looked at each other, this was a tight space, and they had to make sure not to make too much noise when moving a little to prevent their limbs from falling asleep. After what must have been an hour they could hear voices in the vessel, evidently the utility crew was preparing for their service mission. Eventually they could hear the vessel's entrance lock being closed and felt the vessel's vibration as it undocked from the city. For the next half hour, the crew's voices they had heard before were drowned out by the vessel's engine noise. Then, the unmistakable noise of two heavy metal objects making contact told them that they were docking at the institute's utility level. A few minutes later they could hear the lock being opened and the vessel's crew leaving their transport to begin their utility maintenance tour. It took like another fifteen minutes before the light on the device they had been given began to flash; it was safe to leave the vessel.

Without speaking a word, the three intruders entered the Crowden Institute institute utility level. Gor pulled out a small device, another item which their boss had obtained. They all had of course memorized their path through the institute for weeks now but still, such a device could always be helpful in case they needed to take a detour. They moved quickly and within twenty minutes they arrived at the tube through which they could access the institute itself. Using the utility elevator would raise suspicion though they had to use the emergency route, it would be a long climb. It took them more than half an hour before they arrived at the top level of the elevator. Now they had to wait, as it would take several more hours before they could safely enter the institute. Until then their plan was to stay at the top of the elevator tube where an alcove provided them a hideout. It was also a small space but compared to the compartment on the vessel it was roomy; here they could stretch their legs. Sid had the first watch while Gore and Sam

rested. Then it was Gor's term and at the end of Sam's watch the wait was finally over. Just after one o'clock in the morning they went to work.

Their masking capsules made entry into the institute as easy as it had been for them to enter the utility level. Almost too easy, thought Sam. They did not speak at all, they only communicated nonverbally but to Sid and Gor it was clear enough that Sam was uneasy. They too were beginning to think that it was too easy when they saw a light flash coming from a passage just around the next corner. Maybe it was not too easy after all. Someone approached from around the corner but then turned towards the other direction, slowly walking away from them. Evidently, someone from the institute's security team on a routine inspection. There were two more such incidents where each time they had to lay low for some ten minutes to avoid detection. But finally, they arrived at the lab which was supposed to house the skull and the computers through which they could access the research results. Sid kept watch while Sam and Gor went to work. When Sam saw the facial reconstruction of the skull, she was tempted for a moment to turn off her night vision and turn on the lights in the room. That was of course only a foolish thought, and she quickly bagged the facial reconstruction. Then she began to search for the skull fossil itself. It took a while but eventually she found it and bagged it too. In the meantime, Gor had retrieved the skull investigation documents from the institute's central computer and had deleted all copies of it wherever his program could find copies on the institute's devices. Lastly, Gor uploaded this protected container onto the central computer. He had no idea what was hidden in the container, but his instructions had been clear on what he had to do with it. All of it had taken less than an hour after which the three intruders began to head back to the utility level, satisfied that they had achieved every objective this far. Their mission was almost accomplished and even if they were caught now, they had their instructions as to what they must do with the material they had brought into their possession. In that case, all of it had to be destroyed, whatever the cost. But fortunately, it did not come to that. Except for the odd security patrol to avoid there were no incidents and in a little more than an hour they had arrived at the utility level port where their transport back to the city was already waiting. Everything had gone according to plan.

Hakan's Legacy

25

In the early afternoon after the night of the heist, Bran Taliesin was on his way to see Carleen Nuratu in her office. He had now become a familiar face to the institute's security guards and they quickly waved him through. No more security screens for the city's mission chief. The chair behind the desk in the anteroom of the institute's president was empty because Eno Twait had been detained. He only needed to knock on the door once before hearing Carleen Nuratu's voice calling him in. On her desk sat a larger version of one of the institute's privacy devices, it was active.

Bran Taliesin smiled at Carleen Nuratu and said »Good afternoon, Carleen.« And after looking at her again he quickly added, »is it a good afternoon?«

Carleen Nuratu, now putting her reading device aside on which she had studied some documents, returned the mission chief's smile but in a strained way.

»Not quite, Bran, unfortunately. How are things in the city?«

»So far as I expected, Carleen. Han Nakamoto's people have reviewed the recordings from the heist and the intruders proceeded as we expected. But what Eireen Sawarov will do now that she has gotten what she wants, we do not know yet. It will take some time before we understand what her next steps might be.«

»Well Bran, there was one move during last night's heist which we did not expect. The intruders uploaded a secure container to what they believed was the institute's central computer. We do not know yet what it contains but it cannot harm us because it sits on an isolated computer system.«

»So, Han Nakamoto's plan worked?« inquired Bran.

»Yes, it did and beautifully so. By the time the intruders began to make their way from the utility level into the institute the old central computing units had been activated and brought online while the real central computing system where all our data was backed up had been completely isolated and then was powered down. When you

came in, I was just reading the report of the forensic team which is working its way through the old central computing units. It is offline now and can be safely investigated to see what else, aside from the skull investigation results, the intruders were interested in. So far it looks like they were not interested in anything else. But then they uploaded this secure container. As I said we do not know what its purpose is, but it does not matter because it sits on an isolated system and cannot really do any harm.«

»I take it then,« asked Bran, »that your real computer system is now up and running again.«

»Not quite, Bran. But that is on purpose.«

»What purpose, Carleen?«

»While we were preparing for the expected heist, Mog Sinan's experts and some of our people were working on solutions regarding the detection of masking capsules. We already knew that for our security system to be reconfigured for detecting these masking capsules we would have to take down much of our computing system. But it would still take more than a week before our security system would be back online with a configuration which could then detect any kind of masking capsule. When our expert group learned that we would shut down the entire system anyway because of the heist, they told us that we could take advantage of this because in that case the reconfiguration could be done in much less time. We decided to reconfigure the security system now and step by step our computing resources are being brought back online. In two days, we should be fully operational again and then nobody will be able to clandestinely enter the institute with a masking capsule.«

»Now, I understand. That is good news, Carleen! And I am sure our chief of security will be all too happy to have some of his people back because he may need them soon in the city.«

»Bran, I must ask you a question and please answer the question as Bran Taliesin and not as the city's mission chief.«

»That sounds ominous Carleen,« replied Bran with a smile intended to tease his old childhood friend, »but please go ahead and ask.«

»Do you really believe it was the right decision to let them steal all our data regarding

the skull investigation?»

»Yes, I do Carleen, and I do so as Bran Taliesin as well as the city's mission chief. If we had handed them something fake, they would eventually find out and that would make matters even worse. We must understand how these people deal with reality and not with something we fake for our own interest. My only concern is that we could not convince you and your colleagues from Central to let them steal the actual skull. Eventually they will find out that what they stole was a copy of the skull and not the real thing.«

»I do not think they will ever find out that their skull is just a very perfect copy, but still a copy.«

»And you think so because?» asked Bran with some astonishment.

»These extremists will need a few days to make sense of the skull investigation results. Before that, they will not subject the skull to any further analysis. If they eventually decide to do their own kind of analysis, which will be difficult by itself, the skull will have completely disintegrated. What will be left of it will not be useful anymore.«

»And you did not bother telling us this?»

»Alwyn Maar asked that this precaution be taken.« said Carleen. »We did not want them to discover that they stole a fake skull and thought it best for the fake skull to self-destruct in a matter of days.«

»Not a bad idea, Carleen. But the city should have been told about this. So, there is no chance they will find out they were handed a fake skull?»

»Not unless they have access to equipment like we have which they do not; and which not even Haman Institute possesses. All they will find is that they are in possession of bone powder. Simple dating methods will then tell them that this bone powder is about twelve thousand years old. Once they have obtained this result themselves, we are convinced that they will not look any further.«

»Well, hopefully you are right Carleen. I still will have to inform our council chairman and the chief of security of this so there will be no surprise. But before I do that. Is there anything else that we, I mean the city, do not know?»

»There is nothing else, Bran.«

»Then I would like to talk to you about something else. Do you have a few more minutes?«

»What is it you want to talk about, Bran?«

»As you well know Carleen, a lot has happened since Lucy dug up the skull of this ancient human a little more than two months ago. We learned things about Crowden Institute we did not know before and found out that an organization like Central exists. You know I never believed the story of Hakan just disappearing mysteriously. But with what we know now, I am looking at what we factually know about Hakan's disappearance in a completely different light. I am certainly not one to fall for conspiracy theories, but you must admit, to any unbiased person looking at this, Hakan's disappearance is not a mystery but a purposeful cover-up story. Hakan was as much linked to the Haman Institute as he was to the Crowden Institute. Hakan knew Alwyn Maar well and he was even closer to Mog Sinan. He could easily have left Crowden Institute via its utility port in a subsurface vessel heading for Haman Institute without anyone in the city – and maybe even in the Crowden Institute - ever knowing about it. And please do not tell me that if you know as little as I do about Hakan's disappearance that you have not thought about this yourself.«

After Bran had finished his last sentence Carleen Nuratu kept looking at him in silence. She had always known that someday Bran would be asking questions like he was asking now. She could and would of course give him the answer he deserved, well knowing that it would not satisfy him anymore than what he already knew.

»Bran, even though I am not at liberty to speak to you about Hakan's disappearance I will still do so. I had hoped that Alwyn Maar or Mog Sinan would by now have had a chance to talk to you and Peer about this. But given how busy we all were there was probably no time. So, I may tell you as well now. Hakan did indeed leave Crowden Institute via its utility level port and headed for Haman Institute where he arrived safely. He then worked there for almost two months preparing an expedition which was to penetrate the interior of the continent we once called Africa. In preparation for this expedition Hakan was making reconnaissance flights deep into the continent's interior. It was from one of those flights that he never returned. You see, Hakan did disappear

but not in the way people were made to believe. Suggesting that Hakan mysteriously disappeared was a ploy sanctioned by Central's board. They did not want this whole thing to go beyond this city as what Hakan was working on was too delicate to have people speculate about it. So now you know the true story, Bran. Unfortunately, it does not have a better ending than the one you and others were made to believe; something that never really worked with you, however.«

Bran was thinking. His first impulse was to smell another cover-up story but looking at Carleen as she told him what happened he became convinced that she was telling the truth. Or better what she thought the truth was.

»And do you know Carleen what the purpose of this expedition had been? What was Hakan working on?«

»Hakan had become convinced that human life had continued to exist on the continents. More than that, he firmly believed that humans to this day live on this continent where we found the skull fossil, somewhere in pockets which can support such life.«

Bran was silent for a few moments and then said »then we are coming full circle, are we not?«

»Yes, we are Bran. I have wondered about it myself. Even more so, since Lucy is now working here with us on something her father would have been very interested in.«

Bran looked at Carleen, closed the gap between them with a few fast steps, hugged her before she realized what was happening and whispered into her ear »Thank you Carleen - thank you!«

Carleen Nuratu had been too surprised to react quickly. By the time she was ready to say something Bran Taliesin had already left her office. Smiling inside, she acknowledged to herself that even if she had been more alert to Bran's surprise move, she would not have resisted it in any way. It had been a long time since Bran last hugged her. It had been a long time since anyone had hugged her. With these thoughts on her mind, she slowly walked back to her desk and once seated behind it she sent notes to Alwyn Maar and Mog Sinan to let them know that she had to tell Bran Taliesin the truth about Hakan's disappearance; the truth as she knew it, she added.

26

In the small two-room flat in which she had been living since she began working at the Crowden Institute, Lucy was sitting on her bed. She held a small reading device in her hands, but she was not looking at it. Rather, she was staring at the content which it projected onto the screen integrated into the opposite wall. This screen was mostly blank, except for a small graphic icon indicating an archive container and the name of that container displayed next to the icon. The container's name was *Lugrila*.

Manu had handed her this reading device after he had returned from work where he had received it from one of the experts working on the units of the old central computer system. The way Manu had explained it to Lucy, this system was recently reactivated, presumably for a security back-up which now forensic experts analyzed. In the process, old archives were discovered which never had been transferred onto the new central computing system when it was installed more than ten years ago. In these archives they had found one container belonging to Hakan Kassius. However, they could not open it because access required the bio-identity of Hakan Kassius which did not exist anymore. Without it the archive container was useless junk and that was likely why more than ten years ago it had not been transferred to the archives of the new central computing unit. However, before it was now to be erased from the archives for good along with all other containers identified as junk, one of the forensic experts remembered that the daughter of Hakan Kassius had become their colleague. She thought that even though the container was useless now, Lucy may still like to have it. Hence, she downloaded a copy of the container onto a reading device and handed it to Manu whom she asked to pass it on to Lucy.

Lugrila had been the name she and her dad had given to the little retreat in her room, essentially a small, enclosed space in one of the corners where Lucy could hide the little things most precious to her and where most importantly, she could crawl in, but no adult could. At most, this enclosed space, her *Lugrila*, could hold two small kids with little room to spare. Why did her dad name the container *Lugrila*? For sentimental reasons or for easy recall because he would for sure never forget this name, just like Lucy had never forgotten it. But if dad had named this archive container *Lugrila*, that could

only mean that he had intended it to be something like *Lugrila*, a place where something was hidden which in some way must be precious to Lucy. But how could she ever access this place now with her dad's bio-identity being lost? She kept staring at the container symbol and its name, hoping to somehow discover a way to access this archive container's content.

A soft knock on her door jolted her out of her thoughts. She could see that Fjodor was waiting outside. For a moment she hesitated but then let him in. Entering, Fjodor just saw a glimpse of the screen image with the one container symbol before Lucy turned it off.

»You were still working?« asked Fjodor.

»Not really. I was just looking up something.«

»Must have been something important because you missed the employee meeting.«

»Oh, I completely forgot about that. Did I miss anything important?«

»Not really Lucy. Just that there was a break-in a couple of days ago.«

»A break-in? By whom? And was anything stolen?«

»Just minor things,« answered Fjodor. »But it looks like what the burglars had been after were the skull fossil and our investigation results. As to who did this, there seems to be no clear indication yet. But pretty much everyone here believes that the extremists must be responsible for this break-in. Who else could be interested in such things? But don't you think it is a fortuitous coincidence that just a few days ahead we were asked to hand all investigation material as well as the skull itself to institute archives? It makes me wonder what remained in our labs for the intruders to find because it looks like they targeted just our labs and nothing else.«

»Fjodor,« Lucy said, »that is indeed odd. But maybe there was some kind of warning before the break-in or institute security somehow had intelligence about a possible break-in. That would explain why everything was moved out of our labs and secured in the institute's archives. Given the incident at my old institute, just before Manu, Ives and I transferred to Crowden Institute, I am not too surprised that the extremists still want to get their hands on the skull and its investigation results. But what I do not understand

is how they would have been able to get into our labs. Isn't bypassing Crowden Institute security next to impossible.«

»I thought so too but obviously for these intruders it wasn't.«

»Was there anything else of importance discussed or announced at the employee meeting?« asked Lucy.

»Not really. The quarterly security check should be concluded in a couple of days. Then everything should be back to normal, and we can schedule meetings again without having to hand out personal invitations. Do you have any idea yet of what will come next for you? Will you remain at the institute, Lucy?«

Lucy had thought about this herself over the last days, essentially, she had not thought about much else. Frankly, she did not know. But she knew she wanted to talk to Bran and Carleen about it. Bran had always taken an interest in her career and talking to him had often helped her to know better what she really wanted. She knew much less about Carleen, but they had met quite a few times over the past two months and intuitively she felt that talking to Carleen about her plans would be the right thing to do; even though she had no idea why exactly she felt this way. Manu and Ives had already made the decision to stay at the institute and had talked to their heads of department about it. Why had she not done so yet?

»You know that your two friends will stay here?« inquired Fjodor further as Lucy had not been answering his question.

»Yes, they told me so,« replied Lucy, and realizing that she had not answered Fjodor's question she added, »I guess I just presumed that I would also stay?«

»Now Lucy, I have a tough time believing that this is so. It is too much unlike you. You must talk to people about what it is you would like to do. But since you don't, I must assume that you do not know it yourself yet. Isn't that so?«

»Fjodor, I did not know that you can mind-read. But it is as you say, I do not know yet. Of course, the institute is a wonderful place, and I am sure I would enjoy working here in the future no less than I enjoyed it over the past months. But you know, I want to make sure that I follow what it is that I must do in my life and not what just offers itself conveniently, however good that might be for my career. There are not many

things anymore which I can remember about my dad but one thing I will never forget. He always warned me not to just follow inertia and go down a path because it offers itself conveniently. Now, staying at Crowden Institute very much looks like such a convenient path. Do you understand what I am trying to say?«

After looking at Lucy for a few moments, seemingly seeing something in Lucy for the first time, Fjodor just said »I do understand you.«

»But...? There is a but - isn't there?« said Lucy.

»No, not really Lucy. If you decide to leave Crowden Institute you will be missed. I will miss you.«

»I know Fjodor.«

They were looking at each other in silence as Lucy was wondering whether Fjodor would try to kiss her. But he did not and neither did she encourage him in any way to do so. Somehow, she knew that she would have to signal him to kiss her as otherwise he would not have tried. She was quite certain that it had nothing to do with Fjodor being too shy or inexperienced to take the initiative. He was just waiting for her to make that decision and maybe someday she would ask him to kiss her, but not now.

After Fjodor had left, Lucy sat down on her bed again, her reading device in hand, looking at the archive container her dad had named *Lugrila*. As a kid, she had not just put the things most precious to her in her *Lugrila*. It also had been the place where she dreamed about her future, when she one day would be as famous a scientist as her dad was. Her dad had laughed about her telling him that she dreamed of becoming a scientist like he was himself but then he had always encouraged her and supported her all the way; until he disappeared from one day to the other, never to return. Then it was Bran who would tell her the things she used to hear from her dad. It was Bran she could ask about the things she could no longer ask her dad. Maybe Bran would know a way to access the content of the archive container. There must be a way to find out what was hiding in this *Lugrila*, she must know what was inside this container and she was certain that her dad must have wanted her to know its contents the moment he named it *Lugrila*.

Having made up her mind she went to the small desk in her room and began to send

a message to Bran, she needed to see him urgently. It was only a few minutes after she had sent the message that she received Bran's answer. He would come to see her in the Crowden Institute guesthouse meeting room the next morning.

Early next morning Lucy entered the meeting room of the guesthouse where Bran was already waiting for her. As she entered, Bran pulled one of those small privacy devices out of his pocket, turned it on and put it on the table. They briefly embraced and then she sat down next to him. They had not seen each other for a couple of weeks. Lucy had been busy wrapping up her work as the skull investigation project was winding down; and Bran had his hands full dealing with the security situation in the city and in the institute, of which Lucy knew of course nothing. She began by telling Bran about the container and how she had come into its possession and then showed him the container itself on her reading device. However, when she wanted to project it onto the screen in the meeting room to display it, he stopped her.

»Don't Lucy. Whatever content you project on this screen others may be able to retrieve.«

»But we are in Crowden Institute. Are you saying it is not safe here to look at this?«

»I am not saying that, Lucy. It may be perfectly safe but what you have here is an archive container your dad protected with his bio-identity. And I am certain he had good reason to make sure only he could access the container.«

»Well, since he is not around anymore nobody can access this container. So, where is the problem?«

»And you see, Lucy, that may just not be true.«

»Why do you say that, Bran.«

»How much do you remember about the time when you were still small enough to be hiding out in your *Lugrila*?«

»Actually, quite a bit. But certainly not everything.«

»Do you remember the time when you were so anxious about other kids entering your *Lugrila* without your permission?«

»I do. But remembering it, I still feel a little silly.«

»Nothing silly about it. Back then, you were not even ten. But do you also remember what your dad did to relief you of your fear that someone would enter your hideout without permission?«

»Yes, and that was even more silly. He himself installed a security screening device next to the entrance of my *Lugrila*? But that would not have prevented anyone from entering it.«

»Anyway, that thing sitting there was obviously enough to relief you of your fears because you stopped worrying.«

»And you know why? Because I told my friends that it was not just a screening device but also a recording device which would identify any unregistered visitors. They believed me, the more so as the device made a sound when my friends tried to enter, a sound it did not make when I entered. From then on anyone wanting to access my *Lugrila* asked me for permission. Problem solved.«

Laughing, Bran said »I did not know that part. But I remember another part of the story which may help us now.«

Then Bran told her that her *Lugrila* security device had been a properly working screening device and the reason it made this sound when her friends entered her *Lugrila* but remained silent when she entered it was because it scanned the bio-identities of anyone entering her hideout. The device protecting her *Lugrila* recognized only her bio-identity and in order that it could so her dad must have made a copy of her bio-identity. Lucy looked at Bran as if she could not believe what he was just telling her.

»You do you know what that most likely means, Lucy, do you?«

»That my bio-identity will also open this archive container named *Lugrila*?«

»Should we try?«

As Bran asked her this question Lucy was about to turn on the bio-identity function of her reader, but Bran stopped her before she could do this.

»Lucy, not on this device and not here. Are you free for the rest of the morning?«

»Yes, I am. With the skull investigation over there is little to do. As it is, I was

thinking about taking a few days off anyway.«

»Great, then why don't you just do that? I suggest you take care of whatever it is you need to do so you can get away for a few days and then come to my flat tomorrow morning. Or do you want to stay with Kareem?«

»I want to see Kareem but would like to stay at your place if that is fine with you.«

»No problem, Lucy, your room in my flat is just as it was when you last left it. Please leave the device with me now and come to my flat tomorrow morning. I will get us two secure readers where we can look at the contents of what your dad stored in this archive container without anyone else peering over our shoulders.«

Lucy handed Bran the device and they left the meeting room. Lucy to notify her superiors in the institute about her taking a few days of vacation and Bran heading home for his flat.

27

The morning of the next day Lucy went to Bran's place. She had not been at Bran's flat for quite a while because for the last four years she had lived in her institute's dormitory. As she thought about it, she wondered if she should return to her old institute. She could not really imagine it anymore. Over the past four months she had only stayed a few days in her old dormitory room. The few days after returning from the expedition and before moving to the Crowden Institute. Living there felt such a long time ago. When she arrived at Bran's flat, he was already waiting for her. Bran had transferred her dad's archive container to two secure devices, one for her and one for him to discover what was hidden in this *Lugrila*. It just never occurred to Lucy to ask Bran why he was going to search through the contents of her dad's container if they could open it. She just presumed that this was what her dad would have wanted. If anyone knew her dad better than she did, then it was Bran. Bran turned on the bio-identity function on both devices and Lucy put the palm of her hand which contained her bio-identity over the screen of one of the devices. After a short moment the reader had found all containers on the device encoded with Lucy's bio-identity. There was just one, her dad's archive

container. No longer locked it now displayed its content. Lucy and Bran smiled at each other and then Lucy repeated the same process with the other reader.

»Lucy, I do not quite know why your dad protected this container with your bio-identity. But if the purpose was that no one else but you should access it then your dad got his wish.«

»Almost Bran, because you will access it now too and that is exactly what my dad likely had hoped for.«

The next half hour they spent understanding what the content of the archive container was and how it was organized. There were clearly private sections and work-related sections. They agreed that Lucy would first look through private sections and Bran would focus on work-related sections. Given the amount of material in either area this would likely take most of the day. Lucy went to her room and Bran settled into his reading chair.

Bran began his reading with several documents which obviously dealt with the history of oceanic societies. But they were not anything like historical accounts. After reading a few of them it became clear to Bran that what Hakan had been concerned with was what he referred to as their society's paralysis. The way he did so indicated quite unambiguously that Hakan had come to believe that oceanic societies stagnated, that they had been stagnating for a long time. Indicative for that was according to Hakan the lack of true progress in sciences, which he attributed to the complete absence of what he called the spirit of research and exploration. And with exploration he not only meant the scientific endeavor which must characterize research institutions but also the exploration of Earth. Their oceanic civilization had completely forgotten about the vast interiors of Earth's land masses and except for mining outfits it was only clinging to the continental coasts because manufacturing on land was easier and much cheaper than manufacturing in the oceans. More than that, they not only had forgotten about the continental interiors, but they had also lost in many areas the capability to even know what was going on there. Hakan referred in these documents to several studies which he had undertaken and which he said showed the true decay of their civilization's science and technology over the last centuries. Yes, there were others who also noted the lack of progress in

science and technology, but they rather argued that this was a plateau effect. Because so much had already been achieved that for a while, they reasoned, only small progress would be possible compared to the much larger steps science and technology had taken in the past. In essence, the authors of such studies argued that oceanic civilization was science and technology saturated. To Hakan, such statements were nothing else than further corroboration for how much their civilization had lost its spirit for research and exploration.

As Hakan pointed out, the latter observation was for example confirmed by the fact that their civilization was beginning to lose its space faring capability. Replacing satellites was becoming ever more difficult. Not just because manufacturing the rockets to launch them into orbit consumed innate amounts of resources cities preferred to use for other things but also because some of their new satellites seemed to fail much more often than the older ones did. First, their oceanic civilization had succeeded in restoring its presence on the Moon and reestablishing contact with facilities on Mars, the moons of Jupiter, and the space stations orbiting these planets. But the Moon colony was deserted again and not in a long time had a spaceship made it to Mars or Jupiter. The worst part was that the citizens did not know anything about it. As Hakan put it, anyone citizen chosen randomly and asked about human space exploration would proudly pronounce numerous achievements. All of which, however, were achievements of a long distant past and all of which, for practical purposes, had been lost long ago.

Hakan was not much less critical of what he called their civilization's lie regarding its own prosperity. According to his assessments, little of it was fact. Most of it, he claimed, was fiction. What their children learned in school regarding the status of their civilization was closer to fairy tales than to reality. Hakan claimed that this was the inevitable outcome of how their oceanic cities had been organized from the very beginning. Hakan referred to oceanic cities in certain contexts as hideouts and places of refuge which of course was their original purpose. These places of refuge had, however, become places of self-imprisonment. This confinement and the consequent lack of participation in a broad cultural exchange, which requires not only a free flow of ideas but also a free flow of people, has led to the present situation of their oceanic cities. Human civilization could

never have developed if people had not interacted with each other in ways that were not possible across oceanic cities. The fatal flaw of their oceanic cities was in Hakan's words the misguided assumption that they could keep all the positive sides which characterized advanced human civilization while being able to shut out all the negative ones. Hakan maintained that one seemingly could not have one without the other. Oceanic cities had done away with many of the problems which had plagued human land-based civilization, most of them related to what Hakan called the innate problems of human nature, foremost its proclivity for violence. The latter often being directed at those human beings who were not like us because they looked different or spoke a different language. Yes, their oceanic cities had brought an end to much of what had plagued humankind such as warfare, hunger, or diseases to name just those three. But where in the thousands of years of oceanic civilization were individuals who could have rivaled a Shakespeare, a Mozart, a Picasso, or an Einstein? Yes, their citizens lived peaceful and uneventful lives. Unnatural deaths were almost unheard of but so were unique cultural or scientific accomplishments. Most likely, the transition to oceanic life was inevitable, otherwise the human species might have become extinct. But it should only have been a temporary refuge and not a permanent solution lasting for many thousands of years. At one point Bran saw that Hakan refer to their oceanic civilization as a shadow world, comparing life in the oceans to the life which the dead of the ancient Greeks awaited in their underworld. There, what was once a human being degraded to a mere shadow, eventually forgetting who he or she once was, only able to remember its former self for brief moments by drinking blood. Hakan wrote that he had seemingly drunk blood thanks to a discovery he had made. Human life on land - he claimed - never had become extinct but had continued to this day. However, those modern humans living on land were now different from them, most likely now representing a separate subspecies. Or maybe several of those, if human life had not only continued to exist on this continent they used to call Africa - of which he said he was certain - but maybe also on the other continents.

Here Bran put away his reader. How could Hakan be certain that human life on the continent of Africa had persisted through those many thousands of years? He got up and walked to Lucy's room, softly knocking on the door.

»How about a lunch break?« asked Bran when Lucy opened the door. »It is already early afternoon.«

»Sounds like a good idea. I am kind of drowning in all this material I find in the container.«

»Give me five minutes and I will make a few sandwich bites, then you can tell me about what you are drowning in.«

Munching sandwich-bites and a small salad, Bran and Lucy sat at the small kitchen table where Lucy had eaten breakfast, lunch and dinner for she could not remember how many years.

»You still make good sandwiches, you know,« said Lucy teasingly.

»You always liked them, Lucy, but I guess that is less a compliment for my sandwich making skills and more a statement about my otherwise deplorable cooking skills.«

»You cannot have been so bad a cook, just look what has become of me!«

»A wonderful young woman her father would be very proud of.«

With Lucy seemingly blushing a little Bran switched topics, asking her about what she had found so far in her dad's archive. Most importantly, anything that she did not know or more to the point, anything that surprised her. As it turned out, Lucy had not known much about the friendships her father kept. She knew of course how close Bran and her dad had been and she also had learned a few weeks ago that Carleen Nuratu had been one of her dad's friends. But what she did not know was just how close a friend Carleen Nuratu had been to her father. She admitted that for a short time reading through her dad's records she even thought there might have been more than friendship but now she was certain this had not been the case. Then there were other people who must have been close to her dad, a certain Mog Sinan and a certain Alwyn Maar. She knew neither of them. Mog Sinan and her dad both studied at the same college but what she had read so far did not tell her where her dad might have met Alwyn Maar. A part of the private material was something like a family album, where the family also included close friends. She had spent hours looking at images, in many of them she was still a toddler. Quite a few of the images showed dad, Carleen and Bran at different times in their lives including some pictures when they obviously must have been in their early

teens. Lucy told Bran that she was not even through yet with looking through all the photos and she may need his help in identifying people who she did not know.

Bran promised to do so after he had looked through this private section in her dad's archive container. Then he began to tell Lucy about what he had found so far in the work-related section of the archive. Lucy could barely believe what he told her but did not interrupt Bran a single time. Neither did she ask a question when he was finished. She just sat there in disbelief.

»Lucy, from the way all this surprises you I take it your dad has never shared any of those thoughts with you. Is that so?«

»Yes...«, said Lucy after a short silence, »I never even imagined that he thought this way.«

»Your dad did not just speculate about these things, Lucy. What he wrote down were his conclusions and not speculations. Conclusions he would only have drawn after researching everything most diligently. When your dad claimed he discovered that our civilization has been stagnating for a long time then this is what must be the case. Obviously, most people would reject such conclusions out of hand because they only can see as far as their noses. But your dad had resources at his disposal which few researchers have, and I am confident that your dad is right in what he writes about our stagnating societies.«

»But if it is true, Bran, that's just awful. Isn't it?«

»Lucy, the truth is always just the truth. Whether we like that truth or not. What matters is how we deal with the truth. Seemingly, some in our society who had the power to do so must have decided that it was better to hide this truth from the broad populace.«

»So, this Eireen Sawarov is right after all, at least in some way. We are being manipulated!«

»I admit this thought has occurred to me too. But that does not justify any of this woman's actions.«

At that moment, the mission chief's communicator began to buzz. Han Nakamoto was on the line asking him to come to his office as soon as possible. Taras Daley had

turned up in their station in the early afternoon; again. Bran told the chief of security that he would be there as quickly as possible.

»Lucy, I am called to the city's central security station and likely won't be back before dinner. You know where everything is, this is still your home too. Can you begin to search the work-related area of the archive for clues why your father thought he had evidence that human life had persevered on the continent of Africa. We must understand this as soon as possible. I think it may be key to understanding why your father disappeared thirteen years ago. «

»Sure, I will do that Bran. For now, I am tired of looking through family images anyway.«

With that the mission chief left for the central security station and Lucy went back to her room to understand how her dad could have known about humans still living on land, when she and her colleagues thought they had only discovered this a few days ago.

28

At the central security station Han Nakamoto had been waiting for the mission chief in the observation room, separated by a halfway mirror from the interrogation room where Taras Daley sat. The mission chief entered with a silent greeting and then looked inside the interrogation room where Taras Daley was quietly sitting at the table, waiting to talk to chief Han Nakamoto himself; again.

»Same thing, Bran. He just walked in and asked to talk to me - and to me only.«

»How long has he been sitting there?«

»A little more than one hour.«

»For a powerful man having to wait for over an hour, he seems surprisingly quiet. Don't you agree?«

»Now that you mention it, yes, that seems to be unusual for a man like Taras Daley. But maybe he plans to wait here until the street lighting is dimmed for nighttime so it will be easier for him to get out of this station undetected. I do not quite understand

anyway how it is possible for him to come to our station without some in his organization, or better in the council woman's organization, getting wind of it.«

»Han, this is something we must check. We cannot run the risk that he has been followed by one of his or maybe one of Eireen Sawarov's people.«

»You are right, Bran. Let me quickly arrange that before I begin to question Taras Daley. That should not take more than a few minutes after which I will go straight to the interrogation room. Do you need anything here, something to drink? There are chairs behind you so you can follow the interview more comfortably.«

»Some water will be fine Han. Thanks.«

A couple of minutes later, a little lady in security uniform came and smilingly handed the mission chief a large serving of water and after having taken a few sips the mission chief saw the chief of security entering the interrogation room. Taras Daley looked up with a smile.

»Chief of Security, you are still a very busy man.«

The chief of security gave Mr. Daley a rather grave look and responded solemnly, »it is your people among others who keep me busy Mr. Daley.«

»I am sorry to hear that Chief of Security. There is no need to concern yourself with us, but you should worry about these others.«

Han Nakamoto did not respond right away but first sat down on the other side of the table, waited a few moments and then squarely faced Taras Daley, »and who would those others be Mr. Daley?«

Taras Daley continued calmly to look at the security chief. How much did the security chief already know about the others; did he know about them at all? After a moment of thought Taras Daley decided that it was best to go slow and see what he could pick up during their conversation.

»Before we can get to those others, Chief of Security, we must return to our last conversation. You know, since then, things have changed quite a bit.«

»Can you be more specific, Mr. Daley?«

»Well, Chief of Security, did we not agree in our last conversation that Eireen Sawarov's plan to break into the Crowden Institute was doomed to fail? Has her plan

not succeeded since then, and have her people not been able to break into the Crowden Institute and steal certain things? And all of it happened despite my warning.«

»If I understand you correctly, Mr. Daley, you blame us for not preventing this break-in, which you had warned us was going to happen. Is that so?«

»In a way, yes. Initially I did blame you and your staff for failing to prevent it. But not for long. There could be no doubt what Eireen Sawarov's plan was, and if she had carried out that plan, it would certainly have failed. So, my conclusion shortly after I learned about the successful break-in was that Eireen Sawarov's people must have executed an altogether different plan. Would you agree with that?«

»That was also our conclusion Mr. Daley. If Eireen Sawarov's plan had been executed the way you described it to us we would surely have been able to prevent the break-in.«

»And I do believe this also. But a different plan was put into action, a plan the council woman could only execute because of the others I mentioned before. It was those others who you and I have not been aware of who were involved in all of this and who helped Eireen Sawarov to steal these items from the Crowden Institute.«

»If I may ask Mr. Daley, what makes you so sure that others have helped the council woman to remove items from the Crowden Institute. Maybe Eireen Sawarov changed her plan and just did not want to share this with other district leaders of your movement. Why must others be involved, why can't Eireen Sawarov not just have betrayed you as well as your fellow leaders in other districts?«

Taras Daley did not respond immediately but kept looking at the chief of security, carefully examining his facial expression before he eventually gave his answer.

»Because they contacted me.«

Han Nakamoto had to muster all his mental strength so as not to betray the feeling of surprise radiating through his mind. The mission chief behind the halfway mirror did not require such mental control, he simply was surprised. Han Nakamoto had been in this business for too long to be distracted by such tactics as Taras Daley had just employed. However, apparently Taras Daley was still able to catch a tiny glimpse of the security chief's surprise. And that was all he needed for his next move.

»Mr. Daley, you have me somewhat at a loss here. Who did you say contacted you? The people who helped the council woman to engineer the heist in the institute?«

»Precisely, Chief of Security. The same people who helped the council woman with the heist - as you called it - also contacted me, albeit after the heist.«

»If that is so that begs the question why you Mr. Daley come to this station to tell us that you also were contacted by those others who helped the council woman. Why would you do that?«

»For the same reason, I came to this station the last time. Didn't I tell you then, Chief of Security, that I abhor violence?«

»You did indeed say so, Mr. Daley. But what reason could there be for violence now? The council woman has what she wanted, and you are still the movement's leader in your district. What cause is there then for violence to occur?«

»Chief of Security, it is my firm belief that violence is the objective of those others who have helped the council woman and who later contacted me.«

»Mr. Daley, if this is your belief then I must ask you how you arrived at, may I say, this conclusion?«

»Of course, Chief of Security. You will not be able to understand my position unless I explain a few things. But that may take a little time. Do you have time?«

»Please Mr. Daley, explain yourself.«

»Thank you, Chief of Security. The day after the successful break-in, Eireen Sawarov had called a meeting to take place at her district's council chamber. Unlike with previous such meetings, only the respective district leaders were invited, no one else was allowed to attend the meeting. Everyone was searched before entering the council chamber. Then Ms. Sawarov began to tell us about the successful break-in for which she took full credit. She said that just the day before the break-in they had to devise a new plan because of a change in Crowden Institute security. You see, there was no indication of a betrayal at all, and given the success of the operation nobody cared about this change of plan. Everybody assumed that there was just no time to communicate this change without risking the success of the plan. However, there was something else. The stolen items were sitting on a table in the meeting room including the skull. Everybody was free to

check them out, that is, look at them before they would have been destroyed, as that was also part of the agreed plan. But Ms. Sawarov had seemingly changed her mind and stated that the items must first be investigated before destroying them. There was quite a lot of debate but eventually the council woman's arguments won out. How could they be sure that they had stolen the genuine items and not some decoys? So, the unanimous decision was that the items would be investigated. However, two days later the council woman called an emergency meeting, again only with the district leaders attending. What she told us then was that the skull had suddenly disintegrated and all what was left of it was pulverized bone. Nobody, however, really believed the council woman's story.«

»What does that mean - the skull disintegrated - Mr. Daley?«

»This is how Ms. Sawarov described it, Chief of Security. Evidently, the skull disintegrated over night while it was locked away, at least according to what the council woman told us. Nobody knows how and why it disintegrated? However, Ms. Sawarov had the pulverized bone material analyzed at a local institute specializing in such things. The pulverized bone was of the correct age, which is some twelve thousand years old, but it was impossible to extract any DNA from it so the identity of the individual could not be confirmed. But everyone believed it to be the bone material from the individual in question which had disintegrated.«

»What makes you certain, Mr. Daley, that it was not on Ms. Sawarov who ordered the skull's destruction?«

»I believe that to be most unlikely, Chief of Security. It is my opinion that Ms. Sawarov had changed her mind and did not want any of the items stolen from the Crowden Institute to be destroyed. But if you ask me why Ms. Sawarov changed her mind, for that I do not have the answer.«

»Mr. Daley let's get back to why you came here. You said that you are concerned that violence would erupt. But why and how? How does it connect to what you are telling me here at length?«

»I was coming to that, Chief of Security. You see, there must have been a quid pro quo between Ms. Sawarov and the people who helped her organization to pull off the

heist. Ms. Sawarov did not get this help for nothing and there must have been something which she had to deliver. And because she failed to deliver what she had promised to those others, they turned to me.«

»Now I understand Mr. Daley. And you believe that which Ms. Sawarov promised the others had to do with how she used the material stolen from Crowden Institute. Am I right?«

»You are right, Chief of Security. While I do not know what exactly it was that Ms. Sawarov promised those others, I am quite certain what the desired outcome was.«

»And what in your opinion would that be Mr. Daley?«

»Civil unrest, riots, rebellion. Choose your pick Chief of Security. Those others want to incite violence in the city for reasons I do not know.«

»Mr. Daley, how were you supposed to help these others achieve that.«

»By getting rid of Eireen Sawarov in whichever way, taking over the movement and then using the material stolen in the heist to stoke civil unrest. I do not know exactly how this could be done with the material from the heist, but they promised me that they would provide this information in a way which would be very convincing for people. According to this person, who spoke to me via video link, people had been lied to and had been deceived by their governments for generations. Now, I do not know anything about that. We sure have our differences in the city, but we all can voice our opinions and live our lives the way we do if it does not impinge on the ability of other citizens to do the same. I see no justification for violence, none whatsoever.«

After Taras Daley had spoken his last words there was a prolonged silence. Han Nakamoto was considering the possibility that they may have seriously misjudged Taras Daley. Different from Eireen Sawarov, Taras Daley had a partner, and they had two children. As he sat there in his mid-forties, of stout build, medium height, a little overweight, Taras Daley looked more like a concerned spouse and father than an extremist. But looks can be deceiving. As for Taras Daley, his thoughts were of a somewhat different nature. He was wondering if he had prepared the ground sufficiently to ask for what he had come for. Han Nakamoto broke the silence first. »Mr. Daley, when did the others contact you first? How often did they contact you?«

»Four days ago, Chief of Security. The contact was indirect because not I, but my wife was contacted. She was instructed to tell nobody about this but myself and she was to convey to me that nobody else must know about this, not even anyone in my organization. The message my wife received was verbal only and it self-destructed after she had heard it. I was then called via video link twice in my home. I have never seen a person nor heard a name but it I believe the person I talked to on the video link was a man.«

»Mr. Daley, you didn't just come here to warn us. I think you also came here to ask us for something. Isn't that so?«

»That is so, Chief of Security.«

»And what, Mr. Daley, is your ask?«

»For one, I must have personal protection for my family. Second, the city must prepare for the districts where the movement is strong to separate. Specifically, I ask that sectioning off for my district is prepared such that it stays with the city, regardless of what the other districts will do where Eireen Sawarov holds sway.«

»Mr. Daley, protection for your family, we can provide immediately. Regarding your other requests, I still need to discuss a few things with my colleagues at city hall. Can you wait here, let's say a couple of hours?«

»Yes, I can. And can you have personal protection for my family set up right away?«

»I will take the necessary measures so your family will be under city protection, Mr. Daley. I will be back with you in less than two hours. In the meantime, someone will bring you refreshments.«

Back in the office of the chief of security, it took Han Nakamoto and Bran Taliesin only a few minutes before they agreed they had to act now; and quickly. A secure video link was set up between the council chairman's office and the office of Han Nakamoto. The chief of security and the mission chief briefed the council chairman on the interview the chief of security had just conducted with Taras Daley and then gave their assessment of the situation. All of it took less than half an hour during which the chairman did not ask a single question. When Han Nakamoto and Bran Taliesin had given their

recommendations, the chairman simply agreed with their assessment and asked them to set in motion what they had proposed. Peer Aksun said that he would brief the delegation from Central as well as the president of Crowden Institute. He also said that the first thing he would do the next morning was to have Eireen Sawarov taken to his office. By that time, everything had to be in place. The mission chief and the chief of security assured him that this would be the case. By the time Han Nakamoto returned to the interview room to tell Taras Daley that all his three requests had been granted, the city's security forces were already at work implementing them.

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Eireen Sawarov's assistant Ned Busic had received the meeting invitation just before he was to leave the council woman's office. The council woman had not been in her office all day and Ned Busic knew that she had not planned to be in the office the next day either. But the meeting notice indicated an urgency which left him little choice but to call his boss on her communicator and let her know about it. However, she did not answer the call and so he left her the message that the council chairman had asked to see her first thing next morning.

Eireen Sawarov had ignored her assistant's call simply because she was already on a call with someone else. Not on her communicator though, but via video link. But that still did not get her closer to understanding who this someone else was. All she could see on the video screen was just the outline of a person but no face. Video link communication was much more secure than using a communicator device. But that was not why this someone had insisted on using a video link. Whoever these people were that had helped the heist to succeed, that they insisted on using a video link while hiding their faces could only mean that the call must come from outside the city. As the council woman well knew, the only way for someone from outside the city to communicate with her was via video link; with their communication devices this was just not possible. When she had asked the person, whose voice was certainly distorted, how she should address her or him, the answer was Leor. The first name Leor could indicate a male or female, but she opted for Mr. Leor and insisted that this Mr. Leor addressed her as Ms.

Sawarov or council woman. And so, it was. Mr. Leor said that she had not held up her end of the bargain in return for the help she had received for the break-in at Crowden Institute.

»Mr. Leor,« the council woman eventually objected to the repeated demands of Mr. Leor, »I believe you misunderstand something here. What you are asking amounts to initiating civil war in this city. And while I am grateful for your help in getting the items out of Crowden Institute, that is not something that merits bloodshed in exchange.«

»Nobody is talking about civil war or bloodshed here, Ms. Sawarov, I am simply asking you to create the equivalent of civil unrest which will make it impossible for city government to do its job. Because of that, people will ask for stronger leadership, someone who can bring back order to the city and that will be you. I am not asking you to wage war in the city, but I am offering you the opportunity to become the city's council chairwoman.«

»How kind of you Mr. Leor, but please let me be the judge of what the consequences of such actions - as you ask them to be taken - will be. You do not know this city, not its citizens and not its governing body, but I do. The inevitable consequence of what you ask me to do will be civil war and I am not prepared to risk this.«

»Well, Ms. Sawarov, then I must find someone else with a little more ambition than you seemingly possess who will be able to see the advantages of carrying out what you had agreed to do.«

»And who would that person be, Mr. Leor? There is no one else. A Taras Daley, as he is the one you likely have in mind, will not do either what I refuse to do. But there is something else you should know. The skull completely disintegrated after it was in our possession for a few days. We have nothing more to show than research reports which no one will read and those who try will likely not understand very much. The skull was something that one just had to see to understand that our governing body hides things from us they do not want us to know. But that skull is gone. So, what now?«

There was a prolonged silence. With every second it continued the council woman became more convinced that whatever plans this Mr. Leor had, they depended on their possession of the skull.

»That indeed changes things, Ms. Sawarov, but not by much. If I were you, I would prepare for civil unrest and do so with some urgency. You should begin to section off the districts you believe you can control. I do not think your city's governing body can overlook the fact that you had those items stolen from Crowden Institute any longer. You know just as well as I do that this fact must now be obvious to them.«

»That may be so. But even if they knew this now for a fact, they would think twice about laying their hands on me as they must suspect – and rightly so – that I have put in place preventive measures just for such a situation.«

»Well then, Ms. Sawarov, it will be civil unrest after all. It seems you must abide by our agreement even though you do not want to. But rest assured, we will be able to help you quite a bit more than with the little assistance we provided you with for the break-in.«

»Who is we, Mr. Leor.«

»In time, Ms. Sawarov, in time...«

The connection was terminated. The connection was terminated. That much was clear to the council woman, whoever these people were, they were not her allies. For her the question was not just who those people were but what ultimate objective they pursued in trying to use her and her movement. Which role had they assigned to her? As Mr. Leor had stated, even though she did not want to hold up her end of the bargain, circumstances may nevertheless force her to just do that. She had to find an alternative. Maybe there was a way to work things out with the city. The city council members may not think that the welfare of this city mattered to her, but they were wrong. Yes, she wanted the city to change. Change in ways most of these other council members strenuously resisted. However, none of them could have any interest in outside parties to meddle with their city. That must be their common ground. When later in the evening council woman Sawarov checked her messages and saw her assistant's note, she smiled. This meeting with the council chairman came just in time.

Entering the council chairman's office next morning, Eireen Sawarov did so with the resolve to not leave it without some kind of arrangement between the council chairman

and herself which would avoid civil strife. What she could not know was that the council chairman, already waiting for her, had a similar objective but was prepared to use other means than what the council woman would have expected.

»Council Woman Sawarov, please take a seat. Would you like something to drink?«

»Thank you, Chairman Aksun, I am fine. I am glad you called this meeting as there are some urgent matters we need to discuss.«

»As it is, it is just because of such urgent matters that I asked you to meet with me this morning. But I doubt that we refer to the same matters.«

»Then why don't you share the urgent matters which are on your mind first, Mr. Chairman.«

»I presume Council Woman you still remember our last conversation. Unfortunately, this time it is not just any more about leaking confidential information, either by yourself or by your staff. We now have proof that your people are behind the break-in at the Crowden Institute and that it was you who ordered it. What do you have to say about that?«

Council Woman Sawarov was looking at the chairman and the chairman could not detect any surprise on her side, and neither was there any visible anger about the accusation he had just made. She just kept beaming at him her fake smile as if they were discussing some minor matter. Now the chairman was surprised. And as if she had noticed that the council woman broke her silence.

»I am not disputing your charges, Chairman Aksun. My people stole the items in question, and they did so on my order. Had you not excluded me from the skull investigation none of it would have happened. You do understand that don't you?«

»Council Woman Sawarov, I am not sure how you being excluded from the skull investigation oversight body could justify you ordering your people to steal the skull and the research reports.«

»Well, Mr. Chairman, then forget about any such justification and accept that these two events are connected. We have been lied to for far too long. Many people do not trust anymore that what they are being told is the truth. There just comes a point where, if everything else fails, one must use different means to get to the truth. Was anybody

hurt during the break-in? No. And why? Because it was my order that in whatever we do, nobody must be physically hurt.«

»But you and your people still broke the law Council Woman Sawarov. If we let people break the law without suffering the consequence for doing so, what kind of order do you think we would have in the city?«

»Very little I guess, Mr. Chairman.«

»So, you agree that I have no other choice than to arrest you and those of your people involved in the break-in?«

»As a matter of principle, yes Mr. Chairman, this is what you must do. But not now. I do believe there are much more urgent matters than arresting me and others to stand trial for this break-in.«

Council chairman Aksun kept wondering about the turn this meeting was taking. He had expected the council woman to fiercely reject any accusations with regards to the break-in. But she just admitted it. Then she conceded that the arrest of those perpetrating the crime, that is her and those who executed it for her, was the unavoidable consequence. This conversation with the council woman was quite different from what he had imagined it to be. Maybe there was a way after all they could avoid a confrontation in which neither of them would be able to gain much but could lose a lot more.

»Council Woman Sawarov, can you help me understand what those much more urgent matters possibly could be?«

»Certainly, Mr. Chairman. You see, there are others, others outside of our city who seek to throw this city into something akin to civil war. And I am not prepared to let this happen and neither can you.«

»Who are those others, Council Woman?«

»I do not know. The only thing I am certain about is that they are outside our city, maybe in another city, but I do not know which one. It was they who aided my team in the break-in. Without them we could not have accomplished it.«

»I see. But what makes you think that their objective is to cause civil strife, maybe even civil war in our city?«

»What they are asking me to do in exchange for helping us with the break-in would

ultimately amount to no less than the complete breakdown of any order in our city. You cannot want this, and neither can I.«

Chairman Aksun was looking at council woman Sawarov and he was looking at her with different eyes. While he was doing so, his mind was searching for a possible hidden agenda, something he could have missed, which could bring the council woman to the point of practically offering a sort of alliance. But he could find none. Considering all possible explanations to this riddle council woman Sawarov presented to him the most probable explanation must be the simplest. Council woman Sawarov meant what she was saying.

»May I ask, Council Woman Sawarov, what would you propose that we do?«

»Whoever those others are we must understand the nature of their ultimate objectives. I am certain that if I am not prepared to do their bidding, they will seek to recruit someone else who will. Our best option in that case would be to give the semblance of civil conflict while our city remains at peace. It does not look to me as if they have any agents in this city who could tell them what is really happening here.«

»If they have no agents in the city, how will they then know that there is civil conflict?«

»From me of course. Our goal must be to somehow lure them into our city and once we can get hold of them, we can question them directly.«

The chairman sat back in his chair and looked at the council woman, asking himself the unspoken question of how he could even begin to trust her. The council woman did not to have think twice about what must be going on in the chairman's mind. Looking kindlier than ever at the chairman, if such a thing was possible for her in the first place, she sprung her final surprise.

»I understand Chairman Aksun that we have an issue of mutual distrust here. You do not trust me, and I do not trust you. It has been this way since we got to know each other. But we cannot let this get in the way of saving the city from this obvious danger coming from outside. If our city is in danger, I must trust you and you must trust me. To take the first step I tell you now that I will not resist you having me arrested here on the spot, provided we agree that we will continue to cooperate to protect our city from

this outside threat.«

The chairman was looking at her. He was not surprised anymore, not even by this suggestion to have her arrested. He could have done so anyway. When he had sat down for this meeting with her, her being arrested was to be the end of this meeting. Security guards were already waiting outside his office to arrest her when she left it. But that was not necessary anymore.

»Council Woman Sawarov, your arrest was already imminent and guards outside my office would have taken you in custody as soon as you left my office. But I believe there is no need any more to have you arrested. However, I must ask you not to leave city hall without notice. When you leave the city hall, a plainclothes security officer must always accompany you. I will not deny that this meeting has surprised me in many ways. As you must trust me, I will trust you. The matter of the break-in will be ignored for now. We will take care of that later once the present danger for our city has passed; and how we will take care of it will depend on what happens until then. For now, the security guards outside will accompany you to your office. Once the plainclothes security detail has arrived at your office they will leave. Do we have an agreement, Council Woman Sawarov?«

»Yes, we do Chairman Aksun.«

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The mission chief and the chief of security had been busy putting all security measures in place they had discussed with the council chairman. Then, mid-morning chairman Aksun had called them in Han Nakamoto's office. What they heard from the chairman about his meeting with council woman Sawarov was unlike anything they had expected. But this change in situation, with the council woman now freely and willing cooperating in the interest of the city, made their job just that much easier. The plans they had devised and started to implement to counteract what they had expected to evolve into a civil conflict now would just have to be modified. Modified to give the semblance of such a conflict while preventing the possibility of it becoming a reality. By early afternoon they were done. With Eireen Sawarov's people cooperating and Taras

Daley holding up his end of the bargain, everything should be in place for launching their civil strife decoy in a couple of days.

When Bran Taliesin returned to his flat this evening, he found Lucy still absorbed in going through the material in her dad's archive container. Since their late lunch two days ago they had not spoken much because he had been away for most of the time. Lucy looked tired. Likely, Bran thought, she not only spent the day reading through her dad's documents but much of the previous night as well. After checking the food supply in the kitchen, it was clear to Bran that she had barely eaten and so he set about making a more substantial dinner for both; he could use some calories too. When half an hour later they sat down for dinner Lucy did not say much. Something was on her mind, that much was evident to Bran.

»You are not much of a talker tonight, Lucy.«

But Lucy only briefly looked at him and then continued to stir dinner around on her plate.

»I know Lucy, I am not much of a cook. But is it really so bad?«

»No, it is not, Bran. I just don't feel like I want to eat right now.«

»Unless you have secretly stocked fridge and pantry, you have barely eaten anything in the last two days. Have you?«

Lucy said nothing. She only shook her head. Bran saw that she was seemingly trying to find the right words to describe what weighed on her mind. But to no avail because a few moments later it just burst out of her.

»Bran – was dad one of those extremists?«

Bran was no less surprised by hearing this question than Lucy was herself by asking it. He was shaking his head and looking at him Lucy knew that he wondered how she could even ask such a question.

»Lucy, how can you even consider that a possibility! Your dad was anything but an extremist.«

»But Bran, why did he believe that we have been lied to, that we have been manipulated? And not just us as individuals, he claims our society has been manipulated and that for many centuries. Dad writes that without any such manipulation our oceanic

civilization would never have evolved in the way it did. Did he not insist that without such manipulation oceanic civilization would have failed early on, thousands of years ago? Even more, he claims that his research made it clear to him that much of the history of land-based societies taught in our schools and colleges is made up. How is that not extremist?«

Bran realized that in rummaging through her father's archives Lucy was well ahead of him. He blamed himself for letting her go through it all by herself. Also, he could not help observing for himself that given what he had learned in the last few weeks, it was all but clear cut who was an extremist and who was not. But he could not tell Lucy about any of that, at least not directly. However, soon enough, citizens would inevitably learn that things were not quite so as they had taken them for granted. Regardless, Lucy needed to understand right now that her father was not an extremist.

»Look Lucy, just like your father you are a scientist, right?«

»Yes... - why do you ask?«

»Being a scientist just like your father you seek to understand the true nature of things. You want to know the facts. And if the facts you discover tell you that something you thought to be part of the true nature of things cannot be any such thing you will accept that. New scientific facts which disprove what was thought to be the correct explanation is how science progresses. It is not by proving that something is correct that science progresses, even though that has its usefulness. Science progresses by falsification. You can make hundreds of observations which all confirm what you believe you already know, and you will learn little from it. But if you make one observation, which others can confirm, contradicting what you believed to be true, you have really learned something. Take the skull investigation as an example. Before its discovery and investigation, the firm belief was that human life on the continents had ceased to exist many thousands of years ago. Now we know that this is not true. And in addition, we also have a new hypothesis that such human life on land may even exist today. A hypothesis which we can now prove or disprove. If you believe your father was an extremist because he did what he did then you must be an extremist as well, right?«

Listening to his explanation, Bran could see Lucy's face brightening up a bit as she

was thinking about what he had just said.

»I see Bran. Of course, science works in the way you just described it. But how does that apply to history? Dad made not only claims regarding facts which one can prove or disprove by making some measurements which others can confirm or contradict as is the case in archaeology or genomics. Dad was no historian and with respect to history itself, how can you ascertain historical facts, how can you discover the truth of what happened many thousands of years ago?«

»You are right Lucy. History is somewhat different in that respect from sciences like archaeology, genomics, physics or mathematics. Unlike these, most would consider history a descriptive science. Although one could argue that archaeology is also a descriptive science in many ways. As a historian, you must understand which historical sources are reliable and which are not and any historian worth her or his mettle will from a scientific standpoint proceed just as scientifically as any mathematician would. The difference is that one really cannot tamper with mathematics without being quickly called out, but one can do so with history. You are right, your father was not really a historian but discovering that history had been tampered with he began to investigate why that had happened and what the consequences of it were. Your father was following the truth to where it led him. Different from that, an extremist would suit the truth to her or his beliefs. Extremists caught in their conspiracy theories cannot distinguish between fact and fiction anymore. For them, causality is irrelevant. They will claim causal connections between things which are in no way causally connected. You cannot have a rational argument with those people. Does that sound like your father?«

»No Bran, that certainly does not describe dad in any way.« Lucy said clearly relieved. »This is a side of my dad which I did not know. By the time he disappeared I was old enough to understand that dad was interested in many more things than just the research he was known for. He also was the rare scientist who served as a city council member. From what I have read so far in the archive documents, my dad was deeply concerned that our society, or better oceanic civilization, was failing without anyone realizing it. Somewhere in the documents he even refers to what he called the birth defect of our civilization. Do you know what he could have meant by that?«

»Lucy, I don't know that. You are ahead of me in reading through your dad's archive container. Can you point me to the documents which talk about this birth defect?«

»Sure, I will look them up when I am finished here.«

Lucy's appetite had returned. Bran noticed with a smile that after clearing her plate she went for seconds. After they were finished, Bran took care of the dishes while Lucy went to her room, searching in her reader for the documents Bran had asked her for. Half an hour later, after Lucy had left to see Kareem, Bran sat in his reading chair looking through the documents Lucy had directed him towards.

The mission chief quickly understood that this birth defect of their oceanic civilization which Hakan not just pointed out but elaborated on was nothing less than their civilization being founded on what was a blatant falsehood. According to what Hakan discovered in records he had access to, human life on land had never become an impossibility. What happened was something quite different. Human based civilization on land had deteriorated to a point where society stopped functioning. Villages, cities, counties, or countries could not provide the basic services anymore which were necessary to keep a human society functioning. The result was not only complete lawlessness, but also the spread of contagious diseases of both the body and the mind. The latter eventually resulted in the kind of tribalism where people who in earlier times would simply have been seen as morons now had become leaders. At the time this happened, the first oceanic cities had been established and it was then that a small part of Earth's human population abandoned the much larger part of humanity for which there was no place in oceanic cities. But abandoned would have been too benign a term in Hakan's opinion to give justice to what happened. Those now safe in their new oceanic homes had to wage war on those left behind on land to keep them away from the seashore where the onshore facilities of oceanic cities were multiplying. The foundation story they told their children about the last humans remaining on land, presumably the survivors of unimaginable natural disasters, all somehow safely managing an escape to their new watery homes was an overt lie.

Bran put the reader aside, closing his eyes, Hakan had been a scientist's scientist, he would never make such things up. What Hakan discovered must be the truth. But where

could he find these records which Hakan had access to? He wanted to see for himself. And how much of that, he asked himself, did those people from Central know about this. How much did Alwyn Maar, Aung Lasheen, and Mog Sinan know? And what about this Roan Quam, where would he fit in all of this?

Rebellion

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It all happened in the early hours of the morning when lights were dimmed to create a nightly impression and practically nobody was on the streets. The next morning, citizens in six of the seven districts where Eireen Sawarov had a strong following found that the passageways to the city districts surrounding these six districts were closed. Enormous emergency shutoff valves were blocking the tunnels connecting city districts. The purpose of these massive walls which had moved in overnight was to completely seal off a city atom in the case of an emergency, like for example when a major water break flooded a city atom. However, citizens could not detect an emergency. If there had been a water break in a city atom, in the city atom itself many other smaller valves would have moved in place to section off countless compartments in the damaged city atom. This, however, was not the case as citizens in the now isolated six districts could still freely move between the city atoms in each of the six districts and they could move between these six city districts.

Many speculated as to what had happened but almost none of the citizens inside or outside the six districts knew anything; and those who knew kept silent. Some claimed that it was Eireen Sawarov's people who isolated themselves from the city to take power in the districts where she had a strong following. But why then was the district where her followers were most numerous not isolated as well? This district, where Taras Daley led the movement, was still part of the city. And what if the city council had mandated the shutoff of the six districts from the rest of the city to stall, what could have become a rebellion? But then again, nobody had seen any indication of that. There were no riots, not even any commotions. With no answers to such questions the citizens inside the six districts and in the city surrounding them focused on more practical things. How could people now get to work if their home and their workplace were separated by those massive valves? There was no practical solution to that since the only way to get from

one side of the separating walls onto the other side was by using one of the port facilities. The six isolated districts housed one of the city's three port facilities. But traveling from a port facility outside the six districts to the port facility inside the six districts or going in the reverse direction would take the better part of the day. Since none of the city's landing platforms was located inside the six districts it was impossible for people to travel from there to any of the onshore facilities or from onshore facilities to the six isolated city districts.

However, none of these difficulties in getting around would inconvenience too many people. As it was, in preparation for this separation action had been taken to ensure that those who were indispensable at their workplace would be able to get there. In almost all cases this meant a temporary relocation to a place outside the six isolated districts or to a place within them. Anyone who had to travel frequently to onshore facilities needed to relocate to a place outside the six districts. Those who had to do so infrequently could stay in the six districts but their commute to onshore or back from onshore would be lengthened by a day as they had to get out of the six districts using port facilities. Because from the beginning city atoms were designed for autonomy there were few other things which needed to be taken care of. There were sufficient medical resources within the six districts and schooling was not an issue either. Communication between the six isolated districts and the rest of the city worked just as before. Utility connections were always routed from the utility level beneath any city atom directly to it; there was no issue there. Unbeknownst to the citizens inside or outside the six isolated districts, city security had also put in place security measures in the utility level itself. Because the utility level provided access, however uncomfortable, to city atoms themselves, the city's chief of security had made sure that all those access ports from the utility level leading to the city atoms in each of the six isolated city districts were locked as well.

To anyone who could have observed what had happened to the city overnight it may have looked like one of those exercise drills, occasionally undertaken by cities to ensure their emergency responses and procedures were working. No such observer, it occurred to the mission chief, would likely guess at what was hidden beneath this seemingly commonplace situation of a city demonstrating its emergency response capabilities. However,

after a few days such an outside observer would begin to ask questions as to why this exercise was taking so long and might suspect that something else was happening in the city. Different from that, the affected citizens themselves would after a few days become used to their new situation and eventually stop wondering about what was happening; they had to get on with their lives after all. One such outsider contacted Taras Daley the day after the lock-down. It was Roan Quam and Taras Daley had expected his call, although he had no idea who the caller was. Like on the previous calls, the person was not showing his or her face; only her or his voice could be heard, and Taras Daley was sure that this was not really the person's voice which came through the speaker.

»Mr. Daley, have you considered our offer? Have you made a decision.«

Taras Daley did not care to know the name of this person who had first reached out to him through his wife. A move that was clearly intended to be threatening. He had never asked this caller for his or her name and he would not do so this time either.

»There is no longer a need to make a decision.«

»What do you mean by that, Mr. Daley?«

»Six districts have been isolated from the city or better have likely isolated themselves. My district is still connected to the city.«

»Mr. Daley, you must be more specific. What does that mean, six districts have been isolated? Please describe what happened step by step.«

»Well, it is all very simple. The night before last the main shutoff valves connecting six of the seven adjacent districts Eireen Sawarov either controls or can sufficiently influence have been isolated from the surrounding city districts. The tunnels between the city atoms of these six districts and the city are now blocked. Of the seven districts where our movement is strong only my district remains connected to the city.«

»How do you know, Mr. Daley, that this was Ms. Sawarov's doing and not the city locking down those six districts?«

»Don't you think that if it were the city isolating the districts where our movement is strong, they would not have included my district? Besides, locking down the six districts as a unit is not desirable for the city, they would likely have preferred to only isolate Eireen Sawarov's district. Isolating the six districts as a group is much more in the

interest of Ms. Sawarov than in the interest of the city.«

»But why would Ms. Sawarov not have isolated all seven city districts where your movement is strong? Why would she exclude your district?«

»You likely must blame yourself for that because you seriously underestimated Ms. Sawarov. Reaching out to me and asking me to do what she did not want to do for you, don't you think she would somehow learn about this?«

There was a prolonged silence. Whoever this person was, Taras Daley thought, his or her plans were likely to change now.

»Mr. Daley, do you think Ms. Sawarov believes you to be a traitor to her cause?«

»I do not know that. Maybe she does, maybe she does not. We have not talked for more than one week.«

»Do you believe Mr. Daley that your movement will stay united, or could it possibly split in two?«

»I do not know that either. That will likely depend on the actions Ms. Sawarov now takes.«

»One last question Mr. Daley. Is the foreign delegation which arrived a few weeks ago still in the city?«

»I do believe so, but I cannot say for sure as I have not been involved with this delegation.«

Moments after Taras Daley had answered this last question from the person with no name and no face, the connection was terminated. Reaching for his communicator Taras Daley called the office of the chief of security to let Han Nakamoto know that everything had gone according to plan and the message they had agreed on had been delivered. On the other end of the terminated video link Roan Quam sat behind his office desk, seeking to make sense of what he had just learned. Was there now a rebellion in the city or was there not? How could he know that Taras Daley was telling the truth? He knew he could not know that, so he had to look at two different scenarios. Taras Daley was telling the truth and there was indeed a rebellion or at least the beginning of one. But if he did not tell the truth, why would he lie to him? As he thought about it more, he also considered a third option. What if Taras Daley told the truth as he knew it, but the

truth itself may altogether be something different? It was too bad that Eno Twait had been arrested. He knew that Mr. Twait had local contacts in the city, but he had always been careful just to work through Mr. Twait himself and knew none of the people who had worked for him. That may have been a mistake. But then, the less people knew his identity the better it was. He must find a way to get leverage over this Eireen Sawarov. Everyone has their weak spots; she must have one too; he only needed to find it.

32

For the past weeks, Alwyn Maar, Aung Lasheen and Mog Sinan had been looking into the activities of a few cooperatives which had contracts with several different research institutions of Central. These contracts had one thing in common: all of them had seemingly been expedited by Central's chief legal affairs office. For none of them, negotiating terms and conditions took longer than two weeks as compared to the average contract negotiation time of almost three months. Looking at the statistical distribution of contract negotiation duration over the past five years, those contracts were clear outliers. The key question to which they must now find the answer as soon as possible was simple to ask but difficult to answer. What was the relationship between these cooperatives and the chief legal affairs office and specifically with Roan Quam, their chief legal affairs officer? A few days ago, Aung Lasheen had left to join Central's chief industrial officer in visiting a city which was listed as a partner in quite a few of those cooperatives. Maybe city officials there could answer some of their questions. Another question which they could not answer yet was why Roan Quam had chosen Peer Aksun's city to foment civil unrest. Was that just coincidence because it was the host city of the Crowden Institute or did Roan Quam believe the extremists in this city to be far more useful than those in other cities?

»He could have stoked civil unrest in any other city where a sizable fraction of citizens favored extremist views. Why this city, Mog?«

»I do not know Alwyn,« said Mog Sinan after taking a sip of his drink, »but I still cannot help thinking that it must have to do something with Hakan.«

Sitting comfortably in one of the council chairman's living room chairs Alwyn Maar

looked at Mog Sinan. Peer Aksun and his family had been most accommodating and generous hosts. How long was this going to take, how many more weeks would they have to remain here? He did not know and neither did Mog Sinan. Maybe Mog Sinan was right, he often was.

»But what could connect board member Roan Quam with Hakan? I do not think they really knew each other; I am not even certain they ever met. You knew Hakan better than I did, Mog. What could be the connection between the two?«

»I wish I knew Alwyn, but I don't. If Hakan knew him, I am certain he would have mentioned him to me; and he likely would have asked me about him. Hakan always wanted to know more about the people in his life than they would offer freely. He had his way of researching people's backgrounds, understanding who they were and what motivated them. I am sure he would have done nothing different if he had ever met board member Quam.«

»Mog, board member Quam became chief legal affairs officer only about a year before Hakan disappeared. But I think this is probably irrelevant. His personal file shows that he has been working as one of our lead contract negotiators with many of our institutes. And during his tenure as lead contract negotiator, contracts he negotiated on behalf of Crowden Institute outnumbered by far those of other institutes. He negotiated almost four times as many contracts for Crowden Institute as for any of our other institutes.«

»How do you know that Alwyn?«

»Not from his personal file of course. When he was first proposed for the position of chief legal affairs officer he had to submit his application. This application, listing his accomplishments, is still part of Central's records which board member Quam cannot touch.«

»I see. So, he may well have observed Hakan and what he was working on for quite a while. The contracts would have clearly told him about it, he would have had no need to ask Hakan himself.«

»That is what I also think Mog. And he may have already placed spies in Crowden Institute while he was a lead contract negotiator. This way he may also have learned

about Hakan's results. We still do not know board member Quam's source for the masking capsules. Who could tell that he did not possess them already back then?»

»That could be the case, but we will not know for sure until we have identified the source of the masking capsules. We have finally located all the documents relating to the development and manufacturing of those capsules. However, it will take time to go through them. With a little luck we may be able to identify that source within the next three weeks or so. At least that is what our experts tell me.«

»Let's hope so Mog.«

»Alwyn, there is something else we need to reconsider.«

»And what is that?»

»Hakan's disappearance. We have always assumed that a technical defect must have caused his craft to crash. Given the poor state of maintenance of our equipment, which is even worse today, this seemed a likely scenario. But what if it was not an accident? What if Hakan was getting in someone's way? Or if Hakan discovered something and board member Quam found out about it, deciding that he wanted what Hakan discovered for himself or for those who he must be working with?»

»Mog, this thought occurred to me too and quite some time ago. But until we found out about board member Quam's machinations, there was never a suspect. I believe now there is. If it was not board member Quam, then it could just as well have been one of his associates.«

»What could Hakan have discovered that people would kill for it? If we do not know the motive for why Hakan had to disappear, all of what we just discussed is nothing more than speculation. Mog, are you certain that there is not something Hakan could have worked on about which he may not have told you.«

»That is unlikely Alwyn. But it is not impossible. I will ask Carleen to search for any documents related to Hakan which are still in Crowden Institute's records.«

»Yes, you must ask her to do that. But that again will take time, and I am not sure how much time we have left before board member Quam will set things in motion which could lead to an irreversible change for the worse in our societies. But maybe Peer can help us buy more time.«

As Alwyn Maar spoke those last words, he was looking towards the council chairman who had just entered the living room to join them. He seemed tired but also in good spirits, pouring himself a drink before he sat down.

»Gentlemen don't let me interrupt your conversation,« Peer Aksun said with a smile on his face and a drink in his hand.

»Peer, this is your home. You can never interrupt anything here. How is the situation evolving?«

Alwyn Maar and Mog Sinan had both been concerned that the council chairman's decision to enter what looked like a temporary alliance with the city's extremists may backfire. But it was his city and not theirs and they had to respect his judgment. He knew things that they likely did not know. And for all appearances, there was no indication of any civil strife.

»Much as we hoped it would evolve,« replied the council chairman. »We are staying in touch with council woman Sawarov and with Mr. Daley. Everything is quiet, zero incidents. If this arrangement, which we made with the extremist leaders, helps to avoid civil strife or worse than that, then there is hope that we may be able to reconcile some of our differences for the better of the city.«

»Mog and I very much hope that this will be the case, Peer. But what makes you think that the extremists will moderate some of their views?«

»Well, gentlemen, as it is, some of their views may not seem that outlandish any more after all that we have learned. Don't you agree?«

»If you refer to Central and its role then yes, some of their conspiracy theories may not seem to be completely unfounded. However, that is for the wrong reasons.«

»You see, Alwyn, this is where we may have a different perspective on things. It is not just the citizens who were deceived, it is also city governments which have been deceived. You cannot possibly expect us to just ignore that fact. All this secrecy will have to come to an end.«

»We know that, Peer. Mog and I will be working with you and the leaders of other cities to accomplish that. But first we must make sure that our cities will have a future in the first place.«

»What have you been discussing before I joined you,« asked Peer Aksun.

Hearing Alwyn Maar's and Mog Sinan's arguments, the council chairman could not help but agree with them that there must be a connection between board member Quam and Hakan Kassius. But just like them he had no clue what that connection could have been. Just about the time they had finished discussing this topic Bran Taliesin had arrived. The mission chief joined them and for a short while the four of them were sitting comfortably around the small table, nipping on their drinks. Then they listened to the council chairman who updated them on the call which Taras Daley had received, presumably from Mr. Quam. Mr. Daley had relayed the information to board member Quam as instructed and judging by the reaction of Mr. Quam as reflected in his questions to Mr. Daley, their plan seemed to work; for now. They were quite certain that Mr. Quam had no more access to gathering information in their city. So, he either had to believe Taras Daley or not. In either case his reaction would be somewhat predictable. It was interesting that Mr. Quam also wanted to know if the delegation from Central was still in the city, which Mr. Daley could not confirm. Here Alwyn remarked that it would not take board member Quam too long to find out that Aung had joined Central's chief industrial officer on a visit to a northern city. A city which was a partner in several of the cooperatives which board member Quam had given preferential treatment.

»Learning about this,« added Mog Sinan, »he must suspect that we are on to him. So, whatever it is that he plans to do, he must now likely try to do it sooner than he may be ready for it.«

»From the questions Mr. Quam asked Mr. Daley,« said the council chairman, »we are quite certain that he will reach out again to council woman Sawarov. We have already instructed her and when taking the call, she will not be alone but one of Han Nakomoto's people will be with her.«

»And she just accepted this?« asked the mission chief.

»Yes, she did Bran. I must admit, Ms. Sawarov keeps surprising us,« replied Peer Aksun.

»What is it that interests Mr. Quam in Ms. Sawarov? Mog and I discussed this earlier before Peer joined us,« explained Alwyn Maar to the mission chief.

»I guess we will soon know what that is, Alwyn,« replied the mission chief. »As for council woman Sawarov, my bet is that she wants to know what it is that Mr. Quam is after. Once she knows that she will just not take his calls anymore. And I fear then she will also stop cooperating with us.«

»Then,« added the council chairman, »it is even more important that we keep close tabs on her which we do, just like we do with Mr. Daley. But now let's turn to something else. The reason I have asked Bran to join us this evening is that he told me earlier today that there is something he needed to discuss with both of you. As it is, it has to do with Hakan.«

33

After this introduction by the council chairman, the mission chief began to tell them about the discovery of Hakan's archive container. Neither Alwyn Maar nor Mog Sinan had ever known about the existence of this container. As Bran told them, it would not have mattered if they had known about it or not because they would not have been able to open it. It had been encoded with Hakan's bio-identity which now was lost so no one else could possibly open it. Here Bran paused for a moment to judge the reaction of Alwyn Maar and Mog Sinan. Both looked visibly surprised.

»You are not going to tell us Bran that you found an archive container from Hakan and that we will never know what's inside it. Or will you?«

It was Alwyn Maar who had asked the question. Bran responded with a smile.

»Naturally not Alwyn. Hakan had not only encoded it with his bio-identity but also with the bio-identity of his daughter Lucy. But that is something only those who knew both - Hakan and Lucy - very well could ever find out.«

»You mean like yourself?« asked Mog Sinan.

»Yes, I do. Or does *Lugrila*, the name of the archive container, have any meaning for either of you?«

Bran looked from Mog Sinan to Alwyn Maar and then finally to Peer Aksun. They all shook their heads. The name had no meaning for them.

»I believe,« said Bran Taliesin, »there were only three people who would be able

to make the right connection regarding this name. One of them was of course Hakan's wife Helen; Carleen could have made the connection and of course me. I do not think this is a coincidence. Hakan planned for either Carleen or me to help Lucy access the data and he could be certain if we did so that we would see the contents of the archive container. He must have wanted Carleen and I to know about it. As we speak, Lucy is back at the institute sharing the contents of the container with Carleen just as I share it with you now. Of course, not all of it. That would be impossible as it practically was also his private archive, things which are important to Lucy. But the archive contains information about Hakan's work and it also tells us what he was concerned about.«

If it was the mission chief's intention to increase the suspense to breaking point, he certainly succeeded. Alwyn Maar, Mog Sinan, but the council chairman no less, they all were waiting anxiously for Bran to tell them what he had discovered in Hakan's archive container. Bran began by describing Hakan's assessment of decline, the decline of their oceanic civilization. A centuries long decline which Hakan exemplified by the lack of what he called the spirit of research and exploration. Judging from the reactions of Alwyn Maar and Mog Sinan who had looked at each other as Bran spoke, it was clear that all of this was not complete news to them. Not only had Bran noticed that but also Peer Aksun.

»Excuse me Bran for interrupting,« said the council chairman, »but from your reactions Alwyn and Mog, it looks like all of this does not surprise you much. Or am I mistaken?«

Alwyn Maar and Mog Sinan looked at each other for a moment and then it was Mog Sinan who answered the council chairman's question.

»You are correct Peer; this is no surprise for us. The fact that no major discoveries have been made for centuries, that our technological progress has not only stalled for centuries but that we are increasingly not able anymore to maintain some of the more technologically advanced elements of our infrastructure, all of that is no secret to us. To stop this decline and to possibly reverse it, became the main mission of Central centuries ago. But it is an enormous task and all we have been able to accomplish so far is to slow the decline, but not to stop it.«

The council chairman and the mission chief could almost not believe what Mog Sinan had just told them. They looked at each other to check if they had heard the same thing and then looked at the board chairman and the chief science officer of Central.

»And how many, other than yourself, know about this?« asked the mission chief, his voice still betraying his disbelief.

»The hard facts about this decline only a few of our board members know, responded Mog Sinan.«

»Does board member Quam know?« inquired the council chairman.

»He cannot retrieve such information from our records,« replied Alwyn Maar, »access to this data is highly privileged and he possesses none of those privileges.«

»So how did Hakan find out about it?« inquired the mission chief.

»An unfortunate consequence of centuries of decline,« said Mog Sinan, »is the fact that there are increasingly more instances where it becomes evident to people that we have lost certain technical capabilities. Someone in Hakan's position with his knowledge and the ability to analyze complicated facts could infer as much without having access to the actual data.«

»Mog, Alwyn – did Hakan discuss this with either of you?« asked Peer Aksun.

»No, he did not,« said Alwyn Maar, »but we suspected that he had come to understand much of it.«

»What are examples of this technological decline of our civilization?«

Peer Aksun found it difficult to ask this question, but he did not have to wait long for an answer. As Bran had told them, Hakan had believed that for practical purposes their space faring capability did not exist anymore. The Moon base which children in their schools still learned about, whose re-establishment had been one of the first major achievements in their oceanic civilization history, had long been deserted. Their ability to monitor Earth's surface from space had become quite limited because many satellites had failed and could not be replaced. And any satellite replacements they were still able to launch often failed prematurely. Here, Bran was looking at the chairman and he could tell that just as he himself, Peer was thinking about the conversation they had many weeks ago. When they had discussed what they still knew about the vast interiors of

the continental land masses. Now they had the answer. Very little to nothing. Alwyn Maar and Mog Sinan only could nod to what the mission chief told them about Hakan's assessment of their civilization's decline. Unfortunately, it was all true.

The council chairman looked at Alwyn Maar and Mog Sinan, thinking about the question he had to ask them. Any capable investigator would have to ask this question, and so must he. For a few moments he considered what the reactions of Alwyn Maar and Mog Sinan would be. But when he asked them who possibly could have had an interest in silencing Hakan, fearing that Hakan may publish some of his findings, Alwyn Maar and Mog Sinan did not show any visible reaction. In truth, they had expected this question to be asked at some point. It was Alwyn Maar who responded to the council chairman's question.

»I take it Peer that you are considering if Central could have been concerned enough about the effect which such a publication could have; and if it may have acted to silence Hakan. No need to be embarrassed about asking such a question. Rest assured if I were in your position I would ask the same question. The answer is simple. No, there was no reason for Central to be concerned about such an act by Hakan or anyone else working with Central's institutes because it would never have occurred. Hakan was one of us and he wanted the same thing we wanted; the difference being that we could not act like he did. Hakan knew this well. In our own ways we were all looking for a solution to the problem, but for a solution which would not destroy our societies and eventually result in the demise of our oceanic civilization. You already know what Hakan's last mission was. He was convinced that humans still lived on land. Hakan believed that different from what our schoolbooks teach, human life had never ceased to exist on land. He convinced me and Mog of that, and we supported him in the exploration of the areas on the continent of Africa which he was most interested in. Unfortunately, he never returned from one of the reconnaissance flights which he took over some central areas of this continent. For a long time, we believed it was an accident, but we do not believe that anymore.«

»And what do you believe now to be the reason why Hakan never returned from this flight,« asked Bran Taliesin.

»We believe it was sabotage,« said Mog Sinan, »and to understand the motive for it we must know what connected board member Quam to Hakan. Once we know what that is, we believe we will also know why Hakan had to disappear.«

»So, you believe that Mr. Quam is responsible for Hakan's disappearance?« asked now the council chairman.

»Yes, we do believe that Peer,« said Alwyn Maar. »If directly or indirectly we do not know yet, but we are convinced that board member Quam was most likely involved in Hakan's disappearance.«

»Even more reason to hope that our plan works out and he comes to our city himself. I am sure council woman Sawarov will do her best to lure him here. Once we can arrest him, we cannot only question him regarding his role in the heist to steal the skull and in inciting civil unrest in our city. We can then also ask him about his role in Hakan's disappearance.«

»Let's hope this will come to pass Peer just as you say,« said Alwyn Maar. »But it is getting late, and it has been a long day for Mog and myself. If there is nothing else that we need to discuss right away I would like to retire to my room. There a few more calls I must make.«

The council chairman looked briefly at his mission chief who shook his head and then did the same. There was nothing that could not wait until the next day. After Alwyn Maar, Mog Sinan also called it a night. Bran Taliesin and Peer Aksun, their drinks in hand, continued to sit in silence for a while, each following his own thoughts.

»Bran, it looks like Alwyn and Mog are convinced that Mr. Quam is to blame for Hakan's disappearance. They had just finished discussing this topic when I joined them. It makes sense what they say but they admitted that they could not identify a reasonable motive for why Mr. Quam may have wanted Hakan to disappear. What if they are looking in the wrong place? What if we can't see the forest for the trees? What if Mr. Quam's motive, or the motive of those in whose interests he acts, is nothing less than this seemingly unstoppable decline of our civilization?«

»I was thinking in a similar direction Peer. I do not think any personal motive could account for all that has happened. Something much bigger is at stake. The

question is who suffers the most from this unstoppable decline as you say. Would that not be industrial interests or the cities benefiting from such industrial interests? The cooperatives which got this preferential treatment from Centrals chief legal affairs officer, we must understand in which way they suffer from this technological decline. If that is the reason for all this happening, then we must ask what may benefit these cooperatives and maybe there we can then find the answer as to what Mr. Quam's objective is.«

The council chairman and the mission chief looked at each other acknowledging in silence that the motive could indeed be found there. It occurred to the mission chief that seemingly everybody was trying to save their civilization. The extremists were trying to save civilization from itself, insisting that it manipulated them in many ways but being especially concerned about the manipulation of the human genome. And as it turned out, it was not all conspiracy theory, some of it had a basis in reality; some but not all. Then there was this secretive organization Central, seeking to stop the decline of their civilization, most visible in the increased inability to maintain or even produce advanced technology and the lack of fundamental new discoveries in science; both going on for centuries now. And maybe there is this other group, represented by Roan Quam. Realizing Central's inability to halt or even reverse the technological decline of their civilization, this group may seek to achieve where Central has failed. But by doing what? Hakan had thought the only way to reverse their civilization's decline was to move back on land. What if Roan Quam and his associates had come to the same conclusion?

Bran poured himself and the council chairman another drink and then he began to put into words what he had just thought about. The council chairman listened to his mission chief without asking any question. When the mission chief had finished, the council chairman saw as clearly as the mission chief what may be driving Mr. Quam's actions. After a few minutes of silence Peer Aksun emptied his glass and then looked at his mission chief.

»And what Bran, if the land which may still be habitable on this continent of Africa is not empty, what if it is already settled?«

Bran looked at him, nodding his head. Of course, that was the piece missing in the puzzle. Finally, they were getting somewhere.

34

After staying with Bran for a few days Lucy had moved back into her small flat in Crowden Institute. She was still only half-way through reviewing the material in her dad's archive container. But what she had learned about him from his writings so far had already changed the picture she had of her father. She had known him all her life as a loving and caring parent whom she was proud of. Sure, she had also known about his reputation as a scientist, and it was the admiration for the scientist and not the father which influenced her career choice. But what she now began to understand was something quite different about her father. It was about a quality which she had always appreciated in him and similarly in Bran, but she did not really have a name for it. It had to do with integrity, sincerity, honesty, humbleness, authenticity and more things along that line. Even though she could not find the right word for this quality she admired, she felt that it was what she also had to strive for and that doing so was at least as important as being a good scientist. A scientist lacking such qualities to a certain degree, could she or he still be a scientist in the true sense? Lucy thought that probably many could become learned in the sense of being able to use the tools of science to achieve results. But lacking those other qualities, could one still call them scientists?

As such thoughts continued to keep Lucy's mind busy, there were others which she tried to avoid. One of the nice things when staying with Bran was that she could see Kareem again. However, it was not the same anymore, something between the two of them had changed and Lucy could not say what it was. Was it her fault? Kareem had been faithful, just as she had been. She had wanted to talk about this with Kareem but discovered that she could not do so. And when she had finally realized that she had no choice but that she must ask Kareem if he also felt that something had changed between them it was too late. With the six districts isolating themselves or being isolated from the city – Lucy did not know which way it had happened – they could not see each other anymore. The Niagato family home was in one of the six cordoned off districts and Bran's flat was outside. They could still talk using their communicators or through a video link. But the talk Kareem and she must have one could only have in person; of that she was certain. When she had told Bran that she needed to return to the institute

he handed her another device with her dad's archive container, asking her to unlock the container and give it to Carleen. That she had done the other morning when she had returned to Crowden Institute and now she was on her way to Carleen's office. They also needed to talk.

When Lucy entered the office of the institute's president, she was greeted by a new assistant sitting behind the desk in the anteroom who told her that the president was already waiting for her. The assistant knocked at the president's door and after hearing the president's voice calling her in, she opened the door and waved Lucy through.

»Thank you, Ms. Danalee! Hi Lucy, please take a seat, it will only take me one more moment before we can talk.«

Lucy said and waived hello to Carleen and then sat down at the small conference table where refreshments had already been placed. Watching Carleen scrolling through documents behind her desk she noticed how tired she looked. She must have slept very little, likely not at all. When she had handed Carleen the device with her dad's archive container the other morning, explaining what it was about, it was already clear to Lucy that Carleen seemed eager to read through it as quickly as she could. When after a few minutes Carleen joined her at the conference table, Lucy was sure she had not slept at all.

»I must look most miserable Lucy,« began Carleen with a smile, »that much I can tell by how you look at me.«

»Sorry Carleen. I admit, it looks like you did not sleep much last night.«

»I did not Lucy. But it was all worth it. How much of the archive have you now read?«

»There is still quite a bit left to read. Maybe I have looked through about two thirds of the material.«

»Well, then we have a tie. I am about two thirds done also.«

»You read all of that in one night?« asked Lucy with some disbelief.

»Yes, Lucy, and that is why I look so miserable! But let's stop remarking on that and turn to what your dad has been working on and what he believed he had discovered.«

»What do you mean specifically, Carleen? Dad seems to have been working on many things.«

»Well, what I am most curious about is that your dad believed he had proof that humans were still living on land, that human life on land never became extinct. I have tried to find the evidence your father must have had for that in the archive, but so far, I have found none.«

»I have found no such evidence either. But Carleen, I believe this evidence must exist somewhere because otherwise my dad would have never made such a claim.«

»I think so too. But even if we cannot find your dad's evidence for this claim anymore, we now have our own evidence that at least some twelve thousand years ago humans still lived on land. And your colleagues believe that likely this human species you discovered may still exist today.«

»I agree, but how can we prove this without finding my dad's evidence for it.«

»In addition to not sleeping last night I also had a long early morning conversation with Bran discussing just this. We both agree that aside from stumbling somehow over your dad's hidden evidence there is only one way to prove your dad's claim. We must go where we believe this human species may still exist today and we must do so as soon as possible.«

For a moment Lucy was not sure she had understood Carleen correctly. Had Carleen just told her that Bran planned to launch an expedition to locate this human species where it may still live today?

»You mean . . . «

»Yes, Lucy,« said Carleen with an amused smile, »Bran has already begun to plan this expedition.«

Finally recovering from her speechlessness, it burst out of Lucy: »I must be on this expedition, Carleen!«

»Lucy, I had hoped you would say so, as did Bran. You know, through this expedition we may not only find our human cousins if they are still around. We may also learn what happened to your dad.«

»I know Carleen. How long will it take to prepare for this expedition?«

»Bran thought it would take about one month to get everything ready. This will be a different kind of expedition than the ones you are familiar with. The risks associated with the kind of archeological expeditions you know are minor ones. This expedition will be different and the risk that something could go wrong is much higher. Remember, your dad disappeared on a reconnaissance flight in preparation for just such an expedition as the one Bran is now planning. There is a possibility that some going on this expedition with Bran may never return. You do understand that do you?«

»I most certainly do Carleen. Whatever happened to my dad could also happen to me. You know that I have been struggling to decide what to do next after this skull investigation. Dad often reminded me not to just follow one's own inertia and go down a path because it offers itself conveniently. Staying at Crowden Institute and not going on this expedition would be such a convenient path. I must follow what I feel I must do in my life and not just what offers itself conveniently.

»You are your father's daughter Lucy. And that is a compliment!«

»So, what happens next?«

»Well, first you should finish reading through the material in your dad's archive. You will not be able to take a reader with your dad's archive container on this expedition. It is too risky. The only people having access to it right now are you, Bran and me. And Bran wants to keep it this way. Hence, over the next days just make sure that you find everything in the archive which may be of importance to you. How long do you think this might take you?«

»I believe if I do nothing else but read through the material in the archive I should be done in three or four days.«

»Good Lucy, then do just that.«

»What about you Carleen, will you be joining the expedition?«

»No Lucy, I will not. I cannot leave Crowden Institute and given the current situation it is not only much better for Crowden Institute if I stay, but also good for the city if I do not leave. However, if I were a young scientist just like you are Lucy, I can tell you that I would not hesitate one moment to join this expedition.«

»I do understand Carleen. But I still wish you could come with us.«

»And so do I Lucy. When you return from this expedition, I hope that you will consider staying with us. I would like to be a part of your future Lucy, very much so.«

Lucy only nodded. That was enough for Carleen Nuratu to understand what Lucy was saying. How young she still is thought the institute's president as Lucy left her office. And she wondered if she still could recall the person, she once herself was at such a young age.

35

Aung Lasheen and Soeren Nook, Central's chief industrial officer, had been working through the documents of several cooperatives in the northern city they were visiting. On the way, they had caught a lucky break as a message from another city had reached them regarding the stolen masking capsules. Finally, they had located the source of the masking capsules. It was as if Aung Lasheen could see the relief of this thought written on Alwyn Maars forehead.

»Aung, do we know who was in charge of this cooperative at the time the masking capsules were stolen?«

»We do, but this is a large cooperative and it is not one of the cooperatives which board member Quam has given preferential treatment. The unit of this cooperative which manufactured masking capsules at the time was only a small part of it. The names of this cooperative's leaders won't help us with the masking capsules. But the name of the person heading the unit manufacturing masking capsules at the time, that is a different story.«

»In which way Aung?«

»Because this unit was at the time headed by a relative of our board member Quam.«

»But this relative of board member Quam must have died a long time ago.«

»Yes, Alwyn, this is correct. But as the helpful archives people in this city were able to find out, board member Quam is today the only surviving relative. So, anything in possession of this relative of Quam eventually was passed on to board member Quam.

Hence, Alwyn, with respect to the masking capsules the good news is that we now know how Quam got them, the bad news is that this does not tell us anything about motive because Quam got his hands on those masking capsules through the equivalent of an inheritance lottery.«

»Too bad. I had hoped finding the source of board member Quam's masking capsules would help us in identifying his associates.«

»Alwyn, there is more. Here in this city, we have been looking through the books of a few of those cooperatives which board member Quam has given preferential treatment. What we found is that in these cooperatives quite a bit more went missing over time than just a few masking capsules.«

»Aung , what is it that you have found?«

»Looking through the items which went missing over many years, Soeren and I see just one explanation. Someone must be equipping an army.«

»How could anyone hide the build-up of an army?«

»That, Alwyn, could only happen on land. In those many large industrial complexes the cooperatives own which board member Quam favored one could indeed hide such an army.«

»But an army for what?«

»Soeren and I have no better answer to this question than you have, Alwyn. But isn't it time to arrest board member Quam? He is planning for an armed conflict although we do not know with whom. That by itself is more than sufficient reason to detain him.«

»I agree and will take the necessary steps immediately. I am not sure if Haman Institute is a safe place anymore. If you and Soeren are finished, I suggest both of you join Mog and me here where we are among friends.«

After this video-link conversation with Aung Lasheen, Alwyn Maar briefed Mog Sinan about it and then called the city council chairman and his mission chief. They must meet right away. While waiting for them to arrive at the council chairman's home, Alwyn Maar called his secretary Rean Nam with instructions to set in motion the arrest of board member. A little more than half an hour later, Peer Aksun, Bran Taliesin, Alwyn

Maar, and Mog Sinan sat again around the small table in the council chairman's living room which had kind of become their joint headquarters. Alwyn Maar told them about his conversation with Aung Lasheen and that he had ordered the arrest of Roan Quam. There was a long silence after Alwyn Maar had finished. What the council chairman and the mission chief had just learned pretty much changed everything. Launching the expedition, which the mission chief had begun preparing, as soon as possible seemed now even more urgent. Looking briefly towards the mission chief who nodded, it was Peer Aksun who began to speak.

»Alwyn, Mog – Bran and I believe we know what the motive of Mr. Quam is.«

Alwyn Maar and Mog Sinan were both looking curiously at each other and then at the council chairman, wondering what would come next.

»And what you told us just now, Alwyn, makes me,« and now the chairman turned to Bran, »and I guess also Bran even more convinced that we have found Mr. Quam's motive.«

»And what do you and Bran believe that this motive is?«

»It all comes back to what Hakan believed, Alwyn. Hakan was convinced that there was only one way to stop the decline of our societies and that was for humankind to go back to life on land. So, what if Hakan was not the only one who came to this conclusion? Or what if someone else learned indirectly about this conviction Hakan held? Like for example Mr. Quam during one of his many visits to the Crowden Institute as lead contract negotiator. For anyone coming to this same conclusion the discovery that human life still existed on land would be most unwelcome news. We know that Hakan was convinced that human life had never ceased to exist on land, and he was about to go on an expedition to find those human populations on land which he believed still existed. Then, some thirteen years later, a fossil discovery was made. Those interested in getting their hands on the land where our human species cousins possibly live today could have had no interest in any of this becoming public news. Therefore, the human skull fossil had to vanish, and the investigation documents had to be destroyed. Now you tell us that clandestinely someone has been building up an army somewhere onshore. My question is: what do you now believe this army will likely be used for?«

Peer Aksun looked questioningly at the board chairman and his chief science officer, and he did not have to wait long for an answer to come forth. Mog Sinan was faster than Alwyn Maar.

»To take possession of this habitable land where our species cousins live, of course, land which they obviously consider theirs and will defend.«

Mog Sinan had almost murmured this answer, seemingly afraid to put into words what he wished was not true. But he and Alwyn Maar now knew just as well as the council chairman and the mission chief that this must be the answer.

»Alwyn, I do not think that you will still be able to arrest Mr. Quam. If he and his associates had planned to grab this land from our just discovered species cousins, then they must act now before we can get there. He most likely has already left Haman Institute for wherever his secret army was readying itself for deployment.«

»You are probably right Peer,« acknowledged Alwyn Maar.

»We must think about what we can do to prevent this army from taking possession of this habitable land and killing our species cousins in the process,« said Mog Sinan now with determination.

»We have thought about this Mog, and we believe there is only one thing we can do in this regard,« replied the council chairman.

»And that would be what?« asked Alwyn Maar.

Instead of answering this question himself the council chairman was looking for the mission chief to answer Alwyn Maar's question.

»We must launch an expedition which gets to our species cousins before this army can get there,« came the answer from Bran Taliesin.

»Is that even possible?« asked Alwyn Maar.

»It is our only chance to avert our people again killing everyone on land just as our ancestors have done so a long time ago,« replied calmly Bran Taliesin.

»What are you talking about Bran?« asked Alwyn Maar.

»Has Hakan never shared with you Alwyn, or with you Mog, what he had discovered regarding this? Did he never say anything to you about what he believed really happened when our ancestors moved from a life on land to a life in the oceans?« answered the

mission chief Alwyn Maar's question with another question.

Alwyn Maar and Mog Sinan shook their heads. No, both insisted, Hakan had never mentioned anything like this to them. Where could Hakan possibly have gotten this information. They at Central had access to all records that existed from this time of transition when their ancestors moved from life on land to a life in the oceans. Nowhere was there anything to be found about something like what the mission chief had just said. Granted, neither of them had looked through all documents pertaining to that time, there were just too many of them. Did the mission chief know which documents Hakan had referenced to support this claim?

»No,« responded the mission chief, »Hakan does not mention a specific document in his archive but knowing Hakan and given the certainty with which Hakan expressed this in his writings, he was convinced that Hakan's claim was true.« Then he added »Have you ever heard Hakan talk about the birth defect of our civilization?«

Again, Alwyn Maar and Mog Sinan shook their heads. Hakan had never used this expression in any of their discussions. Mog Sinan, with whom Hakan had frequently collaborated, looked distressed. He thought he knew Hakan well. But how well can one know somebody who keeps such secrets?

Bran, sensing Mog Sinan's distress said »Look Mog, Hakan was my best friend, and yet I didn't know anything about this. He did not tell anyone about it. The reason for that is likely simple. Hakan cared deeply about his friends and if he thought such knowledge would be dangerous, he would never have shared it.«

»I have to admit,« said Alwyn Maar, »that all of this is quite disturbing. But having known Hakan as a friend and as a scientist, I must believe what Hakan claims must be true. He would never have said something like that if he had the least doubt that it was not so. Now, back to what we must do. Bran, you said launching an expedition is our only chance to avert what otherwise would likely amount to the extinction of our species cousins. If that is so, then let's not waste any more time, let's get started.«

»Bran has already set in motion everything that we must do to launch such an expedition,« said the council chairman, »but given what we learned from you today we must accelerate this launch as much as we possibly can. If we could draw on Central's

resources for this expedition that would greatly increase our chances of success.«

»Peer, all resources that Central can bring to bear will be at Bran's disposal. Mog will work with Bran to make that happen. Let's get to it«

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Rean Nam had executed Alwyn Maar's instructions for the arrest of board member Quam without delay. However, when only an hour after Alwyn Maar had called his secretary, Central's security team at Haman Institute moved to arrest Central's board member Quam, he was nowhere to be found. Roan Quam had joined his army and its officers onshore, an army which he was now looking forward to inspecting before it would march off. Deployed for a cause which he had been planning for the better part of two decades. Looking at the officers seated with him at the table, one by one, he felt that he had finally arrived. Arrived at his destination. These senior officers of cooperatives had changed their business suits for military fatigues. How much this changed them from businessmen – and they were all men – to military men was still an open question. They had been training for quite a few years. But how does one train for the military in a society which had had no need for a military for thousands of years. They had studied ancient military instruction manuals and implemented whatever seemed useful from those. Their two regiments, each of them a little less than a thousand soldiers strong, had remained hidden for many years, distributed over many onshore facilities. Now they had come together for the first time. The only person at the table not wearing a uniform was Roan Quam.

»Gentlemen, the time to act has come earlier than we had expected. But we are ready. How soon can we deploy General Sono?«

»Leader Quam, all troops have arrived. After a thorough inspection and a couple of weeks of joint training exercises we will be ready.«

»General Sono, can you prepare the troops with one week of exercises?«

»With some adjustment, yes Leader Quam.«

»Then let's make it so. Colonel Feran, what new results do we have from our reconnaissance flights?«

»Nothing new Leader Quam, we still have not located the craft Hakan Kassius used. Between here and the inner continental mountain ranges there is no habitable area. Exploration beyond this mountain range will require that we set up a base camp not too far away from the foothills of those mountains.«

Listening to the colonel was painful for Roan Quam. It was not just the technological capability which had been declining for centuries, it was just as much the average human capability to execute a simple act of sabotage with the required precision. Those in charge of making sure that Hakan Kassius would never return from his reconnaissance trip had also been charged with putting a tracking device on the craft, the signal of which only they could access. However, going by the time Hakan's craft had stopped flashing its identity beacon, it must have crashed much too early in its flight, still far away from where Hakan Kassius had intended to go. Nobody knew where Hakan Kassius had intended to go and with their own tracking device never coming online, they could not even locate the crashed craft's position. Now they had to search the endless vastness of this continent for its traces. Still looking at Colonel Feran, leader Quam realized that he was waiting for instructions.

»Colonel Feran, then get everything in place so we can establish this base camp for exploration beyond this mountain range as soon as possible.«

»Anything else we must discuss now?« asked Leader Quam looking at each of the seven men sitting around the table. With nobody saying anything or raising his hand he continued, »good, then let's get to work. The inspection will start tomorrow after the morning briefing. General Sono, please stay with me for a few more minutes.«

After everyone but leader Quam and General Sono had left the room, leader Quam's demeanor changed and with a smile he invited the general to sit down again.

»Railac,« he addressed General Railac Sono, »I am concerned it will take us too long to find Hakan Kassius' craft. I am quite certain that Central will launch an expedition soon enough to locate the area where they may suspect the descendants of this new human species they discovered may still live. We need to quickly find a way to track down the crashed craft of Hakan Kassius.«

The general thought for a few moments and then offered that they could just track

this expedition which Central would be launching. If they really knew the hiding place of those people still living on land, then why not just follow them and once they could be certain where the location of these ancient people was, they could just overtake Central's expedition and arrive there first.

»Overtaking them and arriving there first would not be enough, Railac. We would have to kill every single member of that expedition so no one will ever know what we will do to these ancient people as you call them. But while our troops will have no problems killing members of another species, I doubt they would willingly kill fellow citizens.«

»You are probably right with that Roan. But what other option do we have?«

»I am not quite sure but there might be one more option to get the information we need without having to kill anyone. While I check if this option might work for us you should think about ways to get rid of this expedition at the right time without our troops getting second thoughts about what they are being asked to do.«

»Sure, Roan. Let me think about that. There must be a way.«

After this brief conversation with his general, leader Quam went to the communication officer in charge and asked him to set up a video-link conversation with a person named Eireen Swarov in the host city of Crowden Institute. It had to be a secure communication link, and his identity must be concealed for the full duration of the call. Then leader Quam retired to his quarters and waited for the notice that the call had been set up. It took a few hours. The onshore facilities they had chosen for assembling their army were on the periphery of what was considered the oceanic rim of such settled land. That had the clear advantage that nobody would come to check what was going on. On the downside, video link connections from there to ocean cities were unreliable and frequently broke off at random. That could not be helped, and leader Quam did not give it a second thought. Bad connections occurred everywhere now and then.

When Eireen Sawarov received the request for a video link call, she asked the city security guard attached to her to please remain outside the room so he could not be seen by whoever was calling. Then she accepted the call.

»Greetings Ms. Sawarov, or rather congratulations Ms. Sawarov on taking control

of your districts.«

»Mr. Leor, how do I deserve the pleasure of you calling me again? You are not making a courtesy call, are you?«

»You are quite right Ms. Sawarov, this is not a courtesy call. We have unfinished business.«

»I don't think so, Mr. Leor. Unless you have something new to offer our business is quite finished.«

»Ms. Sawarov, I wou . . . «

The connection with Mr. Leor had been broken off at mid-sentence. Eireen Sawarov had already wondered about the scrambled image she was looking at this time, not even the outline of a person was visible anymore. What was going on there? As Eireen Sawarov thought about this, the connection was reestablished.

»My apology Ms. Sawarov, our connection does not seem to be a good one. Maybe that is a result of your districts being isolated from the city. Now back to where we were. You are correct, I have something new to offer, something a little more personal this time.«

Council woman Sawarov was wondering what that could be. But what made her wonder even more was that this Mr. Leor attributed the bad connection to her district being isolated from the city. Now, this certainly could not be the case. Why was he suggesting something like that? Knowing that even though she could not see him he still could see her she gave her response with an amused smile.

»And what could that be Mr. Leor that you believe may be of value to me?«

»How about the identity of your parents, Ms. Sawarov, I mean of your biological parents? Is that not something you would want to know?«

Ms. Sawarov did not respond right away as her mind was busy with trying to understand how this Mr. Leor could know the identity of her true biological parents. Roan Quam let the silence continue as to him it was a promising sign that the council woman would be willing to enter a trade. Then as he saw Ms. Sawarov still thinking about what he had said, he added some clarification.

»When I say the identity of your biological parents, this means of course not just

their names but also their complete DNA. Are you interested now Ms. Sawarov?»

»You have my attention Mr. Leor. What is it you are going to ask me to give you in exchange for such information?»

»Very little Ms. Sawarov, very little. Even better for you, you already have what I want. To get the information about your biological parents I require copies of the research skull investigation reports, complete copies of every single document.«

»Provided we can agree on a deal, Mr. Leor, how am I supposed to get those copies to you? You cannot possibly send someone to me to pick them up, neither can I send someone out as our six districts are isolated from the rest of the city. We still can talk via video link because the city did not want to cut off this way of communication between citizens who happen to work onshore and their families. However, it is not possible to send documents anywhere outside our six districts, everything someone asks his relatives to send to onshore must be routed through a city agency not under my control. So how could the copied documents get to you, Mr. Leor?»

Now it was Roan Quam who remained silent. The council woman was right, it would be impossible for her to send the documents or for him to retrieve them. He had no choice but to ask her for the specific information he needed. He would rather not share this information. But then, what choice did he have?

»It seems Ms. Sawarov we do indeed have a problem there. Therefore, I will tell you in which information I am specifically interested. You must then search the documents for this information and convey the results to me via video link.«

»I believe this is something we can do Mr. Leor. But searching all documents for the information you are interested in may well take a day or two.«

»Of course, Ms. Sawarov. The information I need is about the homeland of the individual to whom the skull belonged. I am quite certain that the Crowden Institute scientists have come up with a hypothesis of where this homeland would most likely be located. I must know the coordinates of this homeland.«

»I understand Mr. Leor. We should be able to retrieve such information from the documents if it is in there. Now, how will you then provide me the information about my biological parents in exchange?»

»That will be easy, Ms. Sawarov, because this information is already in your city. Once I tell you where to find it you will have it. Rest assured, accessing it will be quite simple. Now, I must return to my duties. I will contact you in three days to collect what you owe me in exchange for what you will receive.«

Mr. Leor had terminated the connection. However, Eireen Sawarov made sure on her side that the connection had indeed been terminated completely before she used her communicator to call the council chairman to update him on the conversation she just had with this Mr. Leor. She had to wait for a few minutes as Peer Aksun's secretary had to pull the chairman out of a meeting.

»Good afternoon, Council Woman Sawarov,« she heard the council chairman's voice.

»A good afternoon to you too, Mr. Chairman. I am calling you because this person from outside has contacted me again.«

»What did he want from you, Ms. Sawarov?«

Here the council woman gave the council chairman a full and true account of the conversation she just had with the person she referred to as Mr. Leor. Peer Aksun had no doubt as to why Roan Quam was asking about the specific location the scientists had identified as the most probable homeland of the skull individual's species. Judging the situation quickly, the council chairman saw no other choice but to tell the council woman exactly as to why Mr. Leor, whose actual name he told the council woman was Roan Quam, required the information he had asked her to provide.«

»You mean Mr. Aksun, that this Roan Quam plans to kill whoever still lives in this homeland and take it over himself?«

The council chairman could tell from the sound of the council woman's voice that the thought of that happening was deeply disturbing her. Again, he had to admit that he had underestimated this woman, she clearly had a conscience.

»Yes, the army which he has assembled will do that. We are about to launch our own expedition which will head for this homeland of our cousin species to save them from extinction. But we must get there first. If Mr. Quam and his army get there first, they will exterminate these people.«

»We must not let this happen Mr. Chairman! Why don't we provide them with

fake coordinates which will give your expedition sufficient time to get to the homeland of these people first? But I cannot make up fake geographic information myself which would look credible to this Mr. Quam. Your experts must do that. Mr. Quam will call again in three days.«

»Ms. Sawarov, you will have this fake geographic information by tomorrow. And council woman – thank you for helping us to help these people.«

»I am not a monster Mr. Aksun. How could anyone even plan to do such a thing. But can I ask you one favor?«

»Please ask Ms. Sawarov.«

»I would like one of my people to join your expedition. Getting a first word account from this expedition by someone they trust, when the time comes to tell this story, will be so much more convincing than hearing this from someone they may not trust as much.«

The council chairman did not have to think long about how to answer the council woman's question.

»Ms. Sawarov, your woman or man must be ready in a week's time to join the expedition. Please let me know as soon as possible whom you choose so our mission chief can begin working with her or him.«

»Thank you, Mr. Aksun. Oh, before I forget, there was something else which was peculiar about this call from Mr. Quam. The connection was quite bad and at one time it completely broke off. The only other times I experience such bad connections are when someone calls from one of the more remote onshore facilities. Even when calling very distant cities, this never happens. Mr. Quam must already be somewhere onshore.«

»This is a quite helpful detail, Ms. Sawarov, I will relay this to our mission chief. We must launch our expedition as soon as we possibly can.«

Part III

Onshore

1

The mission chief had used his network to pull together the resources for what could become a several-month-long expedition into the vastness of the continent they once called Africa. Without the mission chief being able to call in favors from many of those onshore facilities he had worked with over the past thirty something years, he was not sure if they could have put together this expedition in the first place. Certainly not fast enough to have a realistic chance of finding their cousin species before Roan Quam and his army could get there. Central's resources, the mission chief had to admit, also had been quite helpful and would be so throughout the expedition. Mog Sinan and the people in Central he was working with had bent over backwards to provide whatever it was that the mission chief had asked for, provided they had it at all. In the past two weeks they had brought material to places far in the interior, which would serve as expeditions resource depots. The plan was simple. They would bring what their expedition required to stay a couple of months in the field to a base camp on the foothills of the mountain range beyond which the homeland of this human subspecies must be located. Once they had established a position on the other side of the mountain range, they would then fly provisions there, establishing another chain of supply depots along the way as the expedition would chart its way further inland.

As important as the material resources which were required to launch this expedition and then to support it once it was on its way, was the selection of the expedition personnel. Their expedition would be a search and rescue expedition and not the campaign of an army set on conquest as was the case with Roan Quam's expedition corps. But still, their expeditions did also require some level of security as one could not know what they might possibly encounter. The mission chief had hand selected the team members of the expedition's security detail himself. It included several of the security soldiers who had accompanied them on their last archeological expedition which had discovered the skull.

Gil had agreed to lead the expedition's security team even though Sue Ming was not very enthusiastic about him going on an expedition again. What the mission chief did not tell Gil was that he only accepted people who just like Gil did have personal bonds which would make them want to return safely from the expedition. Lone wolves with no personal attachments might have a higher risk tolerance but that was just the problem. He wanted people on the expedition who would make decisions such that they would naturally be inclined to look for less risky alternatives where a lone wolf might just have pressed ahead, regardless of what risk that may incur for anyone else. There would be only one person with no such personal attachment to home on this expedition and that was Kimal Abuno, Eireen Sawarov's security chief. The mission chief had argued with the council chairman about this but eventually had to concede that it was necessary to have Kimal Abuno on the expedition. In a way, maybe his devotion to Eireen Sawarov could even count as a personal attachment. Still, the mission chief decided that he must keep an eye on Kimal Abuno and Gil would help him with that.

The mission chief still did not really understand council woman Eireen Sawarov. What had turned her from foe to ally? Maybe she never really had been a foe. A long time ago the mission chief had given up on making sense of what made people do what they did. He just kept his focus on what they did. Deep down he was convinced that every human being had to solve this challenge of making sense of one's own existence. Some did this in ways easy to understand, some did so in more obscure ways. And then there were some whose actions did not make any sense at all except to themselves. The mission chief had tended to bucket council woman Sawarov in this last category, but he was not so sure anymore about that. Pretty much everything that had transpired since they had brought back this human skull from their last expedition had made him reconsider his opinion regarding the council woman and her followers. Rather than misguided extremists he now thought of them as the proverbial canaries in the coal mine, an early warning system that they should not have ignored. They had laughed about the conspiracy theories Eireen Sawarov and her followers were propagating. However, reality was even worse than what those conspiracy theorists had imagined. Their oceanic societies had derailed a long time ago with no one ever noticing it. Hopefully, there was

still enough time to change course.

It was only a few days before their expedition would be on its way. After long working days lasting from the first light until after dark, the mission chief usually retired to his container office to continue working on things which he thought could not wait. But just as often, like for the last half hour, he would sit back and think about their situation and what had brought them here. This time a late evening knock jolted Bran Taliesin out of this pensive mood. It was Mog Sinan who wanted to speak with him.

»Bran, are you still working?«

»I was until half an hour ago. Since then, I have just been thinking about things.«

»Sorry to interrupt your thoughts Bran, but we believe we now have a fix on the location of Roan Quam's army.«

»No need for excuses Mog, we have been trying to get this information since we learned about this onshore army of your former board member. I am glad to hear you finally could track it down. So where is it located and how did you find it?«

»To be honest, without council woman Eireen Sawarov commenting on the unusual nature of the call interruption that occurred during her last video-link exchange with Roan Quam, we would not have known where to start. Because of that, we knew that the location from where Roan Quam called the council woman must have been on the periphery of the coastal rim. Either on the northern or the southern end of it, which still meant we had to search hundreds of kilometers of coastline for indications of where this army could be located. Given that the cooperatives which support Mr. Quam own many more and larger industrial complexes on the northern than on the southern end of the coastal rim, it had to be the northern stretch. From then on, our chances of success only depended on our ability to change a few satellite orbits such that they could record high resolution images of these industrial complexes on the northern coastal rim. And there we almost failed. Only thanks to the combined engineering skills of Central and several oceanic cities specializing in satellite technology were we able to pull this off. Here is the result, look for yourself.«

With these words Central's chief science officer handed the mission chief a reader containing satellite images clearly indicating the presence of uniformed personnel and

transport equipment. The mission chief slowly scrolled through the satellite images.

»Where exactly is this, Mog?«

»The last image shows the map with the army's position. Its line-of-sight distance to where we believe the homeland of these people should be located is almost one thousand kilometers more than ours. And if Mr. Quam believes the coordinate information council woman Sawarov gave him is correct, the detour they will have to make before eventually realizing that they have been misled will add another five hundred kilometers.«

»Mog, do we have an idea as to how many transport craft they could have at their disposal? The size of their army really does not matter much if the bulk of it must get to their destination overland. What concerns me most is the number of soldiers they might be able to carry quickly by air transport to wherever they see a need to send them.«

»I understand Bran. We had the same concern and investigated the most probable scenario. Unfortunately, Mr. Quam could likely send many hundred soldiers by air transport over nearly a thousand kilometer as that is how far his transports could go one way and still return safely back to their base.«

The mission chief turned to the container wall, where a large-scale map of Africa was hung. He jotted down a cross where the supposed position of Mr. Quam's army was and then he drew a circle of a thousand kilometers around it. Then he stepped back.

»If we get on our way in the next couple of days without Mr. Quam getting wind of it, we should be able to advance from our base camp towards the homeland of these people for a week, maybe even more, before Mr. Quam's men could even get to our base camp.«

»Then you must leave as soon as possible Bran.«

»We will leave the day after tomorrow, Mog. Not one day later.«

»There is something else Bran.«

The mission chief wondered what else there could be but before he could ask Mog Sinan had already continued.

»Given that these air transports are critical to ensuring the mobility of Mr. Quam's army we have thought about something to counter them.«

»Mog, you don't want us to take weapons along, do you? Once we have crossed the

mountain range Mr. Quam's aircraft won't matter much anymore.«

»I know Bran. But if against all odds Mr. Quam's army in the form of air transport catches up with you sooner than expected you may want to defend yourself. Just consider if in that case you had the ability to destroy their transport crafts, so Mr. Quam will not be able to bring in even more soldiers to confront your expedition.«

»What kind of weapon do you have in mind?«

»Our engineers have developed something which will destroy the electronics of their aircraft, so they become unusable. It is a modified kind of ray gun, light-weight and easy to handle.«

»Let me see it and test it and then I will decide. To be honest, I believe the less weapons we carry – except for the security soldiers - the safer we will be.«

»We will have a ray gun ready for you to test early tomorrow morning. I believe you will agree with me that we test it somewhere where expedition members will not be able to watch. We do not want them to get unnecessarily concerned.«

»Agreed. If we are done with business Mog, how about a drink before we retire.«

»How could I not accept such an invitation, Bran,« responded Mog Sinan with a smile.

They ended up having more than one drink, by itself a measure that they had come to respect and like each other. Each of them was for the other a source to learn about what had been a closed world to them before. The mission chief had known nothing about Central, not even that such an organization existed, until a few weeks back. Mog Sinan liberally shared his knowledge with Bran Taliesin who was curious about many things. In return, Central's chief of security began to appreciate that he knew of nobody else who had traveled as much as the mission chief and had seen things that were unknown to most citizens and which even someone who ranked as highly as the chief science officer in Central's hierarchy had little knowledge of. The mission chief made no secret about the fascination which the exploration of continental areas had held for him for many decades now.

2

The reluctance of the mission chief to take along other weapons except those his five security soldiers and he himself carried, solely intended for the protection of their seventeen strong expedition team, had two simple reasons. First, he wanted to keep the expedition team small enough so they could move fast; and second, this allowed the resource depots which were being set up for the expedition to be replenished quickly. For a small expedition team, two supply vessels could airlift resources lasting for a month to practically any spot where they were needed. Another advantage was of course that if they encountered some of Roan Quam's army, they could get out of its way much quicker. And if they were discovered by Roan Quam's troops it would be much more difficult for his army to track down a few people quickly vanishing in the bushes than to pursue a large expedition; specifically, once they had made their way into the mountainous area. However, if the decoy operation Central was undertaking in an industrial complex several hundred kilometers to their north was successful, the mission chief was confident that it would never come to such an encounter in the first place.

With this decoy operation, Central was trying to convince Mr. Quam that it was launching its own expedition towards the same destination where Mr. Quam's army was headed, the coordinates of which council woman Sawarov had provided to him. The industrial complex where Central was pretending to launch its expedition was much closer to the location where Roan Quam's army was based, and it should have distracted Mr. Quam's army from detecting the preparations of the city's expedition team. The mission chief doubted that Mr. Quam considered the possibility that the city itself would launch a small, nimble and fast expedition under the cover of Central's much more massive undertaking. In addition, he thought it unlikely that it would come to a confrontation with Mr. Quam's troops and if so, he was determined to avoid a fight. However, after testing the ray gun Mog Sinan had suggested, he chose to take two along. A precaution, nothing more.

The expedition team had been preparing and training next to this onshore facility now for several weeks. They had chosen this place because it was the shortest travel time away from their intended base camp at the foothills of the mountain range, a little

less than one thousand kilometers inland. In addition to the five-strong security team headed by Gil Ulan, the expedition team included a six-member science team and then a five-member logistics team, plus the mission chief of course. Among the six members of the science team were Lucy Kassius, Fjodor Rees, and Ives Dubois from the Crowden Institute as well as Ines Strom, Ania Onomi, and Harry Kleon from Haman Institute. Kay Vine, Will Nunos, and Abe Lammer had been on many expeditions with the mission chief before and oversaw all logistical aspects of the expedition whereas Nale Buane and Sid Harper from Central, the other two members of the logistics team, were the expedition's communications specialists.

The mission chief had thought long and hard about which role to assign to Kimal Abuno. But after talking to him at length he had decided to make him part of the expedition's security team under Gil Ulan's command. Mr. Abuno had plenty of experience in security matters and his reconnaissance talent could become useful in Gil's team. When he had told the council chairman about this decision, Peer Aksun was at first not happy about it. But eventually he came to see it the mission chief's way. What better way to show someone like Kimal Abuno that he was just as much a member of the expedition team as everyone else? The mission chief suspected that Kimal Abuno was quite surprised when he learned that he was to be part of the expedition's security team and as such would carry the same weapons as every other member of that team. From what Bran Taliesin had observed through the first weeks of training and preparation, something told him that Kimal Abuno would repay the trust he had placed in him.

Just like every morning for the past six weeks, the expedition team had come together to go through the day's activities. But this time was different as some of the assembled team members could already tell by just looking at their mission chief. And he did not disappoint them.

»A good morning to all. As you know, for a few days now our supply vessels have lifted the expedition equipment and provisions to our base camp. Today will be their last such flight for the next few weeks. The day after tomorrow we will be headed for base camp.«

Here the mission chief paused for a few moments to see if there were any questions.

He did not expect any and none came. Looking at each of the expedition members he could sense their excitement. It was the right kind of excitement. They all knew what they were going to undertake, and they felt ready for it.

»There will be no more training or exercises before we deploy. Use the time before we leave to connect with your families and loved ones but please do so only through our secured channels. We do not want anyone else to know that we will be heading out in a little more than forty-eight hours. In case there are any questions you may still have before we head out, the door to my office is open. I will see you all back here ready to deploy at eight o'clock the morning after tomorrow.«

The expedition's team members quickly dispersed to take care of whatever they had to get done within the next forty-eight hours. Lucy thought about whether she should call Kareem before they headed out but then decided against it. Why had Kareem declined the opportunity to go on this expedition when the mission chief had offered it to him? They could have been together all the time, could have bonded again after being separated for most of the last half year. When she had asked Bran why Kareem may have declined the opportunity, he had told her that going on such an expedition just was not something everyone would willy-nilly decide to do. He told her that Kareem was likely not the adventurous type which did not make him less of a likeable guy. Lucy should not hold that against him.

She had also confided to Carleen how disappointed she was that Kareem chose not to be with her – as this was the way she saw it. But Carleen told her that this was not Kareem's fault. Maybe Kareem could just not be the kind of person she wanted him to be. She told her that it happens quite often that people fall in love and then eventually find out that they have not so much in common. According to Carleen, there was nothing wrong with Kareem, he just was a different kind of person than she herself was. She must not hold that against Kareem and adjust her expectations with respect to Kareem from what it was she wanted him to be to how he really was. Even though they had not officially separated or talked about it, Lucy felt like they had. She was still sitting on her bed thinking about her relationship with Kareem and what had become of it when Fjodor looked at her through the open door.

»Am I disturbing you Lucy?«

He waited just outside the door until Lucy waved him in. He could see that something was on her mind, and he also had an idea about what it was. She was still struggling with the fact that her relationship with Kareem was ending or had already ended.

»Don't just stand around here Fjodor. Sit down and tell me something funny. Why don't you begin by telling me about how your efforts to seduce Ines or Ania are working out?«

»Why don't you ask me about Kay or Nale? Because they are too old for me? You know, older women like me too.«

»Kay and Nale are not older women, they are just in a steady relationship, so no chance for you there.«

»Lucy, why do you think I am a womanizer? You know that I am not.«

»Maybe because I like to tease you? Maybe because you look like the kind of guy who could be a womanizer.«

»Ah, now I see where this goes. You think I am attractive. Thank you for the compliment!«

»Well, yes. In a way you are,« said Lucy and then added with a teasing look at Fjodor, »as are most young men.«

»Let's stop kidding Lucy,« answered Fjodor, »in some forty-eight hours we will be finally on our way. How do you feel about that?«

Lucy was looking away from Fjodor as she thought about his question. How do I really feel about this? For one, this would bring her hopefully one big step closer to understanding what happened to her dad almost fourteen years ago. Was not knowing what happened to her dad preferable to getting confirmation that he was dead? If she did not know what had happened, she could still think that he might be alive. But she knew that this was a foolish thought. What chance would there have been of surviving the crash of his aircraft? Little to none. After a while she looked back to Fjodor again who was still waiting for an answer.

»Fjodor, I want certainty about what happened to my dad. But at the same time, I dread such a certainty because it could be the wrong kind of certainty. The certain

knowledge that he is dead. But then there is the excitement that we could possibly make first contact with another human species, our species cousins with the massive bite and the larger brains.«

»I understand Lucy. I never got to know my father because I am a child of the sea, but still, I can see what your dad may have meant to you. As for us making first contact with our cousin species, this is the adventure of a lifetime, isn't it?«

»It certainly is Fjodor. More than that, it is likely a turning moment in the history of humankind. We have the privilege of being alive at a special time. Could you have imagined half a year ago what has happened since then and what we are about to do now? I couldn't have.«

»And Lucy, neither could I. Sometimes it feels to me as if I am living in a dream.«

»There is something else on my mind, Fjodor. It is about Kareem. When you came in, I was thinking about whether I should call him before we leave for base camp. But I am just not ready to have the kind of conversation with Kareem into which such a call could quickly evolve.«

»Lucy, think about it. We are going on an expedition which is unlike any you have been part of before. We do not know what could happen. In the worst case, some of us may never return. Considering this possibility, I believe we should talk to those people who are important to us before we head out. Kareem is such a person for you. You and Kareem should not talk about your relationship problems now. Instead, you should say goodbye to each other in a way that you will be happy to remember this conversation if against all odds it should turn out to be your last one. Unlike you, I don't have someone I am in a relationship with. But I will still call Song-Ho and let him know what his friendship has meant for me all the time we have been together since joining Crowden Institute. I want him to know that before we leave here, and I might not have the chance to say this ever again.«

Lucy said nothing, she only looked at Fjodor for what seemed like a long time.

»Thank you Fjodor,« she finally said, »I needed to hear this and I could not have heard it from anyone else but you. I will set up the video-link call with Kareem right now.«

Leaving Lucy's quarters, Fjodor felt good and not so good at the same time. He felt good because he was able to help Lucy. He cared about her and when in a quiet minute he thought about it, he had to admit that he had fallen in love with her. However, he felt not so good about helping Lucy to possibly fix her relationship with Kareem. Lucy was his friend, and she had needed the advice he had just given her, even though he did not enjoy helping Kareem. But if helping Lucy resulted in helping Kareem then that was the price one had to pay. He wondered whether Lucy in any way suspected how he might feel about her.

3

Lucy and Fjodor were not the only ones making calls to their loved ones or friends, most other expedition members did as well. Kimal Abuno had no special person in his life, neither a partner nor a faithful friend, the only person he felt somehow close to was Eireen Sawarov. But that was not the reason he called the council woman now, rather, it was the fact that this was the last opportunity for a private call where he could update the council woman. Once they were on their way to base camp, that would not be possible anymore. When the face of Eireen Sawarov appeared on the video screen she seemed to be in good spirits.

»Hello Kimal, how are you doing?«

»Simply fine Eireen, we will be on our way to base camp the morning after tomorrow. So this is the last time we have some privacy.«

»Don't kid yourself Kimal, there is likely no privacy. I would be surprised if the city is not monitoring my incoming and outgoing calls. But that's no problem. There is nothing to hide anymore. Pretty much everything that had been hidden from us is surfacing now, albeit ever so slowly.«

»What do you mean by that, Eireen?«

»I did tell you about my last conversations with our former friends from outside, when they promised to reveal to me my biological parent's identity. Well, they kept their word. But not that this would matter anymore. Our city, as most likely all other cities, has introduced legislation, the effect of which is that Crowden Institute and other such

institutions which are part of the children of the sea program must disclose the identity of parents to adult children of the sea who ask for this information. The respective biological parents still must consent to identity sharing with those children of the sea asking for it. They can decline to do so and then one must wait until they have passed after which children of the sea always will be able to know who their parents were.«

There was prolonged silence as Kimal Abuno thought about what this change would mean for him and for their movement. For children of the sea to be able to know the identity of their biological parents, this had been the main objective of their movement. So, what would come now?

»Then Eireen, I guess we are becoming obsolete, aren't we?«

»Yes Kimal, in a way we are becoming obsolete. But at the same time, we can now shape our society together with other interest groups in the city on an equal footing. They don't perceive us as extremists anymore since our main objective had not been that extremist in the first case. So, I believe that there will be many other things we should be able to achieve in the future, but with everyone in the city working together and not against each other. Our old new friends might have sought to use us for inciting civil disorder, violence, maybe even civil war. What they achieved is quite the contrary.«

»What role will then be left for me Eireen? Who will still need my services? Will you still need me as your security chief?«

»Kimal, you underestimate yourself. There are many more things you will be able to do starting with what you are doing right now. There will be a day the mission chief will retire, and I am confident that by then you will be well positioned to succeed him.«

»You are kidding, aren't you?«

»No, I am not kidding Kimal. There is also another reason as to why you should take a closer look at the mission chief.«

»You are talking in riddles Eireen.«

»Well, then let me be clearer. Instead of using the information our former friends from outside had promised I made an application to Crowden Institute to disclose the identity of my biological parents. Because neither of them is alive anymore, it took only a few days until I got the answer. You see, now I know my biological parents. I also

made a request on your behalf, but your biological parents are still alive. No surprise there since you are quite a bit younger than I am.»

»Thank you for that Eireen. I guess I must wait until I get back from this expedition before I learn whether my biological parents agree to identity sharing.«

»Not entirely Kimal. There is a little bit of information I can already share with you. As it happens, a comparison of your DNA with mine shows that we are related.«

Eireen Sawarov could see the surprise she had sprung with this bit of information written all over Kimal Abuno's face. But then, when she had learned about this it had been no less a surprise for her.

»Related? How... «

»I was just as surprised as you are now Kimal when I first learned about it. You are kind of my second-degree nephew, meaning that one of my grandparents' siblings had a daughter who married someone who then also had a daughter whose son you are.«

»Who would have thought of something like that being possible Eireen? Certainly not me.«

»Well, maybe this is the reason we always get along well. But Kimal, there is more.«

What more can there be thought Kimal Abuno. Learning that his boss was his second-degree aunt, was that not enough? While he thought about this, he kept looking at Eireen Sawarov's face beaming from the video screen. She seemed to be waiting for him to say something but what could he say? Did he really want to know all those things? He had been getting by without a family all his life. The adults in his parental groups had been neither parents nor friends. He looked on them as the administrators of his childhood, nothing more.

»Kimal, don't you want to know?«

»Sure, I do Eireen. It is all just a bit sudden. So what else is there?«

»The mission chief is my elder half-brother«

»What!«

»You heard me Kimal, the mission chief is my elder half-brother. And with that he is also kind of your uncle removed by two degrees.«

»How can that be Eireen?« asked Kimal Abuno after he had recovered his composure somewhat on hearing this news.

»Just like you and me, the mission chief was born a child of the sea. But he was adopted at a very young age and since then has carried the name of his adoptive parents.«

»Does the mission chief know that he is your half-brother?«

»Most certainly not Kimal. Han and Nala Taliesin were all the parents he ever needed; he could likely not have asked for better parents. Because of that, the mission chief never had any interest in knowing the identity of his biological parents.«

»I understand Eireen. Is this why you asked me earlier to take a closer look at the mission chief?«

»Yes Kimal. But the mission chief must not know about this. You must promise me that«

»I do Eireen. He will never learn it from me.«

»I know Kimal, you are as good as your word. But there is one more thing you must promise me.«

»Whatever it is Eireen... «

»You must promise me that you will make sure that you and the mission chief will return unharmed from this expedition. You and the mission chief are the closest things to a family I have, and I must not lose that which was just given to me a few days ago.«

Kimal Abuno looked at the somewhat unsharp image of Eireen Sawarov displayed on the screen. He could not help wondering himself if this was still the same tough council woman who he had admired for years. Something had changed with his boss, and he did not know yet whether it was for the good or not. She was not just his boss anymore, he mused, Eireen Sawarov was now the only blood relative he had ever known; well, aside from the mission chief he quickly corrected himself. But regardless of whether he looked at her as his boss or as his aunt two degrees removed, he knew he would never let her down.

»I promise, Eireen.«

Eireen Sawarov thanked him for his promise. She seemed pleased with how he had taken the news of being related to her as well as to the mission chief. But she knew her Kimal Abuno. It would take him time to get used to the idea that he now had family. They chatted for a few more minutes with Kimal Abuno telling her about the preparations for the expedition and Eireen Sawarov giving him an update on the situation in the city. Their conversation was like a dance, acknowledging their newly discovered relationship in ever so subtle ways. But that was nothing new to them. Except for the fact that they finally had an idea as to why they had been dancing like this for several years now, since the time Kimal Abuno had become Eireen Sawarov's security chief. When the call ended Kimal Abuno kept thinking about a minor fact which had escaped him earlier on. Why had Eireen Sawarov checked his DNA for a possible relation with her? After thinking about it for some minutes he concluded that there could be only one probable reason. Those entering a relationship must routinely check their DNA to avoid engagement with someone too closely related. The council woman must have considered the possibility of becoming romantically involved with her security chief even though he was quite a bit younger. Thinking about it, Kimal Abuno, with a clearly accelerated pulse, sensed that he would not have minded the age difference; not at all.

Kimal Abuno left the cube in which he had just had this video-link call with Eireen Sawarov. It was one of several such cubes which had been set-up for the expedition team members and their much more numerous support personnel to ensure that their conversations with their friends and family back home could not be tapped into. As it happened, the moment Kimal Abuno walked out of his cube, so did the mission chief from another cube.

»Making last calls back home, Kimal?« inquired the mission chief to start a conversation.

»Yes, mission chief, I spoke to Eireen Sawarov?«

Hm, thought the mission chief. If he is calling Eireen Sawarov just before going on an expedition from which he may never return, then she must indeed be the closest thing to a family for him.

»So how is your boss doing Kimal?«

»Well, she is not really my boss anymore?«

»Why do you say so Kimal?«

»With all the changes back home, I don't think she will need a security chief anymore.«

»That is probably right. Did she say so to you Kimal?«

»Not in so many words mission chief. But for all practical purposes, yes, that is what I think she told me.«

»Do you regret that?«

»Not really. But I did like to work with her, quite a bit. Now I guess I must figure out what other talents I have.«

»Well, for starters I will tell you that I am glad we have you in our team. To be honest Kimal, when I first learned that you would have to join the expedition because of a promise the city council chairman made to your boss, I was not too enthusiastic. Now that I know you a little better, I almost think it was a stroke of luck.«

»Thank you mission chief. I am not sure I deserve any of this praise.«

»This is no praise Kimal, just an assessment of your skills which I have had the opportunity to observe for some six weeks now.«

»Still, mission chief, let's wait how useful I will be to the expedition.«

»Agreed Kimal,« said the mission chief with a genuine smile. And then he added more seriously, »you must know, you can come to me any time you feel the need to talk about something that's weighing on your mind.?«

Kimal Abuno nodded, he understood. It was a five-minute walk from the cubes set up for secure communication back to their living quarters. Along the way Kimal Abuno asked the mission chief questions about his job. Like what the most exciting mission was he had been on before this one. The mission chief answered Kimal Abuno's questions good-natured, wondering a little where this sudden interest in his job came from. Eventually they reached the junction where the mission chief turned one way to get to his container and Kimal Abuno turned the other way towards his quarters.

4

So much had changed since the evening when Central's board chairman Alwyn Maar, its chief science officer Mog Sinan, the city council chairman Peer Aksun and his mission chief Bran Taliesin, had discovered the true intentions of Roan Quam. Since that evening when the four of them had sat around a small table in the Aksun family living room, more than two months had passed. It was then that the decision was made to launch a joint expedition supported by the city and Central. Now, as this expedition was on its way towards its base camp located deep in the interior of the continent of Africa, nothing was the same anymore. Not in the city and not at Central. Considering the changes to rules and traditions which had been in place not for hundreds but for thousands of years, the biggest surprise was that nobody asked too many questions as to why many of these were now seemingly obsolete.

The driving force behind such changes was Peer Aksun with his city council backing him unanimously, much less so was it Central itself. After listening to the accounts of their three board members of what had transpired it was clear to Central's board that this change was unavoidable. The board members of Central would have preferred a slower pace of change. But city council chairman Peer Aksun and his city council were adamant that changes had to occur much more quickly. Learning about board member Roan Quam's betrayal Central's board quickly moved to impeach board member Quam in absence but that was a moot point anyway. Roan Quam was a fugitive leading an insurrection and from what it looked like was seemingly committed to possibly eradication of a whole people. That is, if that human subspecies still lived in the homeland that Crowden Institute scientists had identified.

The fact that former board member Roan Quam, a fellow citizen, was planning something like that raised other questions. It was city council chairman Peer Aksun who first put this question to Central's board chairman Alwyn Maar. How could it possibly be that after thousands of years of genome manipulation to address the human proclivity for violence, someone like Roan Quam could plan in cold blood what amounted to a genocide. Was he an aberration or was his genome somehow not altered like the genome of all others to make him a more peaceful human being? But he could not be an aberration, could

he? Obviously, Roan Quam had allies, and not too few of them, who seemingly also had little compunction either about killing fellow humans. What good were their genome alterations if they could not prevent genocide? Central's board chairman Alwyn Maar had no answers he could give to his friend the city council chairman Peer Aksun. He had been asking himself such questions long before Peer Aksun did so. Within weeks, some of the rules regarding the children of the sea program went out the window. First came the change regarding the identity of biological parents of such children of the sea. From now on, upon reaching adulthood every individual raised in the children of the sea program would have the legal right to know the identity of her or his biological parents. Biological parents of children currently in the program would have to consent to such an identity sharing. If they declined, their identity would be shared nevertheless once they had passed. However, future biological parents of children of the sea would have to give written consent to identity sharing before they could become parents of children of the sea. In this way, upon reaching adulthood, an individual would always have the right to know the identity of her or his biological parents. This change, first proposed by council woman Eireen Sawarov, was accepted unanimously when the city council chairman brought it to a vote. Because Central had no choice but to work with the oceanic cities which hosted its institutes it had no choice but to implement that measure as soon as it became city law.

By the time this change in the children of the sea program was instated, the enormous valves which had been separating six of the city's districts from the rest of it had already been open again for a couple of weeks. To be able to participate in city council meetings in person, Eireen Sawarov herself had moved much earlier from her district to a flat just around city hall. The council woman was smart enough to understand that her success in achieving the change in the children of the sea program was not so much owed to her movement's extremist streaks but to the developments that had taken place which had changed her view of others and how these others saw her. Differences certainly remained with other factions in the city council but those could be discussed. More importantly, they could now work together. As far as her movement was concerned, the news that it had achieved its major objective was exhilarating for all those who had fought hard

to accomplish this. But it also represented an anti-climax. The question was where to go from here, what would come next. As far as council woman Sawarov was concerned, whatever came next had to be achieved by working with others and not by working against each other. She, as well as the city council chairman, had realized that they would likely not often agree on things but they both knew that in the interest of the city they had to compromise. Now, there would always be the few in her movement who would equate compromise with defeat. But, thought the council woman, they must learn to adapt, or they would become a fringe minority not able to achieve anything at all.

Taras Daley was a different story. As his chief of security had put it to Peer Aksun, Mr. Daley was simply an opportunist. Nothing remarkable about that either, had Han Nakamoto commented on Mr. Daley's behavior. Mr. Daley had been riding the movement's wave and now he was hoping to hitch a ride with the city. He only had challenged council woman Sawarov once he believed he had the city's support behind himself. When six of the seven districts where Eireen Sawarov's movement had substantial support had been isolated from the city and Mr. Daley's district was the only one which remained connected to it, he thought of taking advantage of that. But his effort to split the movement was only supported by a small minority of its followers in his district. As a result, Mr. Daley's position as the movement's leader in his district had been substantially weakened. There was a good chance that if Eireen Sawarov chose another candidate to run for Mr. Daley's district council seat, that he would not be elected anymore. Realizing that, Mr. Daley turned to the city to support him, arguing that it was in the city's best interest to ensure he would be reelected because he was the only one who could help the city contain council woman Sawarov. Mr. Daley was clearly fishing for straws. He must have observed that the relationship between the city council and council woman Sawarov had fundamentally changed. There just was no need anymore to contain council woman Sawarov which however did not mean that the city would not keep an eye on her. And because an unhappy Mr. Daley might be a greater danger than a cooperating council woman Sawarov, the city also kept an eye on Mr. Daley. As Han Nakamoto told his city council chairman, Mr. Daley was not the kind of man to lead an insurrection, but

treason was something Taras Daley was quite comfortable with if it could further his objectives.

A fundamental question that had been troubling the city council chairman Peer Aksun ever since he had learned about Central and the role it had played in their society for who knows how many thousands of years, was what would become of Central. His city was one among many other oceanic cities. Just how many oceanic cities there were he was not so sure anymore. Given the decline of their civilization which Hakan had lamented, it must have taken its toll over time. Their oceanic civilization had passed its zenith quite some time ago and so might have the number of oceanic cities. Nevertheless, the actions of this Roan Quam clearly highlighted the need for much-improved cooperation among oceanic cities. The simple fact that they now faced a large enemy army without having the means to oppose it illustrated their predicament. Central had been coordinating many things but all in secrecy and without any real oversight from the cities in whose interest Central presumably acted. The city council chairman had no doubt that people like Alwyn Maar, Mog Sinan or Aung Lasheen and their colleagues on Central's board had nothing but good intentions. But from the midst of all those well-intentioned people someone like Roan Quam had emerged. The city council chairman believed this was only possible because of a lack of accountability. Yes, there was some level of accountability. But that in no way matched the power of the offices these board members of Central held. An organization like Central was needed, no doubt about it. But it needed some serious reform. As it were, when discussing this topic with his friend and Central board chairman Alwyn Maar, he agreed with him. He knew that these changes were long overdue but explained that they could only be brought about from outside, as Central could not reform itself from within. When Peer Aksun asked Alwyn Maar why he believed that this was the case his answer was simple. Most in Central believed that giving up the organization's secrecy would result in its destruction. Central, as they saw it, was the only organization left which could still, although in a limited way, coordinate the activities of oceanic cities. If Central would cease to exist, how would cities organize themselves to coordinate their activities and ensure they could continue to mutually support each other. A city left to itself would very much struggle to survive. City council chairman

Peer Aksun agreed that if there were no such organization as Central, the cities would have to create one. However, one that would play by quite different rules.

The organization everyone referred to as Central was indeed central to the life of oceanic cities. Their current situation very much illustrated that this was not the contention of some who may have feared they could lose their roles; it was a fact. To understand this, one only had to consider what options individual ocean cities would have had to respond to the threat that Mr. Quam and his army posed to their civilization and their cousin species. A single oceanic city just could not muster the resources which a response to such a threat required. Of course, one could also have maintained that the threat would not even exist without Central. But was that so? Sure, being able to use the resources of Central did aid Mr. Quam quite a bit in engineering his insurrection. However, someone as determined as Mr. Quam could also have found ways to achieve his goals if there were no such organization as Central. Just because a civilization may have decided not to have a central organization guiding and governing its body parts so to say, does not mean that criminals such as Roan Quam would not set up such a super-regional organization by themselves. City council chairman Peer Aksun and mission chief Bran Taliesin were certain that without the resources of Central they could not have set up the decoy expedition which was to provide cover for their much smaller expedition. Without this decoy operation for which Central had to coordinate the activities of many oceanic cities, their smaller expedition team would find it much more difficult to make it to the homeland of their species cousins without being discovered by Mr. Quam's army. Now they could only hope that their plan would work, and the expedition decoy they had set up would blind Mr. Quam and his army from the fact that a much smaller expedition had already left for base camp.

5

Crowden Institute's president Carleen Nuratu had been no less busy than the city's council chairman. It was institute presidents like here who at each of Central's research institutions had to implement the changes that came down from the top. This task and everything that came along with it took up most of her time. Carleen Nuratu made sure

that everything was executed flawlessly, but while that kept her mind busy her heart was somewhere else. Every minute the institute's president could spare she devoted to finding the sources which had led Hakan Kassius to conclude that human life on land had never ceased to exist. Her efforts in that regard were helped by another directive which came from Central's board once the changes to the children of the sea program had been implemented. As Alwyn Maar expressed it in one of their many conversations over the past few weeks, discovering the true story of their past was a necessity if their efforts to secure the future of their oceanic civilization was to succeed. Alwyn Maar had been deeply disturbed by the fact that not even he seemed to possess a reliable and trustworthy account of humankind's history, including the history of their civilization. With a measure of shame, he recalled that he had prided himself on the fact that he and a few others knew about the true history of their civilization. A history they had purposefully withheld from the broad populace as they considered it too dangerous to be taught in school. There were just too many questions which might have been asked, questions to which there were no good answers, only answers which would cause citizens to begin doubting themselves and their civilization's accomplishments. Now it turned out that someone must have decided that not even he and his fellow board members could have been trusted with a true account of history. Admittedly, they had been a little proud to be the few who seemingly were in the know, only to find out now that they had been deceived no less than the many others they had helped to deceive.

But where should they begin and how should they start to recover the true account of humankind's past? Alwyn Maar had discussed this with Central's board, and the board had then discussed it with the presidents of their research institutions and the bodies representing the cities leaders. Most of all, however, Alwyn Maar had discussed it with Peer Aksun and Bran Taliesin. The problem they faced was that among the learned in their societies there were no real historians anymore. As it was, there were no colleges which even offered courses in history. There were only so-called societal assessment studies looking into which alleged factors determined the success or failure of a society. What students were taught was not history but the correct statistical methods of assessing to which extent a society in the past had succeeded or failed. Clearly, they

must reestablish history as a study course of its own so their civilization would after thousands of years again include true historians. But how could they do that? They were caught in the equivalent of a vicious circle. Without trained historians they could not devise history study courses and without the latter they could not train historians. This was a problem they could not solve. It was Bran Taliesin who then suggested the approach that was eventually adopted by Central's board. They would convene a panel of exemplary scientists. Those scientists would be chosen not so much because of any single achievement their colleagues may value highly but rather for their consistent efforts to ask the right questions to eventually uncover a bit of truth. Alwyn Maar would have wanted the city's mission chief to head this panel but that was not possible, he had an expedition to lead. Second on the list of his preferred leaders for this panel was Carleen Nuratu. When he asked her about it and if she would accept, she agreed. After unanimously being approved by Central's board, Carleen Nuratu suddenly had much greater resources at hand to search for what she was looking for.

Crowden Institute's president lost no time to put those added resources to work. The way they had discovered Hakan's secured container which he had intended for Lucy to open told Carleen Nuratu that the first order of business was to secure any data within Central so nothing more could be accidentally lost. They had to make sure that all of Central's computing systems, anywhere in its institutions, would be searched for material relating to Hakan Kassius in any way, however tangible. Importantly, that included reactivating any older system still functioning which could store data which for several reasons might have never been transferred to the new system which replaced such old computing units. Then there was Central's records archive. To say that this archive was enormous did not really do justice to it. This archive kept records going back many thousands of years, often in formats that were not easy to recover anymore. Quite likely, they would have to build new hardware capable of reading such old records which none of their current systems might be able to access anymore. Clearly, it would take many years just to sort through this enormous amount of data which had not been looked at for centuries or even for thousands of years. It quickly dawned on Carleen Nuratu and her history recovery panel as it was officially referred to, that they would have to train people

to do this job properly. Maybe archive historians would be the first kind of historians they required, and they would have to be trained on the job. They had feared that it would be difficult to find people wanting to do such a job, which on the face of it looked like a rather boring occupation; sorting through archives and cataloging its content by subject matter, creation date, sources referenced, etc. However, quite to the contrary, they received many more applications than they had expected. Young people seemingly were eager to learn more about their history even if that meant they first would have to dig through mountains of archived records. The members of the panel were off to a good start, but they realized that in their lifetimes they would only learn little about the true history of their civilization and what had come before it. But then, one never knew. Maybe they got lucky and found something which could provide them with much more than just the first few glances at humankind's true history.

Carleen Nuratu, in the privacy of her apartment, was waiting for the mission chief's call. Since the mission chief had left for onshore to ready the expedition, they had seen each other several times every week. Today would be the last such video-link call before the expedition was to head out to locate their cousin species in their homeland. Hopefully, the mission chief will be getting there first. He must be getting there first, thought Carleen Nuratu. She had been sitting in her reclining chair, relaxing with her eyes closed for a while when the buzz sound of the video-link call came in.

»Bran, how are you doing?«

»So far, we are still doing fine. Please ask me again in a few days. How about yourself Carleen, are you still spending most of your time revamping the children of the sea program?«

»We are mostly done with that Bran. Now that I am the head of the history recovery panel, which you should have been heading were it not for your more important responsibilities, I have finally the resources which can help us uncover Hakan's sources.«

»So how are you going to find them?«

»Well, first by making sure that no more data is shredded anywhere in our institutes before it has not been thoroughly checked for relevance. And finally, by beginning to

search and catalogue Central's records archive. Bran, is there anything you suggest we prioritize?»

»From what I learned from Mog Sinan about Central's records archive, searching and cataloguing it is a task which will take generations to complete. But I guess we must start somewhere. You know that I have been searching through our city records and some of the records downloaded from old satellites to better understand what happened during the time of the *Great Cataclysm* and what followed it. Given all we learned with respect to how our historical records have been tampered with I would start by looking at the original files which were found on those ancient, recovered satellites. I do not think people facing the perils of the *Great Cataclysm* would have thought much about how what they did would impact our perception of history. It is however likely that those records which are labeled as original data from such satellites and which we are allowed to find in our archives have been tampered with. You must find the genuine original files from which those tampered files were created from. Central must have people who can track how these official satellite records were recovered and who oversaw it. If you can then find where that happened, you might be getting close to the original satellite data source.«

»Bran, this is an interesting thought. Going down this route may be how Hakan could have discovered his sources.«

»That could well be because I chanced on that possibility when I was thinking how Hakan may have gone about searching for the truth. We need to not just put ourselves into Hakan's shoes, we must put ourselves in his mind. I believe we can only discover the truth in a reasonable amount of time if we think like Hakan would have thought about such things.«

»I believe you are right about that Bran.«

»I am sorry Carleen, that I cannot be around to help you with all of that. But you can guess just as well as I can how Hakan may have thought about such things.«

»It still would be nice to have you here. But let's change the topic. How is Lucy doing? She is not just going on an expedition to locate our species cousins; she is going on an expedition to find her father.«

»I know Carleen. Lucy is doing fine. That is as far as her professional responsibilities are concerned. But she is struggling to cope with the separation from Kareem Niagato with whom she had been together for a couple of years. You know Kareem, do you?«

»Bran, I know all three of Hana's and Ari's kids, but as you can guess, I have not seen them for a while. As it is, Lucy did confide in me, so I know how she feels.«

»I am glad she confided in you Carleen. Kareem has become a fine engineer, an exceptionally good engineer I might say. But he and Lucy are quite different people. Lucy is an outgoing, enterprising and sometimes a risk-taking person. Kareem is just the opposite; he never really leaves his comfort zone. I tried to convince him to come on this expedition and share the experience with Lucy, but he would not do it. I believe Lucy still has not really understood why he did not want to come along.«

»Where is Kareem working now?«

»He is still part of the trouble shooting team in the city's engineering department. They get to select their own members and because of that usually only the city's best engineers serve on it.«

»I am wondering whether I should try to pull him into Crowden Institute. We absolutely could use more excellent young engineers. They are getting harder and harder to come by. What do you think Bran?«

»I would say Carleen if you were looking for an excellent young engineer then certainly try it. But if you are doing this with Lucy in mind then I would suggest, don't. I do not think there is a future for them, not if Lucy is to continue her career. As much as I like Kareem, entering a permanent relationship with him would very much limit what Lucy could eventually achieve for herself and for others. And I believe Lucy concluded that much herself already.«

»Message received Bran. I won't do it then. But still, if you know excellent young engineers not in any way connected to Lucy, please let me know.«

Carleen could see Bran laughing on the screen before she even heard him. Whatever should happen, he would take care of Lucy; of that Carleen Nuratu was certain. This was the last time she would see him for quite a while. What if something happened to the expedition and they did not make it back?

»Bran, promise me you will bring everybody safely back from this expedition.«

Bran was looking at Carleen. She must know that he could not promise that. He could only promise that he would do his utmost to ensure that everybody returned safely. And that Carleen must know herself, she did not have to ask for it.

»Don't worry Carleen. I will do whatever it takes. It is not as if there were not people I wanted to come back to. I want to see you again.«

If the video-link connection had been better Bran Taliesin could have seen the slight blush washing over Carleen Nuratu's face. As it was, he did not need to because as they said good-bye Carleen told him that she would wait for him.

6

Railac Sono was sitting in his makeshift headquarters looking through the intelligence reports which had come in the last few hours. His face showed concern. Might they have underestimated what Central could be able to do to confront their army? When the initial reports came in which indicated a substantial increase in activity at several onshore industrial complexes some two hundred kilometers to the south he was not concerned much. Certainly, they had to expect that Central would launch an expedition on its own to get to the homeland of these people before they could. And of course, they had to expect that Central would set up their expedition base as close to where they needed to go while still maintaining a sufficient distance to their army. The choice of facilities Central had made clearly reflected these two constraints. But why the scale of this effort? Central possibly could not expect to be able to build an army of their own to confront his forces. Not in such a brief time. But all the intelligence reports he was receiving over the last weeks had confirmed the same. Central was not just launching a massive expedition of their own to get to the homeland of these people before they could, Central also seemed to prepare a military campaign headed right for their own headquarters. When Roan Quam entered his general's headquarters, he could see that Railac Sono was concerned. Because now nobody else was around his general, Mr. Quam approached him informally.

»You are looking concerned Railac. What is the matter?«

»I have just been reading the intelligence reports for the last few days again. What they say leaves little doubt that Central is not just launching an expedition, maybe even larger than our own, they clearly are also planning to attack us here at our base.«

»But with what army would they attack us, with what weapons, Railac?«

»I do not know Roan, but I cannot assume that they would be heading our way without having the necessary weapons to attack us. Would you?«

Roan Quam was thinking about this. As it were, he had been trying to understand what he might have missed but he could not see anything. As far as he knew there were no hidden weapons stashes with which Central could in such a brief time equip an army of its own, strong enough to have a reasonable chance of success in attacking their army. But then, this is just what Central was seemingly intent on doing, attacking their army's base while simultaneously launching their own expedition to this homeland.

»But Railac, could this not be just a ruse to force us to split our army in two?«

»That looks highly unlikely. However, if you ask me if I can exclude this possibility then I must answer no, I can't. But if it is not a ruse? If we move the bulk of our army to our expedition base camp and the forces of Central seemingly heading our way arrive here, they will wipe out our force here and we will be left without a base. That means we will have no means to reprovision our troops as they head into this homeland. Worse, even if we succeed and our troops conquer this homeland we will be cut off from any onshore facility. Central then could just wait until our forces would crumble and then pick us off piece by piece.«

»I have thought about that too, Railac. We must hold this base. If we lose it, then whatever we should achieve against this other species would come to nought. I don't think we have much of a choice but to split our troops in two. One regiment should be enough to get rid of this people, which, as far as we know, is technology-primitive.«

»I agree Roan. Are you having any success in getting more resources from our supporting cities?«

»No, unfortunately not, Railac. We had to launch this campaign earlier than we had planned and that has become a problem for us because Central was able to cut our links to most of those cities. We have lost the element of surprise which we had counted on.

Also, the civil unrest we had tried to engineer has not come about. It was supposed to keep Central and the cities preoccupied for a while, long enough for us not just to launch our campaign but to successfully conclude it. We must move now and quickly to ensure that we are first to arrive in this people's homeland and that we can hold off Central's forces from capturing our base here. You are the general, you need to tell me what our chances are that we will succeed in both. So, what are our chances, Railac?»

Railac Sono looked at Roan Quam for a few moments before answering this question. It had been Roan Quam's job to make sure that there would be civil unrest in the cities, and they would be able to launch this campaign before anyone would be able to realize what was happening. That had failed. It was his job now to make sure they still could achieve their objectives.

»I believe we still should be able to achieve both objectives. But we must attack first.«

»What do you mean by attacking first? Attack whom, Railac?«

»Central's advancing forces as well as their expedition of course.«

»But attack them how and with what?«

»I don't know how familiar you are with the history of human warfare, Roan. We are using our aircraft right now only for transporting our troops. We must convert some of them, outfit them with weapons so we can attack the enemy when he is still a few hundred kilometers away.«

»You are right Railac. I had not thought about that. How many aircraft would you suggest converting and with which weapons should we equip them?«

»I would suggest converting a quarter of the aircraft we have. As for weapons, I believe it would be best to drop explosives on the enemy. That would be deadly as well as devastating for the enemy as they likely would have no defense against explosives being dropped on them from high altitudes. Before they might be able to develop any anti-aircraft weapons this conflict should be long over.«

»Get it done Railac. I guess we have no choice but to fight two enemies at the same time.«

»I will get right to it Roan.«

Railac Sono was relieved because Roan Quam had just addressed another concern of his. The concern that Roan Quam would begin to develop a conscience if he as his general suggested attacking the forces of Central, which in practice meant murdering fellow citizens. But seemingly, if this could be done in a long-distance way, it did not seem to matter to Roan Quam if fellow citizens were killed in the quest to achieve their goal. They must take the land of this other species which was still habitable and force a portion of their fellow citizens who were still hiding in the oceans to live a life on land. Just as their very distant ancestors had done, they would conquer the land of this other species so that their species could begin to live there.

»One more thing Railac. How far are we with establishing our base camp outside this homeland?«

»We are almost done Roan. In about four days we should be able to send out our first scouting parties into this homeland itself.«

»And what about Central, how soon will they be able to move into the homeland?«

»We do not know Roan. But we suspect their exploration base camp is some one hundred kilometers to the south of where ours is. We have no reliable intelligence because we do not want to risk giving away the position of our own base camp.«

»I understand Railac. Just let us make sure we can also bomb their expedition base camp if that is what it will take to delay them.«

»Roan, I will make certain of it.«

Homeland

7

The homeland was a long and broad valley stretching in the north south direction although slightly slanted towards northeast. It was bounded by mountain ranges on either side. These were not very tall mountain ranges. As one approached them from outside the valley, hiking up rather gentle slopes one would reach the tops after some three or four hours. But once inside the valley the drop was significantly steeper because much of the homeland lay below sea level. These mountain ranges were the first major obstacles air masses coming in from the oceans encountered. This warm moist air rose up the mountain slopes cooling and condensing with rain heavy clouds forming. As they rose higher these clouds eventually irrigated the slopes with the water slowly seeping through the limestone tops of these mountain ranges towards their granite base, nourishing small creeks on either side. The northern and the southern ends of the valley were like small bottlenecks which were not bounded by mountain ranges but slowly transitioned from what was a fertile valley into a desert. At its widest the valley's east-west extension was a little more than one hundred kilometers and for a stretch of some two hundred kilometers from north to south it never was any narrower than sixty kilometers. This homeland was the only part of the continent of Africa left which still could sustain a large human population.

Clan leader Ketan-mo was relaxing with his two young children on a terrace halfway up the mountains from the valley floor. It was a beautiful day. The rainy season was over, and the valley was full of lush greens of all varieties. The next two months would be the most beautiful time of the year and shortly after that his daughter would start school. It would be another two years before her brother would join her there. From time to time, Ketan-mo was looking sideways to the adjoining terrace where his parents were enjoying the last sun rays of the day. He could see his wife Nagun-me coming out of his parent's home with some refreshments in hand. At this time of the year, they would sit

outside like this until late into the night. People would come to see his father, have a few words with him, hear his advice and after a while leave with well wishes. Ketan-mo had only been elected clan leader a few years ago and he relied on the advice of his father Amote-mo no less than those who came to see him each evening. Amote-mo had been one of their elected clan leaders for decades. There were always sixteen clan leaders at any given time. Few other clan leaders had ever served as long as Amote-mo. Since he had stepped down as clan leader some fifteen years ago, he continued to serve on the council of elders as was his wife Setan-me. Ketan-mo's mother Setan-me was the oldest still serving doula. Helping expectant mothers, guiding them through birth, separating mother and child at childbirth while keeping them united for weeks after birth was one of the most important responsibilities in their societies. The senior doula was as much respected as any of their wise old men, if not more so. Nagun-me was pregnant again and Ketan-mo was looking forward to welcoming another child into his family, into his clan.

As Ketan-mo's eyes wandered around the valley, taking in its beauty, he noticed that this peaceful evening was going to be interrupted by one of the clan's sentries running uphill towards his home. Judging by how fast he came up Ketan-mo thought it must be one of the younger men but when he eventually had arrived at the terrace where Ketan-mo was still sitting, he realized that it was one of the older sentries. It was not the youth of the carrier but the urgency of the message which must have set the speed with which the sentry had run uphill. Ketan-mo had risen to his feet.

»Kagun-mo, I greet you. What is the urgent message you carry?«

»Ketan-mo, foreigners have arrived at the other side of the western mountains?«

»Please sit with me Kagun-mo,« said Ketan-mo and turning to his daughter he asked Ulina-me to please bring refreshments for Kagun-mo, as he must be thirsty.

Ketan-mo and Kagun-mo sat down and waited in silence until Ulina-me had arrived with refreshments for Kagun-mo. Kagun-mo thanked her and slowly drank the beverage which she had brought, putting the fruits aside for now.

»Thank you, Kagun-mo, this was very refreshing. May I begin with my report?«

»Please Kagun-mo, do begin.«

»There are seventeen foreigners, not more. Nine men and eight women. Only a few carry what might be weapons. They are building a camp a little up in the foothills of the mountains and some of them have begun to explore areas uphill. They must be searching for the best way to cross the mountains to come into our valley.«

»When were they detected? When do you think they first got here Kagun-mo?«

»They must have arrived this morning, Ketan-mo. But they could not have carried all the material which is now at their camp site. We do not know how, when and by whom these materials were brought there.«

»Could they have brought them in vessels like Agan-mo described them to us?«

»That may be possible Ketan-mo. If they came and left during the night we may not have detected them.«

»How close did you get to them Kagun-mo? Did they detect any of our sentries?«

»We could hear them talk Ketan-mo. They have not detected any of us.«

»Was there anything else unusual?«

»No Ketan-mo, this was all we observed.«

»Thank you, Kagun-mo. The clan leaders and the council of elders will discuss this tomorrow when both will convene. You must be hungry, and you are hours away from your home. Please be our guest tonight. We will signal to your family that you will join them tomorrow late morning.«

»Thank you for your kindness, Ketan-mo.«

»Kindness is how our people survive Kagun-mo. Let's sit for a little while longer before we go inside and eat.«

They sat for roughly another hour, quietly, both looking out into the valley, the bottom of which eventually vanished in darkness. It was a moonless night. When finally, darkness had crept up the mountain they left the terrace and entered Ketan-mo's home. This was a home excavated into the mountainside and the only indication that it existed was a somewhat rectangular shape set into the rock which indicated the entrance. If one had turned on a light switch one could have seen that this was indeed a beautiful home, but its residents required much less light to find their way around than their

ancestors would have required. The little lighting they needed came from a clean source, replenished every day by the sun. Nagun-me, her husband Ketan-mo, their daughter Ulina-me and their son Rulun-mo sat down together with their guest Kagun-mo to eat dinner. They spoke little while they ate and for all appearances enjoyed the food which consisted of a variety of grains and fibers with some fruit for dessert. After they had cleaned up everything Nagun-me showed her guest to his room. Then she and Ketan-mo bedded their children and retired to their sleeping room.

»Does Amote-mo know yet?« asked Ketan-mo as he felt the warmth of Nagun-me's body next to him.

»Yes, he does Ketan-mo, and he has already sent a message to Agan-mo.«

»I had no doubt Amote-mo would already know; he always does. But still, I had to ask for confirmation.«

»Don't be silly Ketan-mo,« said Nagun-me with a suppressed laughter, »you always sound a little jealous when you ask such questions.«

»The only one I am jealous about is this little one in your belly because he is so much closer to you than I am Nagun-me.«

Nagun-me kissed him. »Now you are really being silly because you are just as close to my heart as the little one is.«

They snuggled up together and lay for a while until Nagun-me fell asleep. You always fall asleep before I do, thought Ketan-mo and carefully moved here a little so she would sleep more comfortably. Then he stared into the darkness of the room which was much less of a darkness for him than for these foreign people who had shown up outside their homeland. What were their intentions? There were only a few of them but still there could be danger. He was less concerned about any weapons they may have brought along, but what about diseases? The first of these foreigners had fallen from the sky some fourteen summers ago, now there are seventeen of them. How many more might be showing up a few more years from now? There were still some sparsely populated areas in their valley so taking in a few would not be a big problem. But what if many more came and wanted to stay? His people had been living in this valley peacefully for countless generations. They had no idea how long ago it was that their ancestors first arrived here

in this valley, but the stories passed on from generation to generation made it clear that it was a very long time ago. Almost too long to be still believable. He understood that any people which ever had existed had its unique creation story. The people of the valley were no different in that. From the stories passed down by their ancestors, it was clear that his people were the last survivors. However, for some fourteen summers they knew that this was not so. How many others were there? And why did these foreigners show up now?

Eventually he fell asleep. But even in his sleep his thoughts followed him in the form of a dream. At first the dream images which surfaced from his unconscious were rather harmless but that quickly changed. He could see this party of seventeen foreigners entering their homeland peacefully but then shortly thereafter many more strangers made their way into their valley. They came as heavily armed intruders following in the footsteps of the seventeen foreigners, swallowing them up and then gouging themselves on his people. His dream had become a nightmare in which his people were devoured. They would all be killed. None in his family and none in his clan would survive. Their people would be completely gone from the valley but not before drenching its soil with their blood. He desperately wanted to wake up and eventually he did, panting and sweating all over. He looked at Nagun-me. Thankfully, she was still asleep. Even if he could have done so, Ketan-mo did not go back to sleep anymore, not until the wee hours of the morning. He was a clan leader, and he had to think. Thinking about what he must do to make sure the nightmare he just had would never become a reality.

8

The next morning, after they had breakfast, Kagun-mo left to join his family. Ketan-mo went over to his parents' home to accompany them to the grounds of the people's assembly. There, it was customary for the elders to first observe the meeting of the clan leaders and then hold their own meeting, which the clan leaders were allowed to attend in silence. When they arrived at the grounds of the people's assembly, they separated. Ketan-mo sat down with the other clan leaders of this region of the valley while the elders had taken a seat on the hillside surrounding the meeting ground. Ketan-mo had not been

the only clan leader whom the sentries had sent notice last evening about what they had observed. Several others had learned about it too and now it was those who repeated what they had been told so all clan leaders would hear all accounts. Once that had been accomplished and all clan leaders knew about the situation, they had to decide what they would propose to the council of elders to do about it. A few hot heads argued that they must not let the foreigners set foot into their valley. They were also the most junior of the clan leaders. Others argued, and Ketan-mo was one of them, that they needed to learn more about the foreigners. Because there were only a few of them, they could not be much of a danger. However, they could maybe learn more about these people, knowledge that could be helpful if much larger groups of foreigners were ever to arrive. They took their time to consider the arguments. There were frank opinions but there never was a loud word. Anyone watching the scene as an outsider would surely have wondered whether the fact that these clan leaders, presumably all alpha males, were behaving themselves so well was due to their elders observing everything. Eventually, after some two hours of deliberation the council of clan leaders decided that their recommendation would be to let the foreigners enter their valley while always keeping them under close surveillance. Once they enter the valley, their elders should go out and meet them.

One question they had not addressed yet was how to tell their neighbors in the valley about it. The valley was divided into several regions, each of which had its own meeting ground where their clan leaders and elders would come together. The region in which Ketan-mo was one of the clan leaders and his parents Setan-me and Amote-mo were respected elders just happened to be the area into which the foreigners were seemingly headed. Relations between the various regions were usually amicable but there were sometimes also disputes. But for as long as Ketan-mo's people could remember, such disputes were always settled peacefully. In a very distant past, the valley had become for Ketan-mo's people a kind of Noah's ark. For reasons unknown to them, they had become the saved people. Countless generations before them had passed this on to their children in the creation myths of their people. But their creation myth told them little about where their people once had come from to settle in this valley. Ketan-mo had heard from his father that it might not even have been just one people from whom they all derived.

There were stories that the ones who eventually would become the people of the valley had quite different origins. But that was long ago, so long ago that nobody could really imagine that their people might even have existed for that long. As Amote-mo explained to his children, these very different peoples who made it to the valley eventually became one people. If, instead of the few members of many ethnic groups who found refuge there, only members of two or three different peoples had come to the valley in larger numbers, perhaps today not just one people would be living in the valley, but several. With no single people strong enough to dictate their ways to all the others, everyone had to work together, just like workers in the fields must do. Their valley, their Noah's ark, was not just saving species from extinction, it forced the creation of a new one, their own people. While the valley was quite sizable, it had not enough resources to support large herds of livestock. Hence, the people's valley council had decided long ago that the precious resources of the valley would not be wasted on supporting animal husbandry on a large scale. There would be livestock, but very little. The grains they could grow in the valley were needed to feed the people. That worked for quite some time but then the sky darkened and with less and less sunlight making it through their harvests began to fail more and more often. They had to change to different, hardier food crops, learn how to process them and turn them into something that would be sufficiently nourishing. For generations that worked but eventually even these hardier crops were more and more difficult to grow. It was then, their stories told them, that their people began to use caves. In the mountain ranges that lined the valley on both sides from north to south, there were many limestone caves. The largest such caves became greenhouses where plants could grow year-round provided, they received sufficient nutrition and enough artificial light.

At the time, along with their food sources, the people of the valley also moved into mountain caves. Giving up their homes down on the valley floor had been a difficult decision to make but they had little choice. The dark sky not only kept the sun from warming the ground, but it also changed the climate in the valley to the extent that moving their homes into the mountains was the only realistic option if their people were to survive. Since then, the mountains had been the home of Ketan-mo's people. As time

went by, their homes in the mountain caves became ever more comfortable. When after countless generations the skies finally cleared and they could have returned to settle in the valley, the people of the valley chose to stay in their mountain homes. Therefore, the valley floor would remain a mostly wooded area, supporting the wildlife of the valley. Only in a few places was land cleared for additional crops which could supplement their diet of vegetables and roots growing in their mountain greenhouses. For Ketan-mo, the stories about the time before his people moved to their mountain homes were no less mystical than the stories retelling their creation myth.

Their myth could not tell Ketan-mo's people from which people they descended because his people did not even exist back then, they were the result of many people melting into one. Still, this creation myth included many surprising details about what life must have been on this planet before the inhabitable world shrank to the size of their valley. Some sounded so phantastic that most doubted that they contained any kernel of truth. But Ketan-mo and others like him who thought about such things did not doubt that their ancestor's eons ago must have known much more about how the world worked than they did. What they knew, Ketan-mo thought, must be comparatively little. They could not fly through the skies or ascend to the stars as their ancestors apparently once could. The technology of his people was comparatively simple; and it was different. It had to be different because they looked at things in a different way than their ancestors did. More than that, they thought and felt differently. Reading other people's minds had always been something which some humans had been able to do. But this capability was always based on inference, on assumptions about what one knew about any person and how good a judge one was of other people. Being able to sense emotions had always been a more reliable indicator of what someone would possibly do in any given situation, even more so than guessing a person's thoughts. However, this ability was always based on drawing conclusions from previous observations about how certain emotions were linked to certain behaviors. Ketan-mo's people, however, had evolved the capability to sense emotions more like one would sense a smell or hear a sound. That they also must differ in other ways from their ancestors became clear when Agan-mo had arrived, the man who had fallen from the sky.

Ketan-mo's father Amote-mo and Agan-mo became friends. Agan-mo was a frequent guest in Setan-me's and Amote-mo's home and in a way, he became Ketan-mo's uncle. When Ketan-mo was first introduced to Agan-mo he was scared, emotions in Agan-mo's people seemed to be much stronger than in his own people. Or so he thought. Mistakenly, he had initially concluded from this observation that Agan-mo must be able to sense the emotions of others even better than Ketan-mo or his parents could do. But that was not so. Quite on the contrary, Agan-mo seemingly had to observe a person's behavior to draw conclusions about that person's emotional state. He could not sense a person's emotions directly as even the youngest among Ketan-mo's people would have been able to do. When his people had evolved this capability to sense another person's emotions nobody knew. For his people, it had always been that way. But that obviously couldn't have been the case. Another clear difference was that the visual perception capability of Agan-mo's people was not as good as that of Ketan-mo's people. Anyone of Ketan-mo's people could move around in their home using minimal lighting but Agan-mo was never able to do that. When Agan-mo came to visit his parents, he always carried with him some extra lights so he would not always stumble against objects. But then, Agan-mo's vision was better in bright daylight than theirs. Looking directly into the sun was never a good idea, not for Agan-mo or anyone of Ketan-mo's people. But if that happened by accident, Agan-mo would quickly recover while this would take much longer for anyone of Ketan-mo's people. In severe cases, if one of his people stared at the sun for a moment too long, the result was often partial blindness that lasted for many days and, in the worst cases, even longer.

Agan-mo's people possessed more powerful technology than his people. That much Ketan-mo had understood from what Agan-mo had told his parents about his own people. Ketan-mo used to listen in on the conversations between his parents and Agan-mo when they were sitting around the family table. What Agan-mo told his parents at first sounded even more incredible than anything he knew at that time about their own creation myth. How could people live in cities deep in the ocean, a body of water so immense that it was hard to imagine. Their valley had a few small lakes nourished by the many streams flowing through it. But looking at a body of water that does not even seem to end at the

visible horizon must be a completely different feeling. Ketan-mo wondered what he would possibly feel if he were to look the first time at such a body of water from somewhere on its shores. It quickly became clear to him that Agan-mo's people not only possessed technology superior to their own but that there were also many more of Agan-mo's people than the roughly eighty thousand people of the valley. Ketan-mo could sense Agan-mo's emotions when he told his parents about such technology and how numerous his people were. And he could sense something else. Agan-mo was seemingly concerned about the future of the people of the valley.

With such thoughts on his mind, remembering the time when Agan-mo had arrived in the valley, Ketan-mo had been sitting on the hillside for the better part of two hours. He had been following the deliberations of the council of elders down at the people's meeting ground which had just been adjourned. The decisions the council of the elders had made were simple. First, they would do as recommended by the council of clan leaders. Second, a few delegates from the council of the elders would meet with Agan-mo to hear his thoughts on the matter and listen to his recommendations. And third, two clan leaders and two elders would go out and meet with clan leaders and elders of neighboring regions to inform them about what had happened and to let them know of their actions. In turn, they would ask the leaders of the neighboring regions to then inform their neighbors down-valley likewise so that in a few days everyone in the valley would know what was going on.

9

The valley's population had been oscillating within a narrow band around eighty thousand people. During extended exceptionally good or bad times these deviations could be higher. But even in the worst of times it never dropped below seventy thousand while it never grew beyond some eight-five thousand in the best of times. The valley's economy could have supported many more people. According to legend, when their ancestors long ago moved to the valley from different parts of the world, the valley's population was originally over a million people. Back then, with many kinds of crops being grown on the valley's floor, feeding such a large population was entirely possible. However, when

crop yields began to decline, inevitably the valley's population also declined. At some point, during the most challenging time the people of the valley had ever experienced, the valley's population had dropped below twenty thousand people. It was then that the people of the valley finally moved from a life on the valley floor to a life in the mountains. The mountain ranges girding the valley were rich in natural caves. Right from the start the people of the valley would start to expand those caves. Since time immemorial, people have dug deep holes in the planet's surface in search of riches. Tunnel systems lying thousands of meters underground and extending over many kilometers were not uncommon. Occasionally, such underground tunnels were built not only to bring the Earth's treasures from the depths to the surface, but also to protect against the destructive power of terrible weapons that humans had built to destroy millions of other people. In such deeply buried bunkers, people were supposed to be able to survive until a relatively safe return to the surface was possible. However, when his people moved from the valley into the depths of the mountains, it was not to protect themselves from the aggression of other peoples, but to protect themselves from a nature that had become hostile to human life. Unlike in wars, a safe return to the Earth's surface would not simply be a matter of waiting in a bunker for months or even years. The people in the valley had to be content with living in their mountain caves for many generations. No one could really say how many, because no one knew how long the sky would remain darkened.

From the very beginning, the people of the valley began to develop and expand the existing mountain caves according to their needs, including the construction of new artificial caves. Most of the natural caves in these mountain ranges were limestone caves at higher altitudes. Accommodating them to their needs was not too difficult but when it became clear to the people of the valley that they would have to stay for much longer inside the mountains they knew they had to construct more permanent homes that were not as susceptible to erosion as limestone was. They were fortunate as the geology of the region was quite helpful in creating new and more permanent homes inside the mountains. The limestone that made up the upper two-thirds of the mountain ranges had been deposited over many millions of years on a huge granite plateau that was divided

in the middle by the area that would later form the valley. While burrowing into the granite base of these mountains was difficult at best, their new granite homes would last a long time. However, the limestone caves remained quite useful as they continued to house much of their greenhouse farming and the industries the valley initially possessed which improved and expanded over time. The result was that the homes of the valley people were built into granite while their agriculture and industry with few exceptions continued to operate in limestone caves. Human mining operations in the past had taken their toll and this was no different for the kind of mining operations the people of the valley had to undertake when they chose to move to a life inside the mountains. But over time, by sheer necessity, the people of the valley became the most sophisticated mining experts which humankind had ever known, and accidents became increasingly rare.

In daily life, when he was not serving as clan leader, Ketan-mo was a senior engineer in the metal industry. His father Amote-mo had been a leading biologist working all his adult life on improving the nutritional value of their crops. But he was retired now and while his expertise in this area was still frequently sought after, he preferred to devote his time to the welfare of his people, serving them as one of their elders. Amote-mo had only been an elder for a little over a year when Agan-mo had fallen from the sky. At that time, several people in the valley had observed something falling from the sky beyond the western mountain range and shortly afterwards clouds of smoke rising into the sky. Seeing something fall from the sky was nothing unusual, as meteorites were quite common. What was unusual, however, was that after the impact of a seemingly small meteorite clouds of smoke rose into the sky on the other side of the mountains. Meteorites coming down in or around the valley were always something that the people of the valley would seek to recover as they often contained valuable materials. They would just have done the same this time around but given the clouds of smoke this object hitting the ground had produced they proceeded much more carefully.

Ketan-mo, at the time still a young metal engineer, was part of the search party sent out to recover the object that had fallen from the sky. When they were close enough to realize that the object that had come down for the sky was anything but a meteorite, they paused their search and sent information back to their elders of what they had

discovered. Instead of a message arriving from their elders on how to proceed further, two of their elders joined them after a few hours' wait. One of them was Ketan-mo's father. Amote-me and the leader of the search party slowly approached the object. What they found was a crumpled pile of metal with torn pieces strewn around it. There could be no doubt. This was a man-made object, and it was not something the people of the valley had ever seen. Amote-mo sent a member of the search party back to the valley with instructions to ask his fellow elders to send emissaries to all regions of the valley to convene the Valley Council of the People. After a discussion with his fellow elders, Amote-mo gave instructions to search the area within an hour's walk of the rubble for anything that might indicate the presence of a human being. It took less than half an hour for a member of the search party to return to Amote-mo with the burnt remains of what had once been a shoe. When the two elders examined the shoe, they decided to call in more people from the valley to search for the person to whom the shoe must have belonged.

The object falling from the sky had been observed in the early morning hours. The search party had arrived around noon at the debris field and was joined hours later by two of their elders. The search for the human who must have fallen from the sky began late afternoon. But even well after midnight, they had not found a trace of her or him and they had to pause their search to give everyone some rest. With the early light they began their search again but to no avail. By the end of the day, they still had not found a trace of this human. It was then that helpful news reached them. Children playing outside had seen something else that those who had reported the object falling from the sky had missed. The eyes of the latter had followed the falling object to the ground and had missed observing another object also coming down from the sky, although much slower and over a different area. The children had observed an object slowly gliding from the sky which they described as a huge umbrella with something small dangling from it. The area over which they had observed this was about forty kilometers north of the crash site. When Amote-mo and his fellow-elder heard about it, they looked up the day's weather report and found that the wind must have been blowing in the direction the gliding object had drifted.

They sent out a new search party headed for the area where this gliding object must have come down. After a few hours, the leader of the search team notified Amote-mo that they had found a human; he was unconscious, and he was different. Amote-mo instructed the leader of the search team not to touch the human until a medical team arrived and under no circumstances to speak to anyone about their discovery until the council of elders and subsequently the people's council of the valley had had an opportunity to discuss the situation. Then he assembled the medical team and accompanied it to the site where they had found the human. When Amote-mo arrived, he could not immediately see the difference because the human was wearing some gear. But once the helmet had been removed from the human's head, he could see the difference. The medical team checking the human's vital signs told Amote-mo that aside from being unconscious for the moment he had a few broken bones but nothing that would not heal eventually. However, they needed to transport him quickly to one of their medical facilities to check if the human had sustained any severe internal injuries which could be life threatening. Within three hours the human had been brought into one of their medical facilities and doctors began examining him while Amote-mo was watching what they were doing. It took a few hours until they could be certain that this human had not sustained any life-threatening internal injuries. Then Amote-mo sat down with the chief medic and listened to what he had to tell him. The chief medic had never seen anything like this human being before. As far as he could tell, without any more in-depth examinations, this human's skull differed somewhat from theirs. But importantly, his brain seemed to differ from theirs more than the differences in skull structure suggested. Furthermore, as Amote-mo must have noticed, he was slimmer in build than the people of the valley, but his height was well above their average height. Yes, Amote-mo had noticed these differences but what interested him much more was whether this individual would survive so they could communicate with him and find out who he was, where he had come from and, most important, why he had come. The chief medic was confident that they would be able to communicate with this unique patient once he woke up; somehow. But that would take a while because they had to put him in an induced coma to minimize complications from brain swelling once they had drilled a small hole in the man's skull to relieve pressure.

Amote-mo knew that the chief medic meant it when he said he was confident that their patient would be back to normal within a few weeks. Except of course for the broken bones of this probably some forty-year-old man which might need a few months to heal completely.

10

How could they communicate with this foreigner who had fallen from the sky? This seemingly simple question was not so easily answered as people had different opinions of what was most important. The valley's people council had decided that it should be the responsibility of their council of elders on how to deal with the foreigner. The valley's people council had based its decision on the fact that the stranger had come down in their area, or just outside of it. Hence, they must take care of him and seek to obtain as much information from this stranger as quickly as possible. And there lay the problem. There was no quick way to obtain the information the valley's people council was interested in. The problem was that they couldn't just talk to him. Either their people would have to learn the language of this foreigner, or this foreigner must learn their language. Neither of which would happen quickly. The easy decision was that the foreigner would have to learn their language. But how? In the end, they agreed to teach this foreigner their language just how they did this with their children; only faster.

When the foreigner awoke from the artificial coma, the situation he was in did not seem to frighten him. Being surrounded by people he did not understand and being hooked up to medical equipment unfamiliar to him did not seem to bother him much. If anything, thought Amote-mo, as he watched this foreigner observing the goings-on around him, he did not seem frightened, but rather curious. That was a good sign. If he was curious, he might be just as interested to learn about them as they were interested to learn about him. After a few weeks in the medical facility the foreigner was carried to the home of the council elders Setan-me and Amote-mo. They both had asked their fellow elders to be allowed to take care of their visitor as they now began to refer to him, a wish they were quickly granted. When the visitor arrived at their home, he already knew quite a few gestures and the words associated with them. From then on Setan-me

spent every day a few hours with the stranger, whose name they had learned was Agan-mo, helping him to practice and expand his language skills. Setan-me was surprised how quickly Agan-mo learned their language and so was Amote-mo. Almost every evening, Amote-mo would sit with Agan-mo outside on the terrace in front of their home. There, they would look out over the valley, often sitting silently, one of them waiting for the other to respond. That response might not come for five minutes, not for ten minutes, or not for even longer. Amote-mo and Agan-mo were not so much engaged in verbal conversations but in thinking together.

But this was not just a conversation between two people trying to understand each other, who the other was or who his people were; it was also a revelation for Ketan-mo. His bedroom lay just below the terrace and by opening the venting shafts and turning off the air circulation he could hear every word spoken above on the terrace. What Agan-mo told his father, the answers he gave to Amote-mo's questions, all of that sounded no less phantastic than anything which could be found in the stories of their own creation myth. But there was nothing mystical with respect to what Amote-mo learned about the world from which Agan-mo had come. Ketan-mo was certain of that because of the way his father asked those questions and how he responded to questions Agan-mo was asking his father. But given all the differences which certainly existed between their people, to Ketan-mo they seemed superficial. He became convinced that just as his people had been hiding in the mountains of this valley Agan-mo's people had been hiding in the depth of those enormous bodies of water Agan-mo called oceans. But why? From an early age on Ketan-mo had wondered why no one ever left the valley or why no one from the outside ever visited their valley. Their creation myth referred to his people as special people, but it said nothing about any other people. Now he knew that his people were not the only ones living on this planet. There were Agan-mo's people. And from as much as he had understood, they were far more numerous than his people. Could there still be other people, of whom they and Agan-mo's people knew nothing?

It did not take too long for Amote-mo to understand that Ketan-mo must be listening in on his conversations with Agan-mo. If Ketan-mo had not asked his father all these questions, Amote-mo may never have suspected it. But he chose not to tell Ketan-mo

that he knew about him being a silent third party to his evening conversations with Agan-mo outside on the terrace. In a way, Amote-mo was glad that Ketan-mo gradually learned about Agan-mo and his world, just as he himself did. As their conversations gave him a better understanding of Agan-mo's world, Amote-mo began to worry. Even for him, many things about Agan-mo's people and the way they lived were difficult to understand. How could he hope that beyond the council of the elders anyone would believe such things? Just how difficult such things were to comprehend he could tell from the questions Ketan-mo kept asking him. What questions would people ask who were not as open-minded as his son was? What would they demand from their leaders? For some among his people their uniqueness was almost a matter of faith. That there could be another people, more numerous and more technologically advanced than the people in the valley. How would they react to this news?

The members of the council of elders met every other week. For about the first couple of months after Agan-mo had become their guest, Setan-me reported on his improving language skills. They were surprised about the progress that this foreigner made in learning their language. But then there were also funny stories Setan-me shared with them to illustrate for everyone just how difficult it must be to learn their language. The elders realized that they had never thought about that. For any of their children, acquiring their language was natural and easy. They couldn't compare how difficult it was for someone who grew up speaking another language to learn their language because the people of the valley knew only one language. Was this visitor particularly gifted at learning a new language, or could all his people learn a new language so quickly? Could people of the valley do the same? There was only one way to find out. The council of the elders decided that Setan-me and Amote-mo should ask their guest to teach them their language. Setan-me and Amote-mo had little choice but to agree to this proposal. While he was initially not too enthusiastic about having to learn the language of Agan-mo, Amote-mo quickly convinced himself that knowing the language of Agan-mo could indeed become quite useful but not in the sense that the council of elders may have thought about it. When Setan-me and Amote-mo discussed how to go about learning Agan-mo's language, they quickly decided that Ketan-mo and his sister Igun-me should

learn it as well. Ketan-mo couldn't wait to begin learning Agan-mo's language. But Igun-me was much less enthusiastic about it.

Learning the language of Agan-mo turned out to be significantly more difficult than they had anticipated. To everyone's surprise, despite her initial reluctance, Igun-me picked up Agan-mo's language much quicker than her brother and her parents. Agan-mo turned out to be a very patient teacher. Lessons were held every day and Agan-mo encouraged them to use his language with him throughout the day. After a few months, Igun-me could converse with Agan-mo in his language just as well as Agan-mo could do so with Igun-me in her language. Her brother and her parents could also have conversations with Agan-mo in his language but not quite as fluent. When Setan-me and Amote-mo reported to their elders on their progress in learning their visitor's language the elders were satisfied with the result. But what about the written language? For now, this visitor had learned to speak their language, but how about learning to read and write it? And of course, how easy or difficult would it be to learn reading and writing in the visitor's language? The elders decided to assign a schoolteacher to work with Agan-mo so he would learn to read and write their language just as their schoolchildren did. Since whatever written records the visitor might have carried on the vessel were destroyed when he fell from the sky, he would have to teach them how to read and write his language by writing it down for them. The council of elders also began to discuss how to proceed once Agan-mo would be able not only to speak but also to read and write their language. There was no way for him to go back. That much had become clear from the conversations Agan-mo had with Amote-mo. And even if there would had been a way, it may not have been prudent to let him leave. Agan-mo would have to live the rest of his life among the people of the valley. If the life expectancy among Agan-mo's people were comparable to theirs, he would have some forty years left to live. Agan-mo must have been an accomplished person among his people. According to Amote-mo, Agan-mo had been one of the learned among his people. He might well have skills which could be very useful to the people of the valley. Amote-mo was quite certain that Agan-mo would prefer leading a productive life to being idle. Considering all of this, the council of elders decided that it was time to prepare a home for Agan-mo, a home that would be

his, where he could live, alone or maybe at some point also with a companion.

When the schoolteacher came for the first time to begin educating Agan-mo about how to read and write their language he was in for a surprise. Agan-mo could already read and write their language well, but still made quite a few mistakes. When asked how he had learned to read their language he told them that it was Igun-me who had taught him. He had asked her to show him her schoolbooks and help him learn how to read them. When asked about his interest in Igun-me's schoolbooks he said that being able to learn what children in schoolbooks are taught was for him the quickest way to learn more about the people of the valley. Every society, Agan-mo assured them, would teach their children what it believed was most important for its future generation. The schoolteacher was all too happy that Agan-mo was able to skip a few grades. He informed the council of elders that he was quite confident that within half a year his new pupil would be able to read and write their language well enough to be in control of his own affairs just like every other adult in their society. For people of the valley to learn how to read and write Agan-mo's language might however take considerably longer. The schoolteacher suggested that Agan-mo be given time to prepare the materials he needed to teach his language. It might be best that Agan-mo, once he had moved into his own home, was given the responsibility of teaching his own language course there. The council of elders agreed with the schoolteacher's recommendation. For the few more months that Agan-mo remained Setan-me's and Amote-mo's guest he began to teach his host family how to read and write his language.

11

When after staying for almost one and a half years with his guest family, Agan-mo moved into his own home, he frequently visited Amote-mo to continue their conversations. There was never any discussion between Agan-mo and Amote-mo whether they would continue their conversations; they just did so. The only thing that was now different was that sometimes they would have their conversations sitting on the terrace of Agan-mo's home. Agan-mo's new home was only half an hour walk from his former guest family's home and he as well as Amote-mo enjoyed the walk. On one of the first days of their

conversations at Agan-mo's house, Amote-mo finally asked the question he had been holding back all this time.

»Why did you come to us, Agan-mo?«

There was a long silence as Agan-mo thought about how to answer Amote-mo. He had known that one day Amote-mo would ask this question, and, in his mind, he had already answered it in many ways. None of which seemed appropriate now.

»I am not sure, Amote-mo.«

Again, there was a protracted silence.

»But you must have had reasons, Agan-mo.«

»Yes, you are right Amote-mo, I had my reasons,« came Agan-mo's response after a while. »My people believed for many thousands of years that life on land had ceased to exist shortly after our ancestors had decided to move to a life in the seas. I began to doubt that, and I found evidence that a very long time ago, people might have sought refuge in this valley, just as other people sought refuge in the seas.«

Amote-mo continued to look at Agan-mo without asking a question. He knew that Agan-mo was not finished yet. After a while, Agan-mo began to speak again.

»I believed that it was important that my people learned that they were not the only survivors. That there was at least one kindred people who had survived in its own ways. Amote-mo, my people are stagnating. Our cities in the ocean which once provided refuge for a good part of humankind have become prisons. From what I told you, I believe you understand that my people possess a lot of impressive technology. And they do. But they are stagnating, Worse than that, the civilization of my people is in decay. Things we once were able to do, we cannot accomplish anymore. My people's spirit of discovery and exploration, which had enabled its progress in the past, it is evaporating quickly, often already gone completely. If my people do not find a way to live on land again, eventually our cities will fail, and the consequences will be catastrophic. Our civilization might well continue many more thousands of years, but I doubt that it will still exist in a few hundred thousand years.«

After Agan-mo had finished, they sat in silence for another hour as night fell over the valley. It was Amote-mo who broke the silence.

»Agan-mo, I have many questions. But now is not the time to ask them. Let us continue this conversation another time. Setan-me is waiting for me to return home.«

Agan-mo accompanied Amote-me for some ten minutes on his way home and then returned to his own home. Amote-mo continued to walk alone for a few more minutes and then looked for a dry place to sit on the hill side. He needed to think about a few things before entering his home again. He was convinced that Agan-mo was telling him the truth. He also was certain that there must be something else that could be important for the people of the valley which Agan-mo had not shared yet. Even though the technology of the people of Agan-mo was declining, they were still more powerful than the people of the valley; there were many more of them. Agan-mo must have understood that everyone in the valley would be deeply concerned if they learned that Agan-mo's people had to return to life on land to flourish again. As far as the people of the valley knew, they possessed the only habitable land far and wide. Their homeland was like an oasis in a desert stretching for hundreds of kilometers in every direction. Converting dessert land into habitable land would be a momentous effort for Agan-mo's people. Wasn't it obviously much easier for Agan-mo's people to simply take their land away from them? Yes and no. Yes, because of all he had learned from Agan-mo, his people had the resources to do that. And no because it made no sense. This valley could barely accommodate one million people at best and certainly not the hundreds of millions of people now living in oceanic cities. So maybe Agan-mo's people could plan to use this valley as a springboard to begin cultivating the land around it? But could that really happen? Agan-mo said that among his people he was the only one as far as he knew who believed that life on land had continued to exist and had an idea of where it was located. With no one else knowing about the people of the valley, was there any danger at all? How could Agan-mo be sure that no one else knew? Amote-mo was certain that Agan-mo would be completely opposed to his people replacing the people of the valley. But would all of Agan-mo's compatriots share this view? Before continuing his way home Amote-mo sat for a few more moments looking into the darkness hanging over the valley which was less dark for him than it was for Agan-mo who also was still gazing out over the valley following similar thoughts.

To Agan-mo's surprise, when they next met, Amote-no did not pick up the conversation from where they had left off. As it were, he never ever touched the subject again. They would continue their conversations for many years before eventually Amote-mo would breach this topic again. Amote-mo was not the only frequent visitor to Agan-mo's home. Setan-me also came often as did Ketan-mo. But none of them visited Agan-mo as often as Igun-me did. Their relationship became a rather special one. Initially, Igun-me had not given Agan-mo's presence in her home much attention when her parents brought him home as their guest. Only after she had to learn Agan-mo's language did their relationship change. To break the ice between him and his rather reluctant pupil, Agan-mo shared with Igun-me that back home he had a daughter who was just about Igun-me's age. From that moment on, their relationship changed. In many ways over the years, Igun-me would become Agan-mo's daughter just as much as she remained Amote-mo's daughter. Setan-me and Amote-mo noticed the change in their daughter and one night Amote-mo asked Agan-mo if he had any idea why Igun-me had changed in this way. It was then that Agan-mo told him about his family and told him about his daughter, whom he missed very much. Before that, Agan-mo had never shared anything about his family. Amote-mo, thinking about how he would feel if he were separated from his family like Agan-mo was, probably forever, could understand Agan-mo's feelings. More than that, he could sense Agan-mo's emotions when he talked about his daughter in ways Agan-mo could not have understood. This evening Amote-mo told his wife about the conversation he had with Agan-mo about Igun-me and that Agan-mo had a daughter just about her age. Setan-me took both of his hands and looked at her husband, her eyes asking him how they would feel if they never could see their daughter again. Without saying a word, they agreed it was a good thing that Igun-me may become a second daughter for Agan-mo. Even Ketan-mo, who was initially a little jealous of the relationship between Igun-me and Agan-mo, eventually saw it that way.

The relationship with Igun-me helped Agan-mo to become part of the local community. Igun-me introduced him to other young people, many of whom would eventually become his pupils. Not primarily to learn from Agan-mo about his language, even some would do that, but to learn from him about science. The question of how Agan-mo could

spend the rest of his life among the people of the valley had been resolved quite naturally. The council of the elders acknowledged that there could not have been a better solution. Early on, not long after their evening conversations had begun, Amote-mo had concluded that Agan-mo was likely a scientist. But it was not for another half year before Amote-mo, much to his surprise, discovered that Agan-mo was practically a colleague of his. Discussing biology with him, he quickly realized that Agan-mo's people must be significantly more advanced in this science than the people of the valley. While Amote-mo could understand the concepts Agan-mo was talking about he had no idea how it had been possible for Agan-mo's people to develop the tools to prove such concepts and then to use them in ways which his people could not have dreamed of. Changing the genome of a human in ways which lead to such remarkable changes in human physiology was something biologists in the valley had never heard about. Developing the technology for manipulating a human's genetic material was something beyond the reach of their own technology. Without such tools, the biology Agan-mo described to Amote-mo would remain a theoretical science. But by teaching his students what he knew, Agan-mo's knowledge could still help them build a knowledge base. Once people know that something is possible, they usually will find a way to achieve it. So maybe someday the theoretical biology Agan-mo was teaching now could become practically useful biology for the people of the valley. If they then could develop more resilient and higher yielding crops that certainly would be a welcome development.

A year and a half after he fell from the sky, Agan-mo had started a new life among the people of the valley, and by the time Kagun-mo brought the news that foreigners had appeared on the other side of the western mountains, Agan-mo had already become one of them. It was then that Amote-mo picked up their conversation from long ago.

»Agan-mo, why have they come? What do you think?« asked Amote-mo as they sat outside his home looking down into the valley.

»I am not sure, Amote-mo. But whatever we decide to do, we must be very careful. I believe I know now why I fell from the sky almost fourteen years ago.«

Amote-mo said nothing, he just turned sideways to look at Agan-mo waiting for what he would have to say.

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»I believe I was wrong, Amote-mo, when back then I thought I was the only one who suspected that human life on land never had ceased to exist. Someone else must have learned about my hypothesis that your people may live in this valley. Whoever that was, they wanted to make sure nobody else learned about it. So, they sabotaged my vessel. I have gone through the last minutes of my flight many times. The vessel did not crash because of a piloting error or a system malfunction. I am now certain of this. The craft was not defective. I had made sure of it by checking it thoroughly myself in every conceivable way before I left to come here. My intention never had been to land here. All I wanted was to fly over the valley and see if there were any signs of life. I did not want to make contact as I believed it would be imperative that your people would be left alone as I did not think my people were ready yet to learn about the existence of humans living on land. Whoever tried to kill me the day when I fell from the sky, their intentions with respect to your people cannot not have been good ones.«

Amote-mo thought about what his friend Agan-mo just told him. What could be the reasons for all of that? Why would someone try to kill Agan-mo? Did they maybe not know that Agan-mo thought to keep the existence of the people of the valley a secret himself?

»Agan-mo, would it not be considered a great discovery among your people if one of them learned of the existence of our people?«

»Yes, Amote-mo, I think any scholar of my people would be very proud of such a discovery.«

»Then it would be natural for everyone to assume that you, Agan-mo, if you made such a discovery, would communicate it to your people. Isn't that so?«

»Quite likely, Amote-mo.«

»So, if the people who were trying to kill you did not know that you had no intention of making your discovery public, they practically had to assume that you would do just that?«

»You are right Amote-mo. If they had known that I never had planned to make the existence of your people public, they would likely never have tried to kill me.«

»I believe they did not know about your intentions Agan-mo. Had they known about them, killing you would have served no purpose.«

»Let's assume that this is so, Amote-mo. Why then try to kill me in just this way, by crashing my aircraft outside your valley?«

»Maybe because they needed to know where you were going, Agan-mo?«

»Of course, you are right Amote-mo. They could not have known the location where I suspected humans may still live on this continent. I never shared this information with anyone and never put anything in writing. I kept it all in my head. When I started my journey that day, I first flew in a completely different direction, on purpose. Then I switched off the device which transmitted the location of my aircraft back to our ground stations. Only then did I turn into the direction of your valley. Getting there took several more hours and just when I got here, I noticed smoke coming out of the engine compartment, so I activated the ejection seat and catapulted out of the craft, just in time before it exploded in the sky.«

»So, you are certain that nobody could have traced your vessel to this valley.«

»Yes, Amote-mo, I am certain of that. Whatever way these foreigners learned of the existence of this valley and possibly your people, it couldn't have been by tracking my downed aircraft.«

»I guess there is no way to tell whether the people who arrived outside the valley a few days ago may be in any way connected to those who tried to kill you back then?«

»No Amote-mo. To understand why they have come here you must talk to them. Because there are just a few of them I do not think they come with bad intentions. If I understand correctly, most of them do not carry anything resembling what could be weapons. Some of them carrying weapons for protection so far away from their base is nothing unusual. How will you make contact, Amote-mo?«

»A few of our elders will go out to meet them when they are about to come down into our valley. Setan-me and I will be among the greeting party. We will take some precautions to protect ourselves should the encounter turn hostile. But these foreigners will notice none of it.«

»How will you talk to them Amote-mo and what will you ask of them?«

»We will not talk to them in your language. They must not know for now that a few of us can understand their language so we will communicate with them first using sign language. Thanks to you we know that they will have no problem understanding what we will be communicating in this way. Our plan is to invite three of them to join us for a meeting in the valley and ask the others to stay back in their camp. As a measure of trust, three of our people will join those staying in their camp on the other side of the mountain.«

»And do you already know when you will meet them?«

»We will be waiting for them tomorrow at the pass they will be crossing on the way to our valley. Once they agree to our proposal, we will walk with their three representatives back into the valley. In the evening, our clan leaders and then our elders will sit down with them on the people's ground. Some clan leaders from our neighboring regions will also observe this meeting from the hill sides surrounding the people's ground. As will you Agan-mo. Igun-me will come to pick you up and sit with you in the place where the sound from the people's ground carries all the way up. You will be able to understand everything the foreigners will say.«

»I will be ready, Amote-mo. Let us hope they have come in peace.«

Amote-mo and Agan-mo sat for another hour side by side but spoke no more. Everything that needed to be said had been said. Now they had to wait until tomorrow noon when Amote-mo and his fellow elders would greet the foreigners upon entering the valley. Agan-mo asked himself how Amote-mo could know that the foreigners were to enter their valley tomorrow. There was only one way. The people of the valley must have been monitoring the activities of these foreigners very closely. But that still would not explain how they could know the precise time they would do so. That they only could know if one of the valley people had been listening in to the conversation among the foreigners in which they made that decision. And that they could only do because some of the people of the valley understood the language of the foreigners. Agan-mo was glad that thanks to him they had at least this advantage. If it ever came to an armed conflict between the people of the valley and a large armed force coming from the oceanic cities, the people of the valley must surely lose. The oceanic civilization may

have been in decline for a long time, but it still possessed superior technology and more importantly the people from the ocean were much more numerous. Agan-mo had very mixed feelings about meeting some of his own people again, after some fourteen years. He did not really think that these few foreigners coming here could be a danger but what would come next? As he thought about that, he wondered. The people of the valley had become his people. So, were the foreigners not his people anymore?

After Agan-mo had left, accompanied by Igun-me who would stay the night at his home, Amote-mo asked Setan-me to sit with him for a little while. Setan-me knew her partner well enough to guess what was on his mind. But she said nothing, just sat down beside Amote-mo, putting her hand on his. After meeting the foreigners tomorrow, nothing would ever be the same. Setan-me knew this just as well as Amote-mo. A long time ago, Amote-mo had told her that others would come after Agan-mo. He could not say when and how that would happen, but he was sure that it was unavoidable. They had had almost fourteen years to prepare for this second contact with the people from the ocean as they had come to refer to them. They both thought that their people were lucky that Agan-mo had arrived by accident long ago before the people from the ocean would show up in greater numbers. That had given them time and more importantly, with Agan-mo's help they now knew much about these people. Agan-mo falling from the sky some fourteen years ago was a lucky twist of fate. Their first contact with the people from the ocean could have been quite a different one. Hopefully, Amote-mo thought, this second contact which they will make tomorrow will be the start of a peaceful relationship with Agan-mo's people.

Second Contact

13

Bran had seen many images of the base camp site long before their expedition team finally got there. Even though they all knew what to expect, they were still surprised. From their base camp, which was about a third of the way up the mountain range, they had an unobstructed view of the endless desert that bordered the mountain range like a light brown ocean. This desert ocean was however not uniform, it had crests of underbrush showing up here and there and only in a few areas was nothing else but sand. But it was deadly, nevertheless. That Bran knew firsthand from the many expeditions which he had been part of. But what a difference this mountain range made. The scattered patches of green, right at the desert rim along the foothills of this mountain range seemed to be in a constant struggle of survival. But they were only the vanguard of an army of all kinds of green plants which began to dominate the landscape as one moved up the mountain. Bran couldn't remember ever seeing anything so beautiful. All the pictures of the green landscapes of an Earth that once was which he had been marveling over, they were nothing as compared to the real thing. They had set up their base camp in an almost flat clearing about one third up on this mountain range. For over a week they had explored this side of the mountains up to the tree line. From there, it would take just over an hour to reach what seemed to be the best route across this mountain range and into the valley that scientists had identified as the home of their species' cousins.

Bran could tell that he was not the only one who was under the spell of this wonderful new world. All expedition members seemed somehow to be changed. On occasion he could not help thinking that they looked around themselves in disbelief just as little kids would do when unwrapping what seemed to be a completely unexpected and marvelous gift. And a gift it was. Indeed, a gift to be grateful for. They had discovered numerous freshwater sources, mostly small creeks, and that made further exploration of this area

much easier. The first week they spent almost exclusively exploring the surrounding area. Always staying under the tree line and never venturing out more than half a day's hike so they could always return to their base camp before nightfall. They had encountered some wildlife none of their biologists had ever seen before. Some kind of small deer and rodents but no carnivores so far, at least none of a dangerous size. Every evening, they would go through what they had discovered during the day. On the fourth day two of Gil's team had discovered what they believed may have been partial footprints. While the evidence was not conclusive, Bran and a few others thought it entirely possible that they had company. However, one had to be careful not to become paranoid, because almost anything could hide in the forests that lined the slopes, and which were interrupted only by a few clearings. As Bran thought about it, it might be a good thing if they were being watched by their cousin species as this would give them the opportunity to see that this small expedition posed no threat to them at all.

So far, Bran thought, everything was going well. Maybe even better than they could have hoped for. Roan Quam's forces had been moving towards the coordinates which had been given to him by Eireen Sawarov and a decoy expedition launched by Central had been moving in the same general direction some hundred kilometers south to where Roan Quam's troops had set up base camp. Bran was in constant contact with Mog Sinan, they talked every evening via a satellite connection. Their ruse to lure Roan Quam's army in the wrong direction had worked and he seemingly still did not suspect that he had been handed fake coordinates by Eireen Sawarov. However, there was other not so good news.

To hasten the departure of Roan Quam's forces towards the location where he believed the homeland of their species' cousins to be located, Central also had launched what Roan Quam must have perceived as a military attack against his army's onshore base. While the force Central sent in the direction of Roan Quam's onshore army headquarters was well armed, its mission was not to attack his headquarters but to force him to leave a substantial number of troops behind to protect his army base. As a result, his generals could deploy fewer soldiers towards the homeland of their cousin species. This part of the plan worked. But as Bran had learned from Mog Sinan a couple of days ago,

there was a price they had to pay for that. What had happened was that the forces of Central marching towards Roan Quam's army headquarters came under attack from the air. His generals had modified aircraft such that they were now able to drop bombs on Central's forces. There were quite a few casualties and if it were not for the ray guns which Central's engineers had developed in less than two months, there might have been many more. These ray guns had proven to be so effective that Roan Quam's forces had stopped attacking them from the air because they lost too many aircraft. Roan Quam's army could not replace those and therefore had fewer aircraft at its disposal to transport its troops. Mog Sinan thought that Central's decoy expedition, also equipped with ray guns, might even be able to further reduce the number of aircraft Roan Quam's army could use.

After a week at their base camp the mission chief decided it was time to move into the valley. Everything was in place; they must not wait any longer. He looked at Kimal, Lucy, Ania and Abe who would accompany him early next morning up to the pass that Gil's men had identified as the best crossing point. They would carry no weapons, and they would deliberately move in such a way as to be discovered. After sending the four off them off to prepare for an early morning he sat down with Gil who would be in command of the base camp while he was gone. He told him that no sorties further than an hour away from the base camp would be conducted anymore. They had already camouflaged their campsite somewhat and had taken precautions not to leave any traces where they went. But Gil would have to make sure that the base camp would be even better camouflaged. There would be no more open fires, and the existing fireplaces must be covered with earth. In addition, Gil must ensure that everything was put to the ready so they could move the camp within a few hours into the valley once they received notice from Bran to do so. And when that happened, they had to again make sure that they left no traces.

Every evening Bran had debriefed Gil on his conversations with Central. Next to him there had to always be another expedition member who could seamlessly step in if something should happen that would keep him from staying in contact with Central. That person was Gil.

»Gil, if we should succeed in making contact tomorrow, I might not be able to communicate with Central. As it is, I only take Abe with his communication equipment along so you can reach me if that should become necessary. It will be your responsibility to stay in contact with Central. Call them every evening and only call me if something extremely urgent comes up. I will do likewise and only call you if I absolutely must.«

»I understand Bran. How do you want me to react if soldiers of this army should arrive here?«

»In that case, you will immediately inform me and then use your own judgment. It will be you who can assess the situation; I cannot do that from afar. When making your decisions there are two things which you always must consider. First, the safety of the mission team. If you can protect the team by retreating safely, then do so by all means. And always keep in mind that we must not allow these soldiers to reach the valley. But if that would put the team at too high a risk, then let them cross into the valley and radio me about where and when they might cross into the valley.«

»You can count on me Bran. I will not lose a single member of the team and will make it as difficult as possible for these soldiers to cross into the valley.«

»I know you will do just that Gil. There is one more thing. If Roan Quam's soldiers arrive here, then see to it that you can destroy as many of their air transport as possible. As I said, the contact team will carry no weapons so you will have both ray guns at your disposal. As you know, they have proven very effective in destroying such aircraft.«

»Should I try to take them out while they are still in the air?«

»By all means, if Roan Quam's army should arrive in greater numbers, then take out as many as you can while they are still in the air. Otherwise, use your judgment. A smaller force, seeing its capability to be resupplied or being airlifted out again destroyed may decide not to put up much of a fight and rather concentrate on survival. But that might make them even more dangerous. Central should be able to send a few air transports with soldiers on short notice to keep such a situation under control.«

»Sounds like a plan Bran. Do you have any idea what to expect tomorrow?«

»Not really Gil. I only hope that first contact will be peaceful and that we will quickly find a way to communicate with our species' cousins.«

»You will find a way Bran. We will keep close tabs on your position using the geolocator on Abe's communication equipment.«

»Good idea Gil. Let's call it a night. We both need to get some rest.«

With that Gil walked off to the three tents of the security detachment and Bran headed slowly back to his own small tent. Some expedition members were still sitting in front of their tents, looking at the glittering night sky. He wished them a good night as he walked by. How different the real night sky looked! None of the digital reproductions he had ever looked at came even close to capturing its majesty. Why did no oceanic city ever build a planetarium? Bran knew that quite a few ancient land-based cities used to have such places and that they gave much more realistic reproductions of the actual night sky. Might Central have been concerned that if people experienced something closer to the real thing, they would begin to dream of sleeping under the open night sky again? Which was of course an impossibility in oceanic cities. Bran was not sure to what extent in this regard Central or maybe some at Central had gone through the thousands of years that it had guided the destiny of oceanic cities. What the result of such secrecy could be they now witnessed themselves. Maybe Roan Quam was not the first powerful figure in Central's history trying to grab power from Central itself. Could others have done so successfully before him? Could it have been that at times not just a small group of people had controlled the destiny of oceanic cities but that megalomaniac individuals within Central had succeeded in taking control? Secretive organizations such as Central had their unique problems and sometimes their secrecy would just work against them. Such as was now the case with Roan Quam.

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Early next morning, before dawn break, the five of them began their ascend towards the pass. They quietly marched in file with Bran in the lead and Kimal at the rear. After just over an hour, they reached the tree line, where they took a short rest before heading out into the open. It was a little cooler up here than at the level of their base camp but still warm. However, when they stepped out into the open and moved higher amidst the greening mountain meadows, they began to sweat a little more. But that did

not matter much because all of them marveled at the beauty of the scene. Grass and moss dominated the hillsides with a few hardy brushes in between. Splattered within this green were flowers of all kinds; blue, yellow and red. If they had not been on a mission, Bran thought they would have stayed for endless hours in this little paradise. Stopping for a moment and looking into the faces of his fellow hikers he could clearly see that they were no less amazed by this scenery than he was. None of them had ever seen or smelled anything like it before. It was not just the colors which captured them; it was also the fragrances of all the flowers, the smell of mosses and grass still moist from last night's rain shower. It felt as if this moistness evaporating under the sun's rays carried these smells right up into their noses. For almost an hour they kept hiking up the mountain through this little paradise when the scenery began to change again as grass and moss increasingly gave way to gravel and stone. From there it took them another forty minutes to climb up to the pass and a few minutes later they could look down on the valley stretching from north to south below them. It was a beautiful landscape. Though it was still a couple of hours before noon they decided to have an early lunch right there and then. The climb had not been strenuous, but they could all use a little refreshment and there was no better place than to have it right there.

After having finished their lunch, it was Kimal who noticed first that they were not alone anymore. With a suppressed voice he alerted Bran and the others. Bran quickly told them not to stare at the people standing about two hundred meters away. Then he looked around and saw that there were more of them almost everywhere around them, except in the direction they had come from. He ordered the others to calmly pack all their stuff and stay close together. Then he stood up and slowly began, with his palms raised, to walk towards those who seemed closest to their position. When he was some ten meters away, he stopped. None of those whom he was approaching had moved at all. After Bran had stood there for almost a minute without moving any further, one in the group which Bran had approached very slowly began to walk towards him, his palms raised. He stopped two meters in front of Bran. Kimal, Lucy, Ania and Abe watched as nothing happened for what seemed like an eternity. Then the man, as it obviously was a man who had walked towards Bran, began to speak.

»My name is Ketan-mo,« he said and then kept repeating the word Ketan-mo while every time he did so he pointed with one hand at himself touch his breast.

Bran could not understand anything of what the man looking at him had just said. Their language must be quite different, he thought. But he quickly understood that the man was telling him his name. The mission chief repeated the gestures the man had just used to indicate that his name was Bran. Now the other man pointed towards Bran and tried to speak the name Bran and then pointed back at himself while he repeated the name Ketan-mo. Again, Bran copied what the man had done to indicate that he understood that the man's name was Ketan-mo, and that Ketan-mo now knew that his name was Bran. After that, the man sat down right where he had stood and indicated with a gesture that Bran should do the same thing. Bran followed suit and now they looked at each other for a while without saying anything. Bran could not help but think that these people were beautiful. He could tell that beneath the clothes the man was wearing he possessed a muscular and well-proportioned body. His face showed an evenness that was rare among oceanic citizens. Bran thought about Song-Ho's facial reconstruction of the skull and silently congratulated him on how well he had captured what these people looked like. As for Ketan-mo, he could see that this foreigner was powerfully built, somewhat taller than himself, and probably of a similar age as Agan-mo. Now Ketan-mo began to execute the sequence of gestures he had been training with Agan-mo for a few hours. It did not take Bran too long to understand what Ketan-mo was asking of him and once he had verified that he had understood Ketan-mo correctly he nodded in agreement. When Ketan-mo stood up and pointed towards Bran's team, indicating that they would head down into the valley now, Bran went back to Kimal, Lucy, Alina and Abe. After explaining to them what had just been agreed, he asked Alina and Abe to stay here at the mountain pass in the company of these people, who would take care of them, until Kimal, Lucy and he returned from their meeting with the representatives of these people. Bran decided not to take Abe's communications equipment and asked him to call Gil and inform him of the situation. He should tell Gil that everything worked as they had hoped and that the people of this valley seemed to be peaceful. If their three-member delegation should not be back from the meeting

with these people's representatives within two days, then Gil should inquire about their whereabouts but without intimidating these people in any way.

There was no more communication between Bran and Ketan-mo as the three of them hiked down into the valley with some of Ketan-mo's people in front of them and several of them at their rear. As far as Bran could tell, none of them were carrying any kinds of weapons. He took it as a good sign. Lucy and Kimal had not said much since the encounter with the people of this valley, but Lucy's mind was hyperactive and Kimal kept his eyes on the strangers seemingly preoccupied with the safety of their three-member delegation. Now, Lucy thought, she would indeed be able to speak to the descendants of this individual whose skull they had discovered only a few months ago. As they descended into the valley, she began to study them more closely. Because of how they carried their hair, she could not really discern if the backs of their heads were like the skull of their ancestor. And just like Bran, she could not help but admire the grace with which these people moved. This is something their skull discovery could not have told them but clearly, these people of the valley were beautiful in a very natural way. She could not wait to see what their women would be like. Hopefully, the males of this people were just as graceful to their women as they behaved with respect to each other in this small group which led them into the valley. Another thing Lucy observed along the way was that the people of this valley seemed to have little need to communicate. Unless they had been trained from an early age to interpret the most minute gestures, Lucy could not understand how they coordinated their moves as they most certainly did. This man who had communicated with Bran was surely their leader, that much was clear to her. How he behaved and how his orders were executed without him seemingly not communicating in any way puzzled Lucy.

After some four hours, not always following a straight path downwards as far as Bran could tell, they had reached the valley floor. Maybe these people were not sure if the three foreigners which they were leading to their people's representatives could master the steeper direct path downhill and therefore decided to take an easier route. If they are considerate enough to think about things like that, thought Bran, this just shows the more that they have no bad intentions towards us. After another half-hour hike into

the valley, they approached a circular area surrounded by a small, knee-high stone wall with two diametrically opposed openings. Ketan-mo stopped just outside the entrance closer to them and motioned to Bran and his two companions to enter the circular area. When Bran, Lucy and Kimal did so they saw three people they had not noticed before entering the area from the other side. As these three people walked towards the center of the circular area so did Bran, Lucy and Kimal. To Bran this just seemed the natural thing to do. Obviously, this was an arranged meeting. They must have been expected. As they had come close enough it was clear that the three representatives of these people were considerably older than the ones who had escorted them to this place. But they were in no way less graceful. Only one of them was a man, the other two looked as if they were women.

When they arrived in the center of the circular area both parties stopped, and a similar scene now played out as the one in which Ketan-mo and Bran had introduced themselves to each other. The name of the male Bran understood to be Amote-mo, and the names of the women seemed to be Setan-me and Arane-me. After everyone had understood each other's names, the man named Amote-mo signaled Bran that he, Lucy and Kimal should come with them. And so, they did. No one else walked with them but Bran was certain that they were being watched from afar. They walked for roughly half an hour further into the valley and then turned back towards the foothills of the mountain range they had come down from. After moving some twenty minutes uphill Amote-mo stopped in front of what looked like a step in the landscape. He must have pushed something or pulled a lever because slowly a door built into the step opened. But Amote-mo had done nothing like that. He had just knocked on a door which was slowly opened by Igun-me from the inside.

When Bran saw Igun-me step out of the door he realized that this was some kind of dwelling. Of course, whispered Lucy quickly to Bran, this must be a mountain home. Bran had thought the same thing, only Kimal had not quite understood yet that this was a home, maybe a place where they were asked to stay. Setan-me explained to them that this would be their place to stay and sleep. Amote-mo then pointed towards the sun, showed them how to count to five using his fingers and pointed towards the sky again

but in another direction. Bran understood immediately. He had of course no clue what measure of time these people used but clearly Amote-mo indicated to them that they would meet again late in the afternoon when the sun had wandered to the place in the sky Amote-mo had indicated. After Bran had nodded in agreement the welcome party of three left and Igun-me invited them with gestures to enter the building.

15

Entering this structure, which was built into the mountain, it took them a little time to adapt to the low light level in this building. Igun-me, realizing that they could not see that well in the dark, quickly adjusted the lighting in the building to a level she knew from Agan-mo that it was much more comfortable for his people. Then she showed their three guests the bedrooms, the bathroom and specifically how the latter worked. Leading them from the kitchen to a table in an adjacent room she asked them by using the appropriate gestures if they were hungry or thirsty. Bran, Lucy and Kimal were not hungry, but they indicated that something to drink would be nice. Igun-me nodded that she understood and came back from the kitchen with what looked like earthenware cups into which she poured water from a pitcher she had also brought. Kimal tried the water first and found that some kind of flavoring had been added to it. Igun-me sat next to them but in a manner so as not to disturb any conversations the three might want to conduct among themselves. After looking a few times towards Igun-me and her not giving any indication that she would leave them Bran turned to Lucy while apologizing with some hand waving to Igun-me for having a conversation excluding Igun-me. But Igun me only smiled back at Bran in what he took as an approving smile and then sat back to listen to their conversation without giving away that she did so.

»Does any of this surprise you Lucy, or you Kimal?« he said looking from one to the other.

»Not really Bran. We already suspected that they would be living in subsurface dwellings or mountain caves based on what we learned from the study of the skull. If this structure has been built into the mountain itself or just on it and then been made part of this sloping hill I cannot say. I did not see any buildings anywhere along the way

we came. It looks like they still live in the same kind of cave like environment, albeit much more comfortably.«

»I believe you are right Lucy,« chimed in Kimal, »this building is not some simple cave but quite a sophisticated structure. Did any of you see how this beautiful lady changed the light level? I did not see her touch anything, did either of you?«

Bran and Lucy shook their heads. None of them had seen the young lady touch anything to change the light level. It was not even clear to them where the light really came from. Kimal glanced at Igun-me who still seemed to smile even without smiling. How is she doing that? Kimal couldn't figure out what it was, but he quickly became embarrassed staring at her like that. But the young lady gave no indication of being insulted by Kimal's mustering.

»Kimal, you must stop staring at her,« commanded Lucy as she poked her elbow into Kimal's side. »Granted, she is incredibly beautiful, but you must not look at her in this way. Got it?«

Igun-me kept her composure even so she was tempted to laugh. Never had she heard so many comments on her looks. Her people just did not remark on such things. How funny that Agan-mo had never told her about this peculiar behavior among his people. Bran had listened to the short banter between Lucy and Kimal with some amusement himself but turned their attention now to more serious things.

»Lucy, Kimal, we must find a better way of communicating with these people. How can we warn them of the imminent danger to their very existence if they cannot understand what we are saying? Using sign language has worked quite nicely so far but we need them to understand the danger they might have to face soon enough. Any ideas on how we can do that using gestures?«

At first, neither Lucy nor Kimal had any better idea than using sign language. But then Lucy thought about how, as a little girl, she had learned to communicate with one of her friends who was born deaf. She had done so by converting what she wanted to tell her friend from stories told by words into stories told by drawings. Quite simple but graphic drawings which her friend found easy to understand. That was it, Bran thought. They would have to draw in graphic images what these people must know. But

what could they use to do that? Bran turned to Igun-me to explain that they needed something to make drawings. To his surprise, it did not take this young lady long to understand what he was asking for. When she came back, the three of them were in for an even bigger surprise because what this young lady brought them was a device and some kind of stylus. She put the device on the table, turned it on and then showed them how to use the stylus to make drawings. Bran, Lucy and Kimal looked at each other not knowing what to say. They might have expected some kind of parchment and charcoal or a pencil at best but what they saw in front of them looked like some larger version of the readers they used themselves.

Kimal pulled the device towards himself and began to draw something on the screen. After a few minutes he showed the result to Lucy and Bran. They looked at the screen and then with some astonishment looked back at Kimal. Kimal seemingly enjoyed the look of surprise in their faces as grinned back at them.

»I guess my personal file must not have included that many years ago I was making my living as a quite successful cartoon artist,« he explained to Lucy and Bran. »Kids really liked my storyboards, but when my stories eventually dealt with more serious topics, the parents, or rather the city, found it inappropriate for their children to learn about such things through the comics they read. So that was the end of my career as a storyboard artist.«

»Well, Kimal, I am certainly glad you have this background, this is just what we need now,« said Bran. »Let's see if you, Lucy and myself can put together a storyboard which we can share with these people's representatives when we meet them again later today. But first we need to know more about how this device works. How do we save and access this image? How can we generate sequences of images?«

Kimal turned to Igun-me to show her what he had drawn and asking her with gestures as much as with words how he could save this image and draw another one. Igun-me chuckled a little when she saw that Kimal had drawn a sketch of her face and seemed to quickly understand what Kimal was asking for. Bran looked at Igun-me. How could she so quickly deduce from Kimal's gestures what he was asking for? He had watched Kimal carefully and if he had not heard Kimal say in words the same things

which he was trying to ask by using gestures he doubted that he would have understood. But maybe this was owed to this ability which Crowden Institute's scientists suspected these people had to make sense of things which would seem to have little connection.

The next two hours Bran, Lucy and Kimal spent discussing the contents of individual sketches which then Kimal would draw up and correct as they went along. For the latter they frequently consulted the young lady who observed carefully what they were doing. She also showed Kimal how to use colors in his drawings. The sketches were simple, but that simplicity would ensure that the message they carried would be understood. At least this is what they hoped. The storyboard started out with the sketch of a map showing the location of the valley on this continent and where they came from and where others came from who eventually would also arrive here. The drawings of those others only showed men, and these men were killing people as they marched towards the valley. It also showed Bran's expedition coming to the valley ahead of this army of little men killing other human beings. Another graphic depicted the three of them sitting down with the valley's leaders to alert them to the danger which may be coming their way. Reviewing the sketches of the storyboard several times and making minor adjustments, Bran felt this was the best they could do given the unfortunate fact that they could not speak the language of these people, and these people could not speak theirs. As he leaned back and looked at Kimal it occurred to him that if Eireen Sawarov had not asked the council chairman to allow Kimal Abuno to join this expedition and if his friend Peer Aksun had not insisted that Bran must do so, they would have had a much more difficult time to communicate to these people what might come their way. He would have to thank council woman Sawarov for that.

Bran, Lucy and Kimal could not know that Igun-me had understood every word they had spoken during the time they had spent in this guesthouse in her company. When it was time to leave for the people's ground to first have dinner with the clan leaders and then to meet with their elders, Igun-me signaled to them that they should get ready to depart with her. When they left the guesthouse, the lights went out again with Igun-me not touching anything and outside they could see that the sun would set in about an hour. They headed back the same way they had come to the guesthouse for half an hour

but then turned in a different direction. Just shortly before the sun began to disappear behind the mountains, they had arrived at the people's ground. As they approached this place, Ketan-mo and two other young men greeted the three delegates and gestured that they should come with them to join the assembly of young men sitting in a circle around a what looked like a large fire pit. But there was no fire or any indication that there ever had burned a fire in this pit. When they got close enough, Bran could see that light emerged from this depression in the ground which he first had thought to be a fire pit. The soft light coming from the pit became stronger as the sun vanished behind the mountains. The depression in the ground was the center of a circular area surrounded by a broken stone wall, again knee-high, on which some kind of cover had been put.

Ketan-mo and the other two led them to what obviously had been marked as their seats. Their seats were quite comfortable as the cover was some kind of cushion, the material of which they could not make out. After they had sat down all the other young men took their places and then waiters went from person to person serving some kind of drink. Then more waiters came carrying larger plates on which food had been arranged. Ketan-mo and the other two who were helping him took smaller plates and put several of the food items on each of them. After they had finished that Ketan-mo handed his plate to Bran while the other two simultaneously handed their plates to Lucy and Kimal. Bran, Lucy and Kimal with their dinner plates in hand waited until all the young men had food on their plates after which Ketan-mo indicated to them that they should begin to eat. Lucy was not sure what kind of food it was, but it tasted good. Bran looked at his plate and did not see anything that could have been meat and once he had tasted every item on his plate, he was sure that their hosts were vegetarians. Just as Crowden Institute's scientists had suspected. Looking briefly at Lucy and Kimal he could see that both enjoyed the dish just as much as he did.

No one spoke while they ate and when they were finished their plates were taken away. Even though night had descended on them it had not been getting darker as the light coming from the depression in the center of this place had become stronger. Their scientists had been right with respect to many things regarding these people, Bran thought, but after about two thousand years, these people were certainly no longer

technology-primitive. Maybe, they even might have weapons more powerful than arrows or spears to defend themselves if Roan Quam's army ever showed up in the valley. As he thought about this, he noticed that a few others had shown up just outside the circle a little higher on the hill which surrounded this place on almost all sides like an amphitheater. And when the first barely noticeable sounds of music reached their ears neither Bran nor Lucy nor Kimal were surprised.

16

After entrusting their guests to Ketan-mo, Igun-me had walked to the house of the elders where she already had been expected. Their elders usually held meetings outside in the people's ground, but this was not possible this time as there the clan leaders hosted their visitors. Eleven of their elders sat around the table and listened to Igun-me's account of what the three visitors had discussed among themselves throughout the afternoon. What they heard from Igun-me was deeply concerning and confirmed their worst fears. Because Igun-me had understood every word of what the three visitors had spoken among themselves there was no need to look through the sketches which the visitors had drawn up on one of those devices their children often used for just the same purpose. After the elders had thanked Igun-me for her report she left the room, and the elders began their deliberations. All agreed that these people presented no danger to them. On the contrary they had come to help them. According to their visitors, the people of the valley would face the greatest threat since the time of darkness when their people had struggled to survive for many generations. There were those who asked how credible this warning was. Could it be a trap of some kind? Most shook their heads but not all were completely convinced. It was Setan-me who suggested that Agan-mo must interview these people. Agan-mo had become one of their own and at the same time he understood these people far better than they did as he once was one of them and had lived among them for most of his life. If anyone could assess the credibility of this purported threat, then that was Agan-mo. It did not take long for the elders to adopt Setan-me's proposal with a slight modification. Agan-mo should not talk to all three at the same time, but he should interview each of them individually, beginning with the

older man who they agreed must be their leader. Amote-mo, as his close friend, was asked to discuss and arrange this with Agan-mo. If possible, Agan-mo should talk to the leader of these visitors tonight, after they, the elders, had officially welcomed the visitors as their guests in the people's ground.

Briefly after the music had ended, the clan leaders came one by one first to Bran, then to Lucy and finally to Kimal, placing themselves in front of them and then repeating the same gesture in front of each. Lucy thought this must be their ceremonial way of ending the evening. And so, it was. After making these gestures each of the young men who had participated in the dinner reception left the circular area of the people's ground to take a seat at the surrounding hillside. The last one to say good-bye was Ketan-mo who indicated to Bran, Lucy and Kimal that they should please stay put. As Ketan-mo left the circle they could already see another smaller group of people approaching it. Bran recognized among them the three elders who had met them earlier today when they had come down into the valley. Slowly they entered the circle and then sat down where the young men had sat before them. Due to their smaller number, the distance between their seats was larger. When all were seated the music set in again. Among the ones seated on the hillsides surrounding the people's ground were now also Igun-me and Agan-mo. Igun-me had led Agan-mo to where the acoustic was best. There, higher up, they could clearly hear every word spoken in the people's ground. Igun-me could also see everything that happened down there clearly, including the facial expressions of those who were speaking. Not so Agan-mo, because for him the lighting was too dim to see clearly who was speaking.

After the music had stopped, Setan-me rose from her seat and walked towards the middle of the circular area. There she waited until three young girls who had been standing outside the circular area had joined her. Each of the girls carried on their outstretched arms a traditional dress of their people. Then Setan-me went to Lucy, after that to Bran and finally to Kimal. Each time she spoke the same words as she offered one of the dresses to each of them.

»As our guest, you are now one of us. Please accept this traditional dress as a symbol of you now being one of the people of this valley.«

None of their thus honored guests could of course understand a word of what she said but they had an idea of what it meant. After Setan-me had moved back to her seat Bran waited for a moment and when nothing else seemed to happen he stood up and walked into the center of the circular area himself. There he addressed Setan-me, looking at her as he bowed and spoke.

»I am Bran Taliesin, one of the people from the ocean, and I am honored to be your guest.«

Then he made two more turns and bowed in the directions of those sitting further to the right and to the left of Setan-me. Walking back to his seat he indicated to Lucy and Kimal to do the same. Kimal was quicker than Lucy to understand what Bran was asking them, and he repeated what Bran had done introducing himself to the elders.

»I am Kimal Abuno, one of the people from the ocean, and I am honored to be your guest.«

When Kimal had returned to his seat, Lucy got up and walked to the same spot from where Bran and Kimal had introduced themselves. When she spoke, she had the feeling that she was not just addressing the people sitting in this circle but that she now also finally introduced herself to the individual whose skull she had discovered several months ago.

»I am Lucy Kassius, one of the people from the ocean, and I am honored to be your guest.«

When the older foreign man had spoken Igun-me could feel the strengths of the emotions the words of this stranger aroused in Agan-mo. But this did not repeat when the younger man spoke. However, when the young lady had spoken, she sensed that Agan-mo was overcome by powerful emotions which he could not control anymore. People around them had already turned their heads toward them when they sensed Agan-mo's emotions upon hearing the older man speak. But when the young woman spoke Agan-mo's powerful emotions rippled through the minds of the people sitting in their vicinity with such strength that some of them had gotten up and moved farther away. Igun-me was visibly concerned with what was happening to Agan-mo. When she saw tears rolling down his cheeks, she firmly gripped his hand to let him know that she was there for

him. Of course, she thought, it was to be expected that Agan-mo would be emotionally moved by hearing his own language spoken by some of his own people after so many years. But why such an emotional eruption and why did he cry? Why did the younger man seemingly not trigger additional emotions in Agan-mo? And why was his emotional response to the young woman's voice so powerful, much more powerful than his emotional response to the voice of the older man? As she wondered about that the music had begun to play again, signaling the end of the official welcome ceremony of their visitors by her people's elders. After the music had ended, Setan-me indicated to Bran, Lucy and Kimal that they should follow her and the other elders. The audience on the hillsides waited until everyone had left the circular area of the people's ground and then quickly left. But Agan-mo made no attempt to get up and Igun-me continued to silently sit next to him, still holding his hand. After a few minutes, they were all alone.

»What is it Agan-mo?« asked Igun-me softly while looking at him.

Agan-mo did not respond. He did not even turn his head to look at Igun-me. In the more than ten years she knew him, she had never seen Agan-mo like this.

»Agan-mo, you have me worried, what is happening to you?« she now said with greater intensity as she pressed his hand harder.

Agan-mo slowly turned around to look at her. Igun-me sighed, at least she got his attention now. The way she looked at him, she thought he must understand that she needed a response from him. And respond he did.

»Igun-me, I am sorry. It was just too much for me, it just came too sudden.«

»What was too much for you? What came too sudden, Agan-mo?«

»Igun-me, the young lady you just heard speak in the people's grounds, she is my daughter. And the older of the two men has been my dearest friend from my childhood days on. I never thought I would ever see either of them again.«

Now Igun-me understood what had happened and as she did, she felt the tears coming. She could not stop them and slung her arms around Agan-mo's neck who held her closely. They sat this way for a while, one comforting the other until Agan-mo's hands softly grabbed Igun-me's shoulders pushing her back a little so he could see her face.

»Igun-me,« he said softly, »I have two daughters, you and the young lady you saw today.«

»And I now have a sister, Agan-mo,« she said, kissing him on both cheeks.

After a while they got up and slowly walked towards Agan-mo's home where a little later Amote-mo would arrive with the older of the two foreign men so Agan-mo could interview him. When they had arrived at his home, Agan-mo asked Igun-me to hurry back to her parents and let them know that the young woman was his daughter and that the older man was a good friend of his whom he had trusted all his life. Agan-mo told her that they must know this before the reception, which was taking place right now at the house of the elders, was over. Igun-me hurried back to the house of the elders and as she was not allowed to enter without being asked in, she told one of the young men standing guard that she must speak to Amote-mo. The matter was urgent and there was no time for delay. The young man looked at her for a moment before deciding. This was unusual but he was certain Igun-me would not make such a request without good reason, so he walked into the house of the elders and quickly was back with Amote-mo following him. Igun-me lost no time explaining to her father what he needed to know. Amote-mo was stunned. Igun-me had never seen her father this surprised. But after a few moments his surprise gave way to what clearly was joyfulness. Her father went back into the house of the elders to share the news with his fellow elders. Now they could be sure that these visitors had indeed come to warn them. There was no trap.

17

Bran sat with Lucy and Kimal among what must be something like their local people's council, waiting for an opportunity to share with these people what they knew about the danger which they might soon have to face. But since they had left their accommodation following this young lady there had been no such opportunity. Bran knew that she had taken the device on which Kimal had created the storyboard with her, but he had not seen it all evening; not until now when he thought to have spotted it on a table in the back of the room. It was out of the question that either of them could get up and grab the device so they could begin to show these people why they

had come to find them. It would have been quite impolite and then it would also have been quite impossible to tell so many of them at the same time. He needed to explain everything as best he could to one of their leaders. But looking at the eleven elders sitting around the table with them he could not tell if these people even had a single leader. Bran was not easily frustrated but the urgency of the situation combined with his inability to make progress in conveying the message to the leaders of these people strained him quite a bit. He had to admit that, but he also knew that he must not display any of it. And he didn't. Outwards he gave no intention of what troubled him but unknown to him, his hosts could clearly discern that he was bothered by something. As they were sitting around the table seeking to communicate with these three foreigners using gestures, even though a few of them spoke the language of these foreigners quite well, some of the leaders were a bit frustrated as well. Maybe this was why they did not pay that much attention to the emotional ripples they could discern within the older man and to a lesser extent in the younger man and the young woman. These foreigners must be equally frustrated given the difficulty of communication through what would always be inadequate gestures. Therefore, for the most, these fourteen people sat around the table without doing much else than to look at each other in a friendly reassuring way and passing the valley's traditional beverage around in a large drinking bowl which was topped off every time one person had drunk from it and passed it on to the next person.

Lucy and Kimal followed their own trains of thought. While looking around and smiling to those who smiled at him Kimal's mind was preoccupied with the young woman he had met this afternoon. There was something about her and he felt as if she had cast a spell on him. Thinking about her, he also felt a little stupid. She was not even one of his own kind, although one had to really look at her closely to suspect that. So why did he even bother? She was not one of his people. As he, Lucy and Bran had clearly stated this evening, they were of the people from the ocean and not of the people from this valley. But still, if they were so different, why did this woman trigger these emotions in him? Emotions which were clearly connected to this young woman; no doubt about it. If there would not have been all this emotional noise filling the room, attributed to

their difficulties in communicating with these strangers, some of the eleven elders surely would have identified Kimal's emotions as the seedlings of love. Kimal had not much experience with falling in love, or more precisely, he had none. Except for the tender feelings he always had towards Eireen Sawarov, Kimal had never fallen in love.

Lucy was completely preoccupied with studying the faces of these people. Like how their mimics changed, as the words with which they accompanied their gestures towards Bran produced sounds, the meaning of which Lucy could only guess. She tried to be careful so as not to be perceived as inadvertently staring at any of them but found it difficult to take her eyes off them. This was a dream come true. Whenever did an archaeologist have this kind of opportunity? Even though she had not consciously formed that thought yet, she wanted to stay with these people, wanted to learn their language, their customs; wanted to understand who they were, and she wanted them to get to know her people. Months back she had wished when looking at Song-Ho's facial reconstruction that she could have been friends with this human whose skull she had found. Now there was the opportunity to become friends with his people, some of whom may be his descendants. But then she asked herself if she was not just day-dreaming. If they could not help these people to save themselves, these people might soon not even exist anymore. Just the thought of that made her feel sick to her stomach and for a moment some of the elders looked at Lucy as they registered the emotional spike coming from this young woman. Was she in pain? Was she maybe sick? Setan-me decided that they would have all three of them checked out in one of their medical facilities the very next day. But before she could communicate to one of the attendants in the back of the room to have this arranged for the next day, Amote-mo was called out of the room, urgently, as it seemed.

As the elders waited curiously for Amote-mo to return and to tell them about what had been so urgent that he had to be called out of their meeting with the foreigners, Bran could tell that something unplanned had just happened. We may be different human subspecies, he thought, but we are still humans as I can clearly tell by your reactions to this man being called out of the room. Even to someone who could not understand their language, so thought Bran, this was unmistakably what had happened. However,

when Amote-mo returned after a few minutes, his face showed no visible concern. On the contrary, he seemed to be in an exceptionally good mood. Again, that was something Bran could detect just as well as the elders who looked a little surprised at Amote-mo. Then, again unexpectedly, Amote-mo did not address his fellow elders but spoke directly to Bran indicating by gestures that he and his companions needed to discuss something. As Bran understood correctly, Amote-mo excused himself and the others because he had to address his elders in the presence of Bran, Lucy and Kimal. Even Lucy and Kimal quickly grasped that Amote-mo was just being polite to their guests, explaining to them that they had to discuss something among themselves. Bran gestured that Amote-mo needed not to apologize and they should go ahead to have their internal discussion. And to Lucy and Kimal he gestured that they should move to the back of the room and give these people some privacy. Even though they could not understand their language he felt that this was the right thing to do. Amote-mo nodded with an approving smile when he saw that the three were moving to the back of the room and then sat down, explaining to the other elders what he had just learned. As he spoke, Bran noticed that some of the elders looked towards them with what looked like a raised level of interest. It was obvious to Bran that the reason Amote-mo had been called out of the meeting had something to do with them.

When Amote-mo waved towards them to join them again he did so with a smile. After they had sat down again, Setan-me began to slowly explain to the three delegates that Bran would go with Amote-mo to meet an important person while Lucy and Kimal would be accompanied back to their guesthouse. Setan-me could have told them much quicker in their own language what to do but they had just decided against that. The elders had unanimously agreed that it would fall to Agan-mo to explain the situation to the leader of the three. If Setan-me had now addressed them in their own language it would only have caused confusion. Once their leader had met Agan-mo he would be able to explain in turn everything to the young woman and the young man. It took a while until Bran, Lucy and Kimal had made sure among themselves that they had understood what Setan-me was trying to communicate to them. To show that they had understood, Lucy and Kimal moved away from Bran and Bran himself indicated with a

gesture that he was ready to leave with Amote-mo to wherever he wanted to take him. As they left the guesthouse, Igun-me was already waiting outside with two young men who carried the clothes which Bran, Lucy and Kimal had been presented with earlier. Igun-me pointed towards Lucy and Kimal to follow her while Bran walked off in another direction following Amote-mo. Lucy and Kimal walked behind Igun-me and when from time-to-time Igun-me looked back to check on them she could not help noticing that every time she did, Kimal was smiling at her. Well, Igun-me thought, he could not possibly know that among her people one did not just smile at a girl in this way without having serious intentions. But then she wondered if the same might be true among his people. Even if that were so, she thought, how could he smile at her like that? He did not know her. However, then she remembered that this afternoon he had called her incredibly beautiful and had drawn a very complimenting sketch of her face. When they arrived at the guesthouse, Igun-me showed them again where to find food and how to use the bathroom and then handed them from a wardrobe what looked like pajamas.

When Igun-me had left for the night, not before she had made sure that Lucy and Kimal understood that Bran would join them later. It had been a long day for them but neither of them was tired. They could not even think about going to bed given that their minds were still busy processing the events of the day. And what a remarkable day it had been.

»You know Kimal, this day will be in our history books,« began Lucy after they had made themselves comfortable in a couple of chairs, or what looked like chairs as these things seemed to be more than that.

»You mean when they will retell the story of the first contact between our people?« asked Kimal.

»Well, I guess it will likely be about the second contact,« said Lucy.

»Why not the first contact Lucy? Our people have never met these people before. Or is that not so?«

»Not quite Kimal. Our first contact with these people occurred when we discovered the skull of one of theirs who died some two thousand years ago.«

»Does that count as first contact? Really?«

»I think so Kimal. Now given how you look at this young lady, I wonder how third contact between our people will be reported in our history books.«

»Don't tease me Lucy,« said Kimal as he looked with what could count for slight embarrassment at a giggling Lucy.

»Seriously Kimal, you need to be more careful about how you look at this admittedly beautiful young lady. You might embarrass her, have you considered that?«

»I don't want to embarrass her Lucy. I just can't help looking at her. Believe me, I am usually not this kind of person.«

Lucy did not respond to Kimal. Could it be that Kimal had fallen in love with this young lady. Kimal, the man who was usually such a recluse and always kept to himself? But there was more to consider than that.

»Kimal, seriously, you must be very careful. I respect the feelings you may have about this lady, but we have no idea how these people go about romance. You could hurt her without you ever knowing that you did.«

»I know Lucy. I promise I will be more careful. Promise me not to talk about this to Bran. It would be embarrassing for me.«

»I promise Kimal, I will not mention any of it to Bran. But he has eyes to see for himself and he may at some point get concerned that he will have to save you from her dad forcing you into a marriage.«

Lucy's last remark was meant to tease Kimal. But when she saw in Kimal's face that for a moment he seemed to consider what she had just said as a serious possibility, she burst into laughter. Kimal, realizing that he had fallen for her tricks again, could not help but join her laughter.

18

Bran had walked with Amote-mo for almost half an hour when the path they were following became too small for two men to walk side by side. Now Bran was walking behind Amote-mo wondering where he was leading him. His initial assumption had been that he would be brought in front of their leader or at least a local leader to whom he would be able to explain things as Amote-mo had taken the device along which he

presumed was the one with Kimal's storyboard. But now he was not so sure anymore. To Bran it looked like they were heading towards somewhere in the remote countryside. Why would a leader choose to live remotely rather than living among her or his people? But given their difficulties communicating, Bran could not really ask Amote-mo any such questions. Amote-mo sometimes turned around to see how Bran was doing and when he did so he looked at him in what clearly came across to Bran as sympathy. Without asking any of the many questions he had, Bran continued to follow Amote-mo into the darkness when after some twenty more minutes of walking uphill they stopped. Bran looked around but could not see anything that looked like a dwelling. As far as he could tell they were in the middle of nowhere. But then he remembered that these people could see far better in the dark than he could. And so, it was. Amote-mo took a few more steps and following him Bran saw that they stood in front of a step on the hillside just like the one behind which their guesthouse had been hidden.

Amote-mo pushed some kind of button or lever which Bran could not see, and a door opened. Then he gestured to Bran that he should enter as he himself followed Bran closing the door behind himself. Amote-mo pointed ahead and motioned to Bran to walk further towards the back of the building. He noticed with some surprise how far back into the hill this building seemed to extend. Just before they reached what looked like the back wall of the building Bran stopped at what looked like a staircase. Amote-mo pointed upwards, so Bran climbed the stairs to the upper level of the building. Arriving there Amote-mo now indicated that Bran should move in the opposite direction towards the front of the building. Less than halfway the distance on the lower floor between the entrance and the back wall, Bran saw what looked like a door leading to some kind of terrace structure. Turning around for directions, Amote-mo pointed towards the door. Clearly, Amote-mo wanted him to step outside on this terrace which he did. Once Amote-mo was also outside he called into the dark something that sounded like he was announcing their presence. Then he pointed straight ahead where Bran, after his eyes had somewhat adjusted to the dark, could see someone standing, his or her back turned towards him. The gestures Amote-mo then made Bran interpreted such that he was supposed to move towards that person which he very slowly did. When he turned

around to make sure that he had understood Amote-mo correctly, he saw that Amote-mo must have silently left.

Bran walked a few more steps but then stopped. He was almost certain that the person whose back he now saw much more clearly was most likely a man and not a woman. He also seemed to be a little taller than the other people of the valley he had met so far. As Bran waited, the person a few meters in front of him turned around. Clearly a man, thought Bran, because he thought he had spotted some kind of beard on the person's face. The man slowly walked towards him. When he was a few meters away from Bran and he could see the face of the man approaching him he thought his knees would give way.

»Hakan...?« was all that Bran could articulate in disbelief.

»Yes Bran, it is me,« responded Agan-mo after looking at Bran's face for a few more moments.

»Hakan, Hakan... it is really you,« was all that Bran was able to say as he moved towards his friend to first grab his hand and then embrace him.

The two men held each other in a tight embrace for a while before taking a step back and looking at each other again.

»Thank you, my friend, for taking care of Lucy,« said Agan-mo as he continued to hold Bran's hand.

»So, you already know that she is here with me.«

»Yes, I do Bran. I watched the three of you as you introduced yourself to the elders. I had expected to see neither Lucy nor yourself ever again. You know that I am not very good at handling emotional situations. Hearing you and Lucy say who you were, that was the most emotional experience I ever had. My emotional reaction upon learning that I would see the two of you again disturbed quite a few who were sitting around us.«

»Who is us, Hakan?«

»Oh, sorry Bran, I forgot to say that Igun-me was there with me. You already know her as she was the one who stayed with the three of you this afternoon. She has become my second daughter. You have just met her father in case you did not know that yet. Igun-me is the daughter of Amote-mo, the man who brought you to my home.«

»Hakan, I want to know everything that you learned among these people, and I want to get to know them. But first we must deal with a much more urgent matter.«

»I know Bran, Igun-me already told me about it. These people did not know who you are, so they were hiding from you the fact that quite a few of them understand our language. Igun-me speaks and writes it fluently. She understood every word the three of you have spoken this afternoon while she was with you.«

Now Bran began to understand why these people had so easily understood what he was trying to explain using whatever gesture seemed appropriate. Every time he had used any such gesture, he had always accompanied it with the words which in his language expressed what he wanted to communicate. That was just the natural thing to do and Lucy and Kimal had behaved the same way. These people were never puzzled by any of their gestures because they could understand every word they had been saying. In retrospect, this was a little embarrassing, but the fact that these people, or at least some of them, could communicate with them in their language made things a lot easier.

»You have always been a great teacher Hakan. You know that, right?«

»I have my moments Bran, just as you have them yourself,« replied Agan-mo with a smile. »By the way, my name here is Agan-mo. It is the custom of the people of the valley to indicate the gender of a person with the syllables “mo” and “me” added to the name. So, to them you are Bran-mo and Lucy is Lucy-me. But let’s sit down now. You must explain a few more things to me and then we must come up with a plan on how to defeat those people who are seemingly bent on destroying the people of the valley.«

For roughly the next hour Bran gave Hakan a detailed account of the developments which beginning with the skull discovery more than half a year back had led to Bran and his expedition coming to this valley. Learning about what had happened at Central and about Roan Quam, Hakan told Bran that he had always been concerned that something like that would happen. He had always believed that the secretive way in which Central acted and the unchecked power its executives wielded would become a problem one day. The question was always when something like this would happen, and never if it would ever happen. The way Central worked, with few checks and balances to correct misbehavior, Central’s executives had to have exemplary characters. And Hakan had

to admit that, as far as he could remember, this had always been the case. But there was never any guarantee that it would always stay that way. When Bran told him that the craft he flew out to this valley fourteen years ago crashed because it was sabotaged, this only confirmed to Hakan what he had suspected. He now understood why someone might have tried to kill him, something that had previously eluded his understanding. When Bran had finished his account of what happened and Hakan had no more questions, Hakan began to tell his friend about the people of the valley.

There were many things that were not easy to understand at first glance. In some ways the civilization these people of the valley had built felt almost like a preindustrial society. But that was deceptive. They possessed advanced technology, but it did not really become visible in their daily lives. The population of this valley had oscillated around eighty-thousand for a long time. There was no uncontrolled population growth, and these people had adapted to this valley in a unique way. Few natural catastrophes could hurt them. Also, their medical science was quite advanced even though unlike their oceanic civilization they did not engage in genome manipulation. All of that supported a stable economy, including everybody in some way which provided for a society where there were little material differences. The living quarters throughout the valley were quite similar, there was comfort for everyone but no luxury.

There was also something else which Hakan said could take some time for outsiders to understand. When Bran had told him about what the scientists of Crowden Institute were inferring from the skull of one of the valley people who had died twelve thousand years ago he told him that their hypothesis was essentially correct. However, it only gave quite an incomplete picture of the valley people's extraordinary capability to sense emotions.

»Bran, it is best to think about it like an additional sense which these people possess. Just as you and I can smell the fragrance coming from a flower, these people can sense the emotions you and I experience. And they cannot just detect emotions they can also differentiate between them. For example, emotions associated with love smell quite different for them than emotions associated with hate. Can you imagine how this ability must change the way people live together? Never in all the years I have now lived among

them have I ever heard about a crime. We do not realize this but in essence we do wear our emotional makeup like some kind of clothing. We cannot see that clothing, but they can.«

With what Hakan had just explained to him, Bran began to suspect why he had not seen these people carrying anything that resembled a weapon. If one can read the emotions of others and they can read yours, maybe things never come to a boil where some may want to make use of a weapon. But if these people did not have weapons, how could they defend themselves against the soldiers of Roan Quam's army?

»I have been living among them for a long time, but I still cannot read emotions Bran. Even though, I believe I do understand what must be on your mind. We must make sure that if this army shows up here it does so with not more than two hundred soldiers. These people cannot prevail against a large army, but they can defeat some two hundred soldiers.«

»But how, Hakan? Without any weapons, how can they even prevail against a small, determined fighting force.«

»To explain that would take too long now. It's time for you to go back to Lucy and Kimal. You don't want them to start worrying about you. As soon as possible you must contact Mog Sinan. The most important thing is now to ensure that only a small force of this army ever makes it to this valley. Early tomorrow morning I will go to see Amote-mo so he can work with his people to support you in whichever way possible. He, you and I should then meet midmorning with some of the clan leaders to make the necessary decisions. Amote-mo will send out most of the other clan leaders to contact the people of the valley in the neighboring regions and brief them on what is happening. They in turn will brief their neighbors further south so that within two days all leaders in the valley will know.«

»Hakan, what should I tell Lucy?«

»Please just tell her what happened tonight, Bran. I will meet her later tomorrow. It is better for her and for me that she learns about me being here from you. That will help both of us to prepare ourselves for what will still be quite an emotional moment, regardless.«

»You are probably right Hakan. This will give Lucy a little time to prepare herself for seeing you again. Something she has been dreaming about since we went on this expedition. One last question Hakan. How will I find my way back to Lucy and Kimal? It is a pitch-black night.«

»I believe Ketan-mo, Igun-me's brother, has already been waiting downstairs for a while to escort you back to your accommodation.«

The Assault

19

Railac Sono and Roan Quam had known each other for many years. They had grown up in the same city, although in different districts and first met at their local university. However, at that time their relationship was no different from any other students getting to know each other a little better outside lecture halls or laboratories. Shortly after graduating with a degree in law and administration, Roan Quam started working for the Haman Institute and Railac Sono left his city to pursue a career as an engineer and manager at one of the leading onshore cooperatives that manufactured much of the heavy machinery needed for onshore and deep-sea mining. They lost sight of each other for a decade. But after Roan Quam was promoted to lead contract negotiator at Central, it was only a matter of time before he reconnected with Railac Sono, who by then had already built a meteoric career at the onshore cooperative, which he had joined as a young engineer straight out of college. They quickly discovered that Roan Quam's political interests very much overlapped with the commercial interests of the onshore cooperative which Railac Sono represented. After spending a couple of years recruiting the kind of people they needed for their lofty plan and laying the groundwork for the organization which would execute it, they had worked for more than a decade to put everything in place for launch day.

But then they had to launch their operation a little earlier than expected. They had almost finished preparations, but not quite. Had this skull discovery not occurred and everything that went along with it, they would not have been forced to launch their operation prematurely. However, the situation was what it was and now they had to make the best of it thought Railac Sono as he walked over to Roan Quam's office for their usual early breakfast morning meeting after which they would both meet with their commanding officers to assess their situation and to decide on how to proceed. For a few weeks now their breakfast meetings had become less and less enjoyable as both had

become more tense because their plans seemed not to work out quite the way they were supposed to. Railac Sono had become increasingly convinced that Roan Quam had been given the wrong coordinates for the homeland of this new human subspecies. They were acting on bogus information he had frankly told Roan Quam in their last meeting, but Roan Quam would still not believe it.

He did not want to, but Railac Sono could not help but blame Roan Quam for screwing this up. It had been Roan Quam's responsibility to make sure that they knew the location of this homeland. Roan Quam understood Railac Sono thought he had failed to deliver the coordinates but instead had been duped by Eireen Sawarov. In turn, Roan Quam had blamed Railac Sono for the loss of many of their aircraft which they could not replace; aircraft which they had counted on being available for quickly relocating their troops if the need arose. Why, he had asked Railac Sono, had their intelligence failed? Why did they not know that Central had equipped its soldiers with ray guns capable of downing their aircraft?

This morning, Railac Sono came into Roan Quam's office with the firm determination that they must now make the decisions that Roan Quam had been putting off for almost a week. Given their discussions over the past week he expected that this would be difficult to achieve. Entering the office Roan Quam greeted him from behind his desk with the kind of friendly smile he had not seen for several days. He had come around, finally, thought Railac Sono. And so, it was.

»Railac, let us put this behind us. We both screwed up and we should not waste more time debating any of it. You are right; we are looking for the homeland of these people in the wrong spot.«

»I am glad to hear that, Roan. But how can we figure out where the true location of this homeland is?«

»I am not exactly sure yet. There is another thing that does not make sense to me. If I were given the wrong coordinates why would Central launch an expedition of its own towards roughly the same destination? Because we were first to get there, we assumed that when Central launched its expedition, it took a position south of ours because it could not really penetrate an area where we were already present. None of this makes

any sense if the coordinates are indeed fake ones. Don't you agree?»

»But Roan, it makes sense when you consider that this expedition launched by Central could be nothing more than a diversion to distract our attention from something else.«

»What do you mean by that?»

»Let's assume, Roan, that Central somehow learned about our plan to occupy this homeland and make it ours. In that case, because Central was not really prepared to oppose our forces, they would have had to play for time. They had to delay us from reaching this homeland as long as possible so they could prepare counter measures.«

»But what counter measures, Railac? Remember, at the time I had to leave Haman Institute to escape arrest there was zero indication that Central had made any preparation to counter an army like ours because they did not know that such an army existed.«

»That may well be so Roan. But Central has resources at their disposal which outmatch ours and don't forget the cities, specifically the city which hosts Crowden Institute. If I am not mistaken, we may have seriously misunderstood the role this city has played in all of what happened after you had to leave Haman Institute.«

The two men fell silent as Roan Quam was thinking about what Railac Sono had just said. Railac may be right. The key to understanding Central's plans could be this city and the role it may still play. He had to find out and he already had an idea of how to go about it.

»Railac, what you just said about this city and the role it may play in Central's plans may be more important than you realize. If we could understand this city's role in all of this, we might be able to counter Central's moves much better than we can do now. Right now, we are only guessing what Central may do next as we have next to no intelligence on what they may be up to.«

»Unfortunately, so. I do not understand how the agents we had placed close to Central's onshore base could have been discovered so quickly and why we never learned about the existence of these ray guns.«

»I cannot tell you what happened to those agents Railac, but with respect to these ray guns I'm pretty sure they didn't even exist a few months ago. Central's technological

development capabilities may have largely atrophied, but there are still areas of technical ability that could pose a threat to us. We must find a way to know about those before they can hurt us. Any ideas on how we could do this?»

Railac Sono could only answer this question in one way, which was in the negative. And Roan Quam knew why. First, because there was seemingly no way for them to get information out of any of Central's institutes or out of the city cooperatives which might now be working on developing new weapons technologies. And the second reason was that having to launch their operation prematurely quite a few informants had chosen to defect to the enemy. But there was another option on how to find out what Central may be up to.

»Railac, I believe it is time that we capture some of those soldiers Central has deployed south of our base camp. The soldiers of Central's expedition must have orders pertaining to what they are supposed to do out there. . Their officers must know if they are just being used as a distraction or if they are supposed to protect this homeland that is supposedly somewhere out there, even so we can't find it.«

»Capturing some of Central's officers might really help us. But it will be risky. We will have to fly in a task force close to them as marching a task force there is out of the question. If Central's forces out there also possess ray guns we might lose more aircraft; and soldiers riding in those. Are you willing to accept this risk, Roan?»

»That depends, Railac. How many more aircraft could we lose in such an operation?»

»The task force for such an operation would have to be the size of two platoons so we would need four aircraft. However, we also must add a couple of aircraft as back up in case we lose aircraft on landing or during the operation and cannot get our troops out anymore.«

»So, in the worst case we could lose another six aircraft, right?»

»Yes, if everything went wrong, we could lose six more aircraft.«

»Railac, at the juncture we find ourselves, what is more important to us, our troops or our aircraft? Or to put it differently, what would lessen our capability to win this fight more, the loss of a few troops or the loss of a few more aircraft?»

Railac Sono did not like where this was going but he had to admit, Roan Quam had a point. If they lost a platoon that would not really impact their ability to achieve their objectives. But losing six more aircraft could.

»Roan, you know the answer to your question just as I do. We cannot really lose any more aircraft without seriously impacting our ability to quickly move large numbers of soldiers to where we may need them. But soldiers, I believe, we have more than enough to accomplish our goals.«

»Then lets send this task force there with no aircraft backup and maybe we can adjust the required force such that they can get by with three aircraft. Honestly, if all three aircraft return to our base camp and one of them carries the prisoners from whom we can obtain the information we need then I would consider the operation a success, even if only a few of our task force returned with them. Don't you agree?«

Railac Sono only nodded. He did not like to set up his soldiers, but Roan Quam was right. They must find out what Central was up to, and they must know where this homeland really was located. He knew that if they failed to accomplish either of these objectives within the next two weeks, their chances of achieving what they had set out to do would quickly diminish. Roan Quam saw that nothing more needed to be said and it was time to meet with their commanding officers to set the plan in motion they had just devised. There would be concerns among the officers about this plan which would sacrifice some of their soldiers. But they also would understand that there was no alternative.

20

Peer Aksun looked at his partner Juliet who sat with him at their kitchen table. It now was usually just the two of them sitting down for dinner and so they did not bother to set up the dining table but rather stayed in the kitchen. For weeks, their house had been much busier. Juliet had enjoyed having Alwyn, Mog and for a short time also Aung as their guests. Aung Lasheen had left first, joining Central's chief industrial officer to identify Roan Quam's business partners and then to work diligently towards cutting off Roan Quam's onshore army from all supplies. Then Mog Sinan and the city's mission

chief left with the objective of setting up the expedition which was to warn their cousin species and to implement whatever measures they could think of which could delay Roan Quam's army and degrade its capabilities. Finally, Alwyn Maar moved back to Haman Institute to supervise the reorganization of Central itself. Life had returned to normal not just for their family but also for the city.

But what was normal? Who was to make that decision? All of us have just one life and we want it to be our life, and not a life forced on us by others. If some people pronounced one thing as normal, then in the same sentence they had just defined something else as not normal. Juliet Aksun, somehow sensing what may be going through her husband's mind, stretched out her arms towards him and put her hands on his. Peer Aksun could not help but smile at her, she always knows, he thought.

»Have you heard from Bran lately?« she asked her husband.

»I have not heard from Bran himself since they left for their base camp site outside this homeland of our cousin species. Bran only calls Mog and his team at the onshore facility from where Central coordinates everything. He cannot call into our city. This is still too risky. Mog told me a few days ago that everything was going according to plan and that he expected the expedition to enter this homeland once they had thoroughly explored the area around the base camp which should take about two weeks. After that they would move into the valley on the other side of this mountain range.«

»Well, then Bran may be back in a month or two at most and we will have a little more company here from time to time. Why have you never invited Carleen Nuratu? Or maybe even this council woman Eireen Sawarov who seems to have changed remarkably?«

»Once Bran is back you will likely see Carleen Nuratu quite frequently around here,« he replied to Juliet hoping thereby to change the subject.

»Peer, is there something I missed about Bran and Carleen Nuratu?«

»I would not be surprised if the two of them would get back together again. I am almost willing to bet on it.«

»And what makes you think so my dear husband? I did not know that you were such a relationship expert!«

»One does not have to be a relationship expert to understand certain things. Because of the changed relationship between the city and Crowden Institute we are in frequent contact now and Carleen Nuratu keeps asking about Bran and how he is doing in ways which clearly indicate that hers is not just a professional concern.«

»Well, that's great for Bran. I would be very happy to see him not spend the rest of his life in his very interesting but usually quite lonely pursuits.«

»I knew you would say something like that Juliet,« said Peer as he kissed her right hand which was still resting on his.

»And what about this chameleon of a council woman, are you ever going to invite her?« Juliet now inquired from her husband.

»Do you want me to, Juliet?«

»Why not? From all you told me about her she must be an interesting person. An evening with her would certainly not be boring.«

»Let me think about it Juliet,« he said as he was getting up looking at his buzzing communicator. »I must take this call Juliet, please excuse me.«

When he had entered his small home office and had closed the door behind him, he told Han Nakamoto that they now could talk. What his security chief told him did not seem to be of immediate concern, but they had to make sure they understood whether any of it might have relevance for the city or Central in their effort to fend off this Roan Quam. Given the current situation they had to treat anything unusual as suspicious. Therefore, the council chairman told his chief of security to check out this Taras Daley, one of the former movement's leaders, and find out what had happened. Quite a while ago Eireen Sawarov had told him that Mr. Daley was not one of their leaders anymore and after discussing this with his chief of security, they had decided to stop the observation of Mr. Daley. When Han Nakamoto had agreed with him at the time he also recommended that their agent Saren Xian, who had been Mr. Daley's former security chief, should stay in touch with Mr. Daley. Now they had learned from Mr. Xian that this Taras Daley had been contacted again from somewhere onshore by someone who did not want to identify her or himself. As Taras Daley had confided to Saren Xian, the person calling him was the same one who had months ago tried to manipulate him into

stirring civil disobedience or even civil war in the city. The council chairman agreed with his chief of security that this cannot have been a social call, Roan Quam must have had a particularly good reason for contacting Taras Daley again.

Taras Daley had been sitting in the security station's interrogation room for more than an hour. He had no idea why he had been brought here. He did not really want to be here because he believed he had no more business with city security but the people who had knocked at his door mid-morning had been very convincing. Han Nakamoto did not make Mr. Daley wait on purpose as he was himself waiting for someone else to come to his station before he could start the interview process. Early morning the council chairman had called him and asked if he thought it might be a good idea to have Eireen Sawarov observe the interview. She may be able to discern something from Mr. Daley's answers or his behavior during the interview which they may otherwise overlook. Han Nakamoto didn't have to think about the council chairman's suggestion for long. He quickly agreed that this could be helpful. Eireen Sawarov and her movement had kept Han Nakamoto and city security busy for many years. But Han Nakamoto never took such matters personally. A few months ago, the council woman certainly still had been a formidable adversary but now she had proven herself to be a most helpful ally. Yesterday was yesterday and today is today Han Nakamoto thought. Things change and we must change with them. That is, except for the few principles which always must guide our actions, these never must change. When Eireen Sawarov arrived, he led her to the observation room where through the half-way mirror she could observe the interview. The council woman had already been briefed by the council chairman, so he needed not explain anything. He only had to show her how to adjust the volume of the loudspeaker. Then he left to meet with Mr. Daley.

When the chief of security entered the interrogation room Mr. Daley welcomed him with a smile.

»Chief of Security, at last a familiar face.«

»Good day Mr. Daley. How are you? It has been a while since we met last.«

»Indeed, Chief of Security. But I still do not know whom I must thank for the

pleasure of meeting you again. Why was I brought here?»

»Mr. Daley, it was brought to our attention that you received another call from this same anonymous caller who had reached out to you several months ago?»

»Oh, that is what this is about. Honestly, Chief of Security, I have no clue as to why this person has contacted me again. By the way, how do you know about this call?»

»All calls coming from outside into the city are being monitored,« lied Han Nakamoto. »What did you think?»

»Oh, nothing Chief of Security. I was just being curious.«

»So, what did this person want from you, Mr. Daley.«

»Nothing, really nothing. He was only asking about how things in the city were.«

»You don't want to tell me this was just a social call? Are you Mr. Daley?»

»I really do not know what this call was about, Chief of Security. This person certainly did not suggest any kind of business or something along that line.«

»Ok Mr. Daley. Then please retrace this conversation for me sentence for sentence. Can you do that?»

»Certainly, Chief of Security, certainly. I have a good memory. He first asked me about my situation, what I was doing and if I was still vying for the leadership position of the movement. Basically, he asked if I had settled my scores with Eireen Sawarov.«

»And how did you respond, Mr. Daley?»

»I told him that I was not part of the movement any longer. That for practical purposes there was no movement anymore. And that there was no more score to settle with Eireen Sawarov.«

»Was he satisfied with your answer, Mr. Daley?»

»Yes and no. He kept asking me for explanations as to what I meant when I said that there was no movement anymore. And he very much wanted to know what Eireen Sawarov was doing.«

»What explanation did you give him?»

»Well, that the movement and the city had settled their differences, of course. Isn't that what has happened?»

»Yes, Mr. Daley, this is what has happened. But what did you tell this person

about council woman Sawarov?«

»The truth of course. That she is still the uncontested leader of the movement but that this movement and the city now work together.«

Han Nakamoto thought he had learned enough from Mr. Daley. He pretended to take a call on his communicator, apologized and left the interrogation room to discuss the interview with Eireen Sawarov. The council woman very much confirmed what he had taken away from this interview himself. Whoever had called Mr. Daley had no interest in Taras Daley himself but must only be using him to learn about the situation in the city. But for what purpose? Mr. Daley had no knowledge whatsoever about what Central and the city were doing or planning to do in how to deal with this Roan Quam and his army. One could learn nothing from Mr. Daley in this respect. And the questions this person had asked Mr. Daley indicated that she or he knew that much. Mr. Daley possessed no such information. But there was something else which the council woman suspected.

»Mr. Nakamoto, what if all this person really wanted to learn about, was the current situation in the city?«

»But how could that be useful to Roan Quam?«

»What if these people have come to suspect that we have given them the wrong coordinate information for the homeland? They cannot just call me anymore and ask me if I had given them the correct coordinates, can they?«

»You are correct Council Woman. But that means they must find another way to understand whether they have been given the correct coordinates or not.«

»And they can only do so indirectly like checking to see if the situation in the city has somehow changed in a way that would allow them to draw their own conclusion regarding the information I gave them.«

»If I understand you correctly, Ms. Sawarov, you are saying that the realization that this division of our city no longer exists, or perhaps never existed, could be an indication that you gave them the wrong coordinates. Is that what you think?«

»That is the most likely explanation to me. Don't you agree with that, Chief of Security?«

»I very much do Ms. Sawarov. We must inform the council chairman immediately so he can share this with Central. If Roan Quam now has confirmed for himself that he was handed fake coordinates he will do everything he can to find out about the true location of this homeland. We must warn the expedition.«

After thanking the council woman for her assistance Han Nakamoto ordered Mr. Daley to be escorted home and went to his office to inform Peer Aksun.

21

The messenger brought the news from the valley orally, and to Gil Ulan's amazement, the native transmitted it flawlessly in Gil's own language. Bran's order to move the expedition into the valley immediately came just in time. The other night Mog Sinan had informed him that their secret was out. He told him that Roan Quam's forces had launched a surprise attack on Central's expedition decoy a couple of days ago. He must have become convinced that the coordinates he was given by the council woman were fake. There were casualties on both sides with the heavier losses sustained by the task force which had attacked them. They had managed to shoot down two of their aircraft but a few of them got away with their remaining functional aircraft. Unfortunately, they had taken a few hostages along with them. None of Central's captured soldiers had any knowledge about where the homeland was; and neither did they know about a second smaller expedition already being in contact with the people living in this homeland. However, Mog Sinan suspected that nevertheless Roan Quam may now know about the homeland's location through different means. One of Central's communications officers, who was apparently employed by Roan Quam, had access to the satellite communications data, which of course revealed Gil's position. By the late next afternoon Gil could expect half a platoon of Central's soldiers to arrive, all highly trained but most importantly, every single one of them skilled in using the ray guns they were equipped with. They would also bring additional ray guns for Gil's men.

After receiving Bran's message Gil had a few quick decisions to make. A large number of young men from the valley would soon join him to help move the expedition into the valley. Gil should work with them to achieve this as quickly as possible and then

stay behind with these people's sentries. They would be his reconnaissance force to alert them if Roan Quam's forces should show up. Nobody knew better than these people how to hide in this mountain area. As soon as the communication equipment arrived in the valley along with the rest of their expedition team, the mission chief would call Mog Sinan and request reinforcements. After asking the native's messenger to carry a message back to Bran, the expedition team and the young men from the valley went to work. It took them less than five hours to move everyone over the pass and then Gil's men and some twenty of the valley's men went back to clean up. It only took a few hours, and everything looked pristine again. When they were finished, even Gil could hardly believe that anyone had ever stayed at the site of their former camp for any length of time. Then they began to wait for Central's reinforcement to arrive. Each one of Gil's men had been teamed up with a man from the valley. Gil's partner was Ketan-mo.

While they sat in their hideout waiting for Central's troops to arrive, Ketan-mo answered Gil some of his questions. That these people spoke their language and spoke it so well, how could that be? But when Ketan-mo told Gil that Hakan Kassius had taught them their language, he understood. Like many others in his city, Gil had known about Hakan Kassius' disappearance some fourteen years ago; that is, the official version of it. So, Hakan Kassius had lived with these people all these years. No wonder that they could speak his language. Gil also could not help but be surprised by the physical fitness of these young natives. Gil and his security team were no slouches either. To be accepted for that mission they were now supporting they had to be physically strong in every respect. But Gil had to admit that he probably wouldn't have stood a chance in a wrestling match against Ketan-mo.

A couple of hours before sunset they could make out what looked like six aircraft approaching the landing site, the coordinates of which Gil had given to Mog Sinan. To be certain that this was really Central's reinforcement arriving as promised and not the vanguard of Roan Quam's army, they proceeded cautiously. Gil, Ketan-mo and a few others had carefully approached the landing site just before the first aircraft touched down and soldiers began to disembark. This was indeed Central's reinforcement. Gil walked up to what he presumed was their commanding officer and introduced himself as

the expedition's chief of security. Captain Svan Kumo was happy that contact with Gil's people was established so quickly.

»Chief Ulan, glad to meet you. My soldiers are securing the perimeter and once they have done so we will unload weapons and provisions.«

»No need Captain Kumo to secure the perimeter. We have already done so. Since Mog Sinan and I spoke yesterday things have evolved. Our mission chief has established contact with the native people. Earlier today they helped us relocate the expedition into the valley. My orders from the mission chief were to stay behind and supported by some forty young men of the valley to look out for potential enemy forces arriving. These men know the terrain here better than any of us ever could and they will help us set up positions so we can welcome any enemy force approaching the valley appropriately. You will find that quite a few of them speak our language very well and that they are physically highly trained. In fact, I believe that the people of the valley are physically much stronger than our people. One of those bilinguals will be at your side at all times so you will be able to communicate with them whenever the need arises.«

»Sounds good. We are a little more than half a platoon strong, so with your security team and these natives we should be about eighty people strong. What kind of weapons do they carry.«

»Well, Captain, this may sound a little strange,« replied Gil while scratching the back of his head, »they do not carry any visible weapons. However, the mission chief assures me they have their own kind of weapon.«

»And with what kind of invisible weapon will they then fight an enemy,« asked the captain, »by wishing him away?«

»I know this is confusing Captain, but you must trust the mission chief in that just as I do. Believe me, if the mission chief says that they have their own kind of weapon they surely possess such a weapon.«

»Ok, Chief. I am to take my orders from the mission chief or his representative so I will go by what you say. But do you think they might be able to handle some of our own weapons? If we could train them to use our ray guns, that could really help us. Each one of my soldiers carries two ray guns and we have a stash of about one hundred more

of them as cargo.«

»Captain, these people are at least as smart as you and I are. I see no reason we could not teach them how to handle a ray gun.«

»Great. We should get out of here as soon as possible. Unloading weapons and provisions will not take longer than thirty minutes and then we can move to wherever these natives want to take us. There should be plenty of places here where we could hide our presence and prepare for engaging the enemy if he should arrive here.«

»Don't burden yourself with carrying additional provisions Captain. These people will supply us with whatever we need in this regard so a couple of days of personal rations should suffice for everyone.«

»Even better, Chief, this will make us more mobile and Central won't have to re-provision us. I will tell the pilots to communicate this to Central. We have enough ammunition for a week of heavy fighting but after that we will run out of ammunition. I guess if we need new ammunition supplies it would be much better if Central could deliver those into the valley itself. Will that be possible?«

»I am sure that can be arranged, Captain. Now let's hurry up and get out of here somewhere higher on the slopes where we will be less visible.«

How could we not have discovered this place? Gil Ulan could not understand why they had never discovered the entrance to this extensive cave system even though it was only less than an hour's hike away from their former base camp site. He was certain that they had carefully searched in the vicinity of this place for traces of human activity like everywhere else within half a day's hike away from their camp site. What else did we not see, Gil Ulan wondered as they entered the cave system. Captain Svan Kumo was no less amazed. He was certain that one could hide several platoons just in this place without anyone suspecting anything. Not to mention the extension of this cave system which they slowly began to understand as Ketan-mo displayed it to them on what looked like a larger version of the reading device they commonly used. This clearly was an enormous advantage for them as they could move their troops along the hillside without even venturing outside. Together with Ketan-mo and some of his people they sat around

a small pit from which a soft light illuminated this part of the cave. Gil Ulan and Svan Kumo had not seen how this light had been turned on nor could they understand what the light source was.

They knew that Roan Quam now had the coordinates of their base camp site. The logical conclusion was that his army would seek to take out this base camp and if possible, eliminate the forces city and Central by surprise before moving into the valley. Along the hillside there were only a few landing places where an army could deploy airborne troops. They would have to split their forces such that they could oppose enemy forces at multiple locations. Given the strength of their force of about eighty men and the number of ray guns they carried, Gil Ulan and Svan Kumo believed they should be able to do so. Once they were certain where the main force of the enemy would be deployed, they could move their troops inside the caves to the position where they would be needed most. However, their plan would only work if Ketan-mo's men could handle ray guns.

Gil Ulan began to explain to Ketan-mo what ray guns were and what impact they had. Using his own ray gun, he showed him how simple it was to use it and how one had to aim for the target. Ketan-mo perfectly understood everything which Gil-mo had said. Ketan-mo was then handed a ray gun to get a sense of how easy this weapon would be to handle. He inspected it and pretended to aim at a target and then shot just like Gil-mo had demonstrated. Gil Ulan and Svan Kumo looked at each other with relief, Ketan-mo seemed to understand and so would his men. But then Ketan-mo put the weapon down in front of him and pushed it back to Gil-mo. There was a problem.

»Gil-mo,« he addressed Gil Ulan, »this weapon will kill people. We cannot kill people.«

Gil Ulan and Svan Kumo were both dumbfounded. Yes, this weapon would not only bring down an aircraft or incapacitate it. In the process of doing so it may also kill people. Most likely it would kill people. Hearing his suspicion confirmed Ketan-mo again shook his head.

»But Gil-mo, my people must not kill other people« he said looking from Gil Ulan to Svan Kumo.

»But how can you then defend your people against those soldiers who will be coming

here for the very purpose to kill all of you?» erupted it out of an exasperated Svan Kumo.

Ketan-mo could sense the emotional stress Svan Kumo was experiencing. For some reason, Gil-mo, while surprised by what he had just heard from Ketan-mo, seemed to be able to control his emotions better than Svan-mo.

»We do not kill our enemies, but we incapacitate them,« Ketan-mo said as he looked at Gil-mo.

»But Ketan-mo, how do you do that? For our plan to work we must know how many enemies at a time you can fight in your people's way and at how far a distance you can do that.«

»Our defense is effective up to about two-hundred of your meters. Depending on how close the enemy stands together, we can fight many or only a few of them at any moment.«

»And how effective is your kind of weapon?« asked Svan Kumo. »To what degree will the enemy be incapacitated and how long will that last?«

»Once we incapacitate an enemy, she or he will not be able to move anymore. That will last for many hours. All the enemy will be able to do is breathe and relieve themselves.«

»So, you somehow put them in a state of agony, correct?« inquired Svan Kumo.

»It looks like agony Svan-mo,« replied Ketan-mo, »but there is no physical pain. Although such an incapacitated enemy might experience considerable psychic pain. The latter will help the enemy, however, to refrain from attacking us for many weeks.«

»Good Ketan-mo,« said Gil Ulan, »I think we now understand a little better how the people of the valley fight against their enemies. Let's devise a battle plan that deploys our joint forces such that the capability of your people to fight, combined with our capability to do so, will deter the enemy from entering your valley.«

Discussing the respective strengths of their different forces, they agreed on a general approach they would propose to the mission chief. The combined forces of the Central and the city should carry out their attacks in daylight, guided of course by some to Ketan-mo's scouts. Ketan-mo and his men would only attack the enemy at night.

22

»They cannot stop us now, can they, Railac?«

After their efforts to find the homeland had been frustrated for many weeks, they finally had turned things around. Railac Sono believed he detected a little exuberance in how Roan Quam had asked this question. Yes, they had caught a lucky break with one of their agents at Central being assigned to the communications team, which maintained contact with what seemed to be a second but much smaller expeditionary force Central had deployed several weeks ago. Learning that Roan Quam had been deceived, only told them that they had been purposely misled by this city or Central, or whoever it was this Eireen Sawarov was working for.

»Roan, we have lost the element of surprise,« cautioned Railac Sono. »And we have lost another two aircraft and most of the task force for nothing. The officers we captured knew nothing. Believe me, we questioned them harshly and if they had known anything they would have been more than happy to talk, just to ease their pain.«

Roan Quam did not like this sadistic streak that sometimes broke its way through with Railac Sono. Railac was usually a considerate man, but he could be exceedingly cruel at times, much more so that he had believed it possible. Of course, it needed leaders like Railac to achieve what they had set out to do. Nice people would not set out to kill a whole people just to take away their homeland from them so they could live there and build a new future. It had dawned on Roan Quam for a while that the people he needed, in a manner of speaking, to clean the slate for a new civilization to emerge could not be the ones which after that would build up this civilization. To accomplish a job, one needed the proper tools. Railac Sono was the proper tool to conquer this homeland and to get rid of its people. But building a new civilization from the ground required different tools. At the proper time, he would have to rid himself of Railac Sono and his likes. As regrettable as that might be, it was unavoidable.

»Railac, you know that there was no need to torture those captives to elicit the information they might have had. Have you thought about what this might do to the morale of our own soldiers?«

He is always too soft, thought Railac Sono. If they had acted more forcefully early

on, they might be in a much better position now. Sometimes Railac Sono wondered if his longtime friend and associate Roan Quam was not too soft for being their leader. True leadership, Railac Sono was convinced, be it in business or in the military, required resoluteness and the ability to carry out sometimes very difficult decisions. He could do that, but could Roan Quam?

»Roan, you have your way to achieve an objective, and I have mine. And we need both. Once we have achieved what we have worked now for many years to accomplish, we can reconsider how we tackle things. But not now.«

»You are probably right, Railac. So, what is your assessment of our current situation?«

»This smaller expedition Central sent out several weeks ago might have contacted the people of this homeland. They might now be ready for us. We must assume that we have lost the element of surprise. What matters now is that we move decisively and quickly. The advantages we are left with are our strength in numbers and the speed at which we can act. Central's forces are still weaker, and it will be difficult for Central to move its forces as quickly as we can.«

»What makes you think so?«

»Because we will make it so, Roan. For one, we will tie down Central's large expeditionary force. Our forces just north of it will make sure that Central cannot redeploy any part of it towards the homeland of these people. Second, we will launch from here an overwhelming force towards the homeland while keeping a large enough number of troops on site to deter Central from attacking our army's headquarters.«

»How large a force must we send out to conquer the homeland?«

»I am planning to send some eight hundred troops in total.«

»But Railac, do we still have enough transport aircraft for that?«

»Barely so Roan. Just enough that we can deploy an expeditionary force towards this homeland in the strength we will need.«

»But that means we will take a substantial risk, betting everything on this expeditionary force to succeed. If it fails, we will have no more resources we can bring to bear quickly.«

»That is a risk we must take Roan. I rather would not but I see no other choice. Any additional day we delay getting our forces out there will decrease the odds of us succeeding. We must act now and do so decisively. This is the only way.«

Railac Sono could see that Roan Quam was not happy about hearing that. A couple of months ago their forces were vastly superior to whatever Central could put up to counter them. But those days were gone. They still had the advantage but if they did not act swiftly and decisively, they would lose whatever advantage they still had. He had not told Roan Quam that the soldiers being sent out to conquer the homeland had been given specific instructions. Railac Sono had ordered the commanding officers of their conquering force that no prisoners would be taken. They could not be slowed down in any way. Every member of this other species was to be treated as an enemy combatant and must be shot on sight. He had expected that not every officer would be willing to accept such orders, but he had prepared for that. Those who indicated that they could not execute such orders were removed from their positions and replaced with people loyal to Railac Sono; people he had handpicked himself. His officers were also instructed to make sure their subcommanders would execute such orders and if not, they would have to tell him who needed to be replaced. Finally, because it was not possible to handpick every single soldier for this mission Railac Sono had issued one more secretive order to his commanders. Any soldier who disobeyed the order to kill any member of this species on sight was to be shot immediately. They were in a war of conquest and discipline must be enforced at all costs or they would fail. Of course, he had not informed Roan Quam that he in a way had set up his own army within their army following quite different orders than the rest. But he would have to tell Roan Quam that he would be leading this conquering army in person.

Roan Quam had been waiting for Railac Sono to explain himself more about what sounded like a much more dire assessment of their situation than what he had heard from his general until quite recently. What was he thinking he wondered as Railac Sono remained silent.

»Railac? Railac, when will we be ready to launch those eight hundred of our forces?«

»Sorry Roan, I was thinking about something. Very soon. Hopefully in a couple of days.«

»And which of our officers will be leading this force?«

»I will be leading it, Roan«

Railac Sono could see that Roan Quam was surprised. But he seemed quite a bit less surprised than Railac Sono had expected him to be. Had Roan Quam already suspected that he would lead this force himself?

»Given the severity of the situation and how critical it is for us that this force will prevail against Central or whoever else may oppose it, I guess it makes sense that you lead them Railac. It certainly will be good for troop morale if their senior officer is with them out there facing the same dangers they will face.«

Railac Sono was not sure if he had heard right. This felt wrong. This was not at all the kind of reaction he had expected from Roan Quam. But he was careful not to give away his suspicion that something was wrong with Roan Quam's response.

»I knew you would see it this way, Roan. Once we have all of our forces out there it should not take us more than one week to take possession of the valley and with a few more weeks of clean-up this homeland should be all ours.«

Roan Quam went over to his desk and pulled out of a drawer two glasses and a bottle. He handed one of the glasses to Railac Sono and then poured both a drink. After closing the bottle, he held up his glass.

»Railac, let's toast to the success of our forces and that this homeland will be ours in a few weeks.«

Railac Sono smiled when he raised his glass to toast with Roan Quam but deep down, he knew that something was wrong. Never ever had he and Roan Quam raised their glasses for a toast like that, even though there had been many good occasions where that would have been more than appropriate. Why now? What made this occasion different from others? This almost felt like a goodbye. But not like a temporary goodbye. Did Roan Quam not expect him to return from this war of conquest which he was about to lead? He was not sure. But he was quite certain that from now on he would have to watch his back.

23

A couple of days ago Bran Taliesin and Kimal Abuno and more young men coming with them from the valley had joined up with the combined forces led by Gil Ulan, Svan Kumo and Ketan-mo. From their well camouflaged observation posts at several cave entries, they watched for any signs of Roan Quam's army coming their way. It was around midmorning when the first reports came in. The approaching force was quite large. They could not count the number of aircraft from this distance yet, but Mog Sinan had told them the day before that Central's intelligence believed there was credible evidence that about seventy aircraft, fully manned, would soon be coming their way. In that case they had to assume that the enemy force could number up to nine hundred or even one thousand soldiers. At the time, the approaching force was first detected it was not clear if these aircraft were headed towards a single landing site or multiple sites. But given its size, Bran was certain they would not just land at one site. About an hour later it was clear that they were approaching two different landing sites in the foothills of the mountain range.

Bran told Gil Ulan and Svan Kumo to get ready to quickly head down through the woods while the aircraft were still approaching their landing sites. The landing sites the approaching forces had chosen were too far down from the caves to attack them directly from there. Also, it would have been a mistake to do so as it would have given away the location of their hideout. The young men from the valley, except for a few guides coming with them, would stay behind in the caves for now. Given that the enemy force seemed to be split between the two landing sites in a roughly two to one ratio, Bran decided to split his force in the same ratio. Gil would be heading down with most of his team and several of Svan Kumo's troops to attack the smaller landing force while Bran with Kimal at his side would lead their larger force with Svan Kumo against the main landing party. With the enemy aircraft still circling, the two columns heading down the mountainside to oppose them had positioned themselves in the wooded areas above these landing sites. At each of the landing sites, the combined forces of Central and the city waited until the first few aircraft touched down. Then, before more than a few enemy troops could disembark the shooting began.

Their ray guns were devastatingly effective. First, they disabled the aircraft on the ground and then they began to attack those approaching the landing site. Their ray guns did not destroy an aircraft outright, all they did was to completely disable the aircraft's electronics. Even if an aircraft was hit, a skilled pilot could still crash land it by manually deploying the huge parachutes an aircraft was equipped with for just such a case. Sure, there would be some injuries, maybe even severe ones, but fatalities were unlikely. As they managed to bring down a considerable number of aircraft the number of enemy troops on the ground kept increasing. And as these enemy troops opened fire, targeting the locations from which they thought they were being attacked, Bran as well as Gil ordered their troops to retreat higher up on the mountain slopes. Their plan had been to take out as many enemy aircraft as possible without sustaining losses themselves and then retreat higher up, calculating that enemy troops would not pursue them as the enemy's priority had to be to secure its landing sites, establish security perimeters and to fortify their positions before trying to fight their way uphill. And this is just what happened. Slowly, the forces of Central and the city moved back up the mountain into the protection of the caves leaving only a few men of the valley as sentries behind. These would quickly alert them if the enemy should decide against the odds to fight its way into the valley before the next day.

Once they were all safely back in the caves, Bran, Gil, Svan and Ketan-mo assessed their situation as more detailed information was coming in from sentries they had left behind regarding the damage they may have wrought on the enemy. From what it looked like, they had taken out almost half of the enemy's aircraft. They also seemed to have inflicted many injuries which would diminish the enemy's fighting force not only because it reduced the number of fighting men the enemy could deploy against them but also because those injured soldiers had to be cared for. There were no injuries among their own troops, except for a few sprained ankles. When Bran, Gil and Svan discussed potential enemy losses or injuries, Ketan-mo remained silent. Bran was not quite sure as to why Ketan-mo would not offer an opinion but thinking about what Hakan had told him about the people of the valley people he had a suspicion.

»Ketan-mo, what have you observed? How much do you believe we have weakened

the enemy?»

Ketan-mo looked at Bran and the other two as if he were not quite sure how to answer Bran-mo's question or if he should answer it at all. But then he did answer Bran's question.

»The larger of the enemy forces suffered twelve casualties and some one hundred forty injuries while their smaller force suffered one casualty and about sixty injuries. The greater relative number of casualties in the larger force was not caused by us but by two of their aircraft colliding when they were just about to land.«

Gil and Svan could barely believe what they were hearing but not so Bran. He had suspected that Ketan-mo would know the exact numbers of casualties and injured among the enemy, because he must have sensed himself how many were hurt when he had accompanied Gil's forces attacking the smaller landing party while some of his men who were with Bran's force attacking the larger landing party must have reported what they had sensed to Ketan-mo.

»You are guessing Ketan-mo, right?» asked Svan Kumo with disbelief. »You cannot know these exact numbers? Or can you?«

»I am not guessing Svan-mo. My people know these are the correct numbers.«

»But Ketan-mo, how?» asked Svan-mo even more amazed.

»Your people and my people are different Svan-mo. Your people can do things my people cannot and vice versa my people can do things that your people cannot do.«

The way Ketan-mo had given his last answer he considered this discussion to be over. So, when Svan was about to ask another question Bran signaled him quickly not to. Hakan was right, these people were special. Bran wondered to what extent Ketan-mo and his people could sense emotions. Did they actually experience the fear and the pain of those dying or suffering from injuries? When Gil and Svan had told him that the people of the valley could not and would not kill any of the enemy, he was not sure how that connected to their ability to read emotions. Could it be that, if they ever tried to hurt or kill someone else, they would have to feel their victim's despair and trauma. To what extent was it their conscience which kept the people of the valley from hurting or killing others? If they would not have to feel their victim's pain, would they then have less

inhibition to hurt or kill others? What about the attack Ketan-mo's people would launch on the enemy tonight? Will his men have to endure the same pain they will subject their enemies too, or could they protect themselves in some way? As Bran looked at Ketan-mo he could not help but think that their two subspecies might differ from each other quite a bit more than one would suspect just by their physical appearance. Silently he asked himself in what other ways Ketan-mo's people were different from his own.

»Ketan-mo, is there anything we can do to support your people when you attack tonight?« asked Bran changing the topic.

»No, thank you Bran-mo. But I and my men must now use the time we still have to prepare ourselves for what we will have to do later tonight.«

He is not talking about any physical preparation, Bran thought. This must be about their mental or emotional preparation for the attack. Bran was sure of this when the four broke up their meeting and Ketan-mo with most of his men moved deeper into the caves, leaving only a few of his sentries behind at the cave entries where they could watch what was happening down the slopes in the pitch dark of this night. Even with his night vision goggles Bran had not been able to detect anything down there where the enemy must be. But he was certain that the eyes of these sentries would penetrate the darkness of this night much better than his night vision goggles.

Just past midnight, after trying unsuccessfully for some time, their communications experts were able to set up a connection with Mog Sinan. The news Bran and Gil received from Mog Sinan were not good. Roan Quam's expedition force which he had deployed to the fake homeland coordinates in the north was attacking the decoy expedition Central had launched just about one hundred kilometers south of it. Central's forces sustained heavy losses, but they were not as severe as the losses suffered by Roan Quam's forces. The heavy fighting in the north was still going on as they spoke and that was good news as well as bad news. The good news for the people of the valley and the combined forces of the city and Central defending them was that these enemy forces in the north would not be able to reinforce the troops now attacking them. The bad news was that none of Central's decoy expedition forces could be redeployed to strengthen the valley people's defenses. Central still had some back-up forces right onshore but those were not

immediately available. Mog Sinan believed they should be able to move some of the forces they had positioned to threaten Roan Quam's headquarters once they got confirmation about the reduction in troop size there.

»No need to wait for that information, Mog« offered Bran, »we are quite certain that the strength of the enemy force which landed today is about nine hundred soldiers. Your intelligence about the seventy fully-manned aircraft coming out here was right on the mark.«

»I will pass this on to our military leaders right away, Bran.« That should help them to make a quick decision about the number of forces they can spare to send your way.«

»Whatever they can spare will help us. But this time they should send the transport craft right into the valley. We do not know how long we can hold our position on this side of the mountains. To be honest, much will depend on the attack that the people of the valley will launch tonight. We have no idea how much they will be able to weaken the enemy. As it is Mog, we have no idea of how they are even going to do that although I have a suspicion.«

»And what is your suspicion, Bran?«

»I believe it has to do with their ability to sense emotions. After we attacked the landing parties today, their leader gave us the precise number of enemy casualties and injuries. In my opinion they could only know those numbers if they felt the individual pain of those people dying or being injured. The positions we had taken to attack the enemy were about two hundred meters away from where the enemy had landed. Can you imagine Mog, sensing someone's pain from some two hundred meters away? Maybe they can not only sense pain but also cause it, I mean the emotions associated with pain.«

»Hard to believe Bran. But evolution sometimes works in astonishing ways. Please inform us as soon as possible once you know how effective or ineffective the attack has been which these people will launch tonight on Roan Quam's forces. Our future strategy will very much depend on correctly assessing these people's capability to defend themselves.«

»I am confident Mog, that Ketan-mo, the leader of this native force, will be able to tell me exactly how many of Roan Quam's forces his men have been able to incapacitate.«

»One more thing just occurred to me, Bran. It may be a long shot. But if these people can sense the emotions of others so precisely at that large a distance, maybe there is a chance they can target some of the leadership personnel. I figure the emotional costume of a commander might differ quite a bit from that of the common soldier. By the way, it looks like the force attacking you is led by Roan Quam's right-hand man. His name is Railac Sono. If these people could take him out that would have a major impact on this force.«

»I will pass that on to Ketan-mo in an instant,« said Bran as they ended the call so he could talk to Ketan-mo before the people of the valley were moving out to attack the enemy.

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Railac Sono was livid. Almost half his aircraft were gone. About casualties or injuries, he could not have cared less. This was war and soldiers died in wars. But losing so many aircraft was unacceptable. He had crashed with one of the first aircraft which was shot down just before it was about to touch ground. Like all the other men on this aircraft, he had escaped with minor injuries. Why did they not know that the enemy would welcome them like that? He was not asking his intelligence officer this question, he was shouting it at him. But he did not get an answer because he was not waiting for one and instead continued to shout at the officer. Had he known about the size and capability of the enemy then they would have landed somewhere out there in the desert and would not have lost a single aircraft. The other commanding officers sat around this makeshift table in the general's tent, no one daring to speak while Railac Sono vented his anger. Even though some among them wondered why their general had not taken that precaution in the first place. As it were, they had no reliable intelligence about the enemy in the first place. They did not know if the enemy was present there at all or if it was present there in force. In that case, would it not have been the prudent decision

not to land here at all but out there in the desert? But none of the officers spoke up. They knew what the consequences would be, so they just waited for the storm to subside. Relief came in the form of a soldier entering the tent and waiting for permission to speak. When after a minute or so the general realized that the soldier was waiting to speak, he just waved at him and learned that communications had been established with the second landing party. They had sustained similarly heavy losses. The soldier left the tent with the order for Sati Oufone, the commander of the second landing party, to call into their meeting.

»Colonel Ximen, Colonel Oufone, how far have we progressed in securing the perimeters around the landing sites?« asked General Sono in a more measured tone once Colonel Oufone had joined their meeting remotely.

Colonel Ximen, the commanding officer of the larger landing party, reported that the landing site was secured, and had begun to fortify positions around the landing site so they could efficiently repel an enemy attacking them. Colonel Oufone reported the same status for the smaller landing force.

»Colonel Ximen and Colonel Oufone,« the general began again, »you two must ensure that our defensive positions are fully established before tonight. Unless I am completely mistaken, the enemy will attack us again tonight. I am sure all of you noted that once we had disembarked most of our soldiers and they began to spray possible enemy positions with gun fire, the enemy did not engage us in a gun battle but quickly retreated somewhere into the woods. There is only one explanation for that. This enemy force is much weaker than our force. Otherwise, they would have taken the opportunity to destroy our landing force once they had immobilized almost half of our aircraft. They only fired their ray guns at us, and these won't help them much once we attack them with our light and heavy infantry weapons. Does any of you think differently about that?«

Nobody spoke up. It made sense what the general said and contradicting him would only cause problems. All of them knew from experience that their general did not like to be contradicted. Most of the time it was better not to ask questions. But not always.

»General, what are your orders regarding the many wounded we have? Almost twenty percent of our forces have sustained injuries. Quite a few of them of a severity which will preclude these men from continuing the fight. Our capabilities to treat them are limited. We have no field hospital with us and only two physicians to take care of the wounded in a limited way. Should we fly them back once ammunition and provisions have been unloaded from those aircraft now sitting out in the desert?«

It was Colonel Ximen who had asked the question and while a necessary one it was also kind of an invited question as well as a compliment. When General Sono had realized how the enemy quickly disabled many of his aircraft, he had ordered all other transports in the air to fly out into the desert and land there at a safe distance. He did not want to lose those aircraft too and he certainly did not want to risk losing his ammunition supply and their provisions. Ximen's question in a sense complimented the general on this decision and, as Colonel Ximen knew well, it would also give the general an opportunity to show his decisiveness. And General Sono certainly enjoyed displaying his leadership.

»Good question Colonel,« said Railac Sono looking approvingly at Colonel Ximen before addressing all his commanding officers. »All of you know that we are in a war of annihilation, it is either them or it is us. There is no room in this homeland for both of our species. In this war we must always keep an eye on maintaining our tactical advantage. And our tactical advantage is keeping those aircraft here and not having them return to headquarters as was the original plan. That original plan went down the drain once we lost almost half of our aircraft today. We must keep those aircraft close to us so we can relocate quickly if the need arises. That is much more important than transporting injured soldiers back to our army's base. Colonel Ximen and you, Colonel Oufone, are to triage these men and eliminate those whose fighting strength we cannot restore within a few days. All those we cannot expect to fight again in this war shall be isolated somewhere down at the desert rim. They either die a hero's death there or they survive long enough on their own to be transported back once we are victorious.«

Colonel Ximen and Colonel Oufone had worked with General Sono long enough to understand that he did not expect any of these severely wounded soldiers to survive long

enough to see victory day. Even though the general had not said anything of the sort, the two colonels knew that they were expected to ensure that the seriously injured did not become a burden to them for too long. That was regrettable but they were in a war and war had its own rules as General Sono used to remind them. Neither Colonel Ximen nor Colonel Oufone was a cruel man. They certainly did not enjoy what they would have to get done. Colonel Ximen, who sat next to General Sono in his tent, could not risk having any of his misgivings about having to execute an unspoken order like that surface on his face. Not so Colonel Oufone, who was only participating in this meeting remotely from his tent at the second landing site; he had no such inhibitions. If the general could have seen the colonel's face he would not have liked its expression. And neither would he have approved of the thoughts the Colonel harbored as he could not help thinking about what the general's orders would have been had he himself been injured severely today.

»What about our contingency plan, General Sono,« asked now Colonel Ximen the question which had been on everybody's mind around the table except for Railac Sono.

»The contingency plan is still in place,« answered General Sono the question with a barely suppressed smile on his face. »Fortunately, none of the four aircraft carrying the tools for our contingency plan was shot down so we still have this capability. And on that note, let's all get back to work so we can greet the enemy appropriately should he visit us tonight. Or are there any other questions?«

There were no other questions, only concern about the contingency plan. How desperate does one have to be to poison one's enemy using lethal agents dispersed from aircraft? When Colonel Oufone had first learned about this contingency plan, he could not believe that this was indeed something they would have to do. What had they become, what have I become he asked himself. This was not what he had signed up for. They had been told that it would be up to them to secure the future of humankind. Colonel Oufone, like many others who had joined this army, believed that they must return to a life on land. Their oceanic civilization was clearly stagnating, that much had become clear to him long ago. But they had never envisioned that they would have to wage a war of extinction against people who had never hurt them. It was not just the

orders they had been given regarding their enemy; it was as much the orders they had been given on how to treat their soldiers. Killing those who showed themselves unable to overcome their scruples when ordered to kill every member of this species; children, women, elderly – how could one justify such things? Colonel Oufone knew that he could not and would not obey such orders. Never.

Everything had remained quiet along their security perimeter. It was past midnight and it was pitch dark out there. Colonel Ximen began to think that his general may have been wrong after all and the enemy would not attack them during the night. But unbeknownst to him they were already being watched by eyes which could see through a darkness their own eyes could never penetrate. Ketan-mo and the larger detachment of his men had positioned themselves in a half circle uphill just outside of the security perimeter. His second in command was in a similar position above the enemy troops at the second landing sight. Ketan-mo and his men could sense the emotions of all soldiers positioned around the perimeter. If an enemy soldier had even the slightest suspicion of them approaching, Ketan-mo and his men would detect the emotion which would accompany such a suspicion immediately. In this way they moved silently so close to the soldiers along the security perimeter that they could have talked to them without those soldiers noticing anything unusual.

When Ketan-mo and his men began their coordinated attack the impact on the soldiers around the perimeter was instant and devastating. Heart-rending screams echoed through the night as soldiers tried in convulsive movements to free themselves from a terrible and invisible enemy. None of the soldiers under attack were capable anymore of coherent thought, not to speak of using their weapons to defend themselves. The terrible noise alerted the enemy camp. Orders were given and soldiers rushed to help their comrades. But to no avail. Before they could even make it to the security perimeter they collapsed, crying out their pain in agony. Colonel Ximen was in front of his tent issuing orders when he saw General Sono approaching him rapidly.

»What is happening Colonel Ximen? Why is it that none of our soldiers are using their weapons to beat back the enemy?«

»I do not know General. Something very strange is happening. I will go with the soldiers and check myself what is going on.«

But Colonel Ximen could do nothing more than his soldiers to fight an enemy who was using a weapon against which they were powerless. After some twenty minutes no more soldiers were storming towards the security perimeter as General Sono had ordered them to establish a new security perimeter right around the camp. It was better to pull in their defense line instead of sending out soldiers towards an invisible enemy whom they seemed to be unable to fight. It was hard for the soldiers to hear the screams of their comrades lying out there in the distance without being able to help them. But slowly the screams turned into lamentations and then into whimpers. Only many hours later, with the first daylight, did General Sono send out reconnaissance troops to check on the soldiers lying out there who had become completely quite hours ago. What they found was almost incomprehensible. None of the soldiers they found had been killed but all of them were in a state of agony not reacting at all when spoken too. When Colonel Ximen was brought back to the camp on a stretcher and Railac Sono saw the terrified look in his eyes which seemed not to recognize anything going on around him, he began to understand that he was dealing with an enemy far more dangerous than he ever could have imagined. After listening to one of the two physicians, who gave him an initial assessment of what might have happened to these soldiers, General Sono was almost certain that his enemy must have some kind of psychic weapon.

To Victory

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Bran had been waiting outside the cave entrance from where Ketan-mo and his men had left a couple of hours earlier to attack Roan Quam's forces. When the people of the valley began their attack there was no gunfire echoing through the darkness, just humans screaming in pain at a volume and a pitch cutting right through one's bones. Hearing these screams from down there rolling up the mountainside almost paralyzed him. Never had Bran Taliesin heard so many human beings crying out in agony like this. What power must these people have to cause that kind of pain? Now he understood why they were so reluctant to use it even if it was in their own self-defense. When Ketan-mo and his men had entered the cave again and Bran could somewhat make out their faces he saw nothing but exhaustion and distress staring at him. Clearly, the price they were paying for using this power must be great. He did not see Ketan-mo again until around noon the next day and when he saw him again Ketan-mo was still not quite himself. When he then learned that Ketan-mo's people had disabled some two hundred sixty soldiers at the larger landing site and some one hundred twenty soldiers at the smaller landing site he first could not believe it. But remembering what he had heard last night it must be true. If Ketan-mo's men had only experienced a fraction of the pain they had inflicted on so many enemy soldiers they may have even suffered more than those whom they had attacked. Bran was sure that they must somehow be able to shield themselves at least to some degree from the pain they could inflict on others. Because if not, Ketan-mo and his men would have had to be just as paralyzed now as the attacked enemy soldiers seemingly still were. As Ketan-mo told them, none of the soldiers they had attacked last night would be able to fight them for many weeks. Their attack had only disabled them for some time but had not killed a single man.

Given the losses Roan Quam's army had suffered on landing plus all those the people of the valley had disabled last night, there could not be many more than about three

hundred enemy soldiers left from a fighting force which initially must have been around nine hundred soldiers strong. It would not be easy, maybe even impossible, to compensate those losses because resupplying would be just as difficult for Roan Quam's army as it was for Central's forces. The respective forces in the north at the fake homeland coordinates neutralized each other and neither one of them could send reinforcements towards the homeland. The same held true for Roan Quam's forces at his headquarters and the force Central had sent there to besiege it. The result was that the people of the valley and the forces from Central and the city were now on their own, as was Roan Quam's invasion force down there along the foothills of this mountain range. Bran looked at each of the five men gathered with him around the lighted pit in the central cave which they had been using as their temporary headquarters. Gil Ulan, Svan Kumo, Kimal Abuno, Ketan-mo and Unam-mo, Ketan-mo's second in command, all had nodded in agreement to what he had said.

»Now, given the current situation the enemy and we find ourselves in,« Bran continued, »I believe we must consider two possibilities, one good and one not so good for us. First, given the situation they were confronted with, including a weapon they never had faced before, the enemy could conclude that the game was over and decide to surrender. But there was another, much less desirable scenario. The enemy, instead of surrendering might take desperate measures to prevail after all. Even with a fighting force some three hundred strong, the enemy could still do much damage. We really do not know what kind of weapons the enemy might still have at its disposal. Last night our enemy faced a weapon they had never encountered before. Who is to tell that this enemy may then not himself deploy some kind of weapon which we have not encountered before. That much I know from human history, any enemy driven by extremist convictions is often capable of immeasurable cruelty.«

»What kind of weapon do you think they may have which we do not know about?« asked Svan Kumo.

»I do not know Svan. But here is the thing. We know that Roan Quam has sent out his army to kill the people of the valley and take their homeland from them. What I kept asking myself is how Roan Quam could have any idea of how many people lived in the

valley. It could have been a few thousand it could have been a million or more. The fact is, he could not know how many people his troops would encounter in the homeland. We know his army was initially about two thousand men strong. Even if Roan Quam had sent his whole army to conquer the valley and kill all its people that would have been exceedingly difficult to achieve. Hence, he must always have had a different plan than sending his soldiers so to speak from door to door and kill everybody on sight. I fear the force facing us down there in the foothills of these mountains must be carrying some kind of weapon capable of killing many people very quickly. Without such a weapon Roan Quam could never hope to achieve his objective which must be to kill everyone in the valley in a matter of hours without making the valley uninhabitable. Given this objective, we can rule out nuclear weapons of any kind. Whatever weapons of mass destruction Roan Quam's troops may possess must be chemical or biological weapons which will kill all life in the valley indiscriminately but otherwise leave the valley intact.«

There was a long silence around the pit where the five men had come together to discuss their situation and decide on next steps. The severity of the scenario the mission chief had just verbalized weighed on each of them. The first one to speak again was Ketan-mo.

»I must warn my people Bran-mo. How can my people protect themselves against such a weapon?«

»I do not know yet how we can protect your people. There is something I must first understand and discuss with Agan-mo and your leaders. I will head back with you to the valley when we are finished here but first, we must decide what to do next regarding the enemy force down there.«

»If we could locate these weapons of mass destruction, we may be able to destroy them or make them at least unusable,« suggested Gil.

»Gil is right, we must find these weapons and destroy them before they can do any harm. But how?« added Svan.

»That might be quite difficult to achieve.«

This last statement had come from Kimal Abuno. He had not spoken a single word so far. At one point Gil Ulan had jokingly remarked to Kimal Abuno that he was even

less talkative than Ketan-mo or any of his people. But Gil Ulan knew his man. When Kimal Abuno said something, one better listened to what it was he had to say. As Kimal Abuno explained to them, the only practical way to deploy a chemical or biological weapon which would quickly kill everyone in the valley was to release the chemical or biological agent from the air. If this force at the foothills of the mountains possessed a biological or chemical weapon it would be deployed from the air. Unless these weapons had been on board of any of the numerous aircraft they had recently shot down, they must now be out there in the desert where the rest of the enemy's aircraft had landed, and thus safely out of range of their weapons.

»Kimal is right,« said Bran, looking at him. »The only way for the enemy to deploy such a weapon is through dispersion from an aircraft. We must check with our scouts to see if they observed anything since yesterday's attack which may have looked like a salvage operation. If not, the weapon or the weapons must indeed be out there in the desert.«

Ketan-mo said a few words to Unam-mo who left the group to have some of his people check with their scouts about any such activity as Bran-mo had mentioned. The people of the valley had been closely monitoring the enemy's activities since they had landed and if there had been some kind of salvage operation, he was sure they would have noticed. While they were waiting for Unam-mo to report back to them they discussed possible ways of how to destroy those weapons if they were indeed sitting out there a few kilometers into the desert. From whichever angle they looked at it, approaching this landing site in the desert without being detected would be difficult. Once one was out of the foothills of the mountains there were only a few isolated shrubs providing minimal cover. Their enemy would have no difficulty monitoring this open space for anyone trying to approach their aircraft and most certainly, they were doing that. The enemy had to make certain that its most important weapons could not be taken out and at the same time he also had to protect all the other aircraft for the simple reason that they were the only hope of ever making it back to its headquarters. They also discussed the possibility that these weapons might have been on one of the aircraft they had shut down, but Unam-mo returned and told them that their sentries had not observed any

activity which remotely could have been interpreted as a salvage operation. Now, they knew that these weapons must be out there in the desert.

»Well, that is unfortunate,« began Bran after hearing Unam-mo's report. »It will be quite difficult to destroy those weapons out there in the desert. Certainly, in the time we might have left to do that. Given the losses they suffered, I am quite certain that the enemy will seek to deploy this weapon of mass destruction now as soon as they can. I believe there are only a few days left before the enemy will use this weapon. We might still have to try to destroy them, but our priority must be to protect the people in the valley. Does any of you think otherwise?«

They all agreed with Bran. Their focus now must be the protection of the people of the valley from this coming attack. Their base line assumption had to be that the enemy would be able to deploy this weapon of mass destruction. Therefore, they had to focus on doing whatever was possible to help protect the valley's population from the impact of this weapon. Ketan-mo, Bran, and Kimal would head back into the valley to discuss what actions to take with their elders and Agan-mo. They had to act with a real sense of urgency because once they had decided on what measures must be taken this would have to be communicated to all valley people as quickly as possible. To delay the enemy deploying this weapon as much as possible Gil, Svan and Unam-mo would have to keep the enemy as busy as they possibly could. Ketan-mo said the people of the valley would also send reinforcements to Unam-mo so the coming night they could degrade the enemy's capability to fight even more than they had done the previous night. As for the forces of Central and the city, the decision was made that they should split their forces again roughly in a two to one ration and then attack the flanks of the respective landing forces. The plan was that the people of the valley would lead them to the respective positions best suited for such attacks. Bran was adamant that they were not to engage in close combat but only harass the enemy from a safe distance. The objective of these day-time attacks must be to distract the enemy and leave him guessing where he would be attacked next. If they choose to attack, it will fall again to the people of the valley who, protected by the darkness of the night, could seriously degrade the number of the enemy's fighting force.

Half an hour later, Ketan-mo, Bran and Kimal were heading up the pass on their way back into the valley while the forces led by Gil Ulan and Svan Kumo, guided by scouts from the valley people, moved into position to harass the enemy for the rest of the day.

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Ketan-mo, Bran and Kimal arrived back in the valley just before nightfall where the elders were already waiting for them. Ketan-mo must have somehow notified them in advance, Bran thought, as he discovered that the elders were at least partially informed already. After they had entered the room where the elders of this region were gathered, they were served some refreshments while Setan-me began to address everybody sitting around the table. As he listened to what Setan-me said Bran had to admit he did not know how seniority worked among these people. For some reason he had expected Amote-mo to take the word but evidently, his wife Setan-me outranked him among their elders. Setan-me summarized what they had learned and what measures they had taken so far. Evidently, a messenger sent by Ketan-mo had already arrived before them in the valley to inform the elders. As far as Bran could tell, this messenger practically must have overheard the conversation they had had around the lighted pit in the cave around noontime because he seemingly retold it to their elders several hours later, word for word. What amazing people Bran thought; and what other mental capabilities they might possess which we are not aware of. He would have to discuss this with Hakan later this evening. It looked like the elders had lost no time to warn their neighbors. Messengers had been sent out. Their job was to urge their neighbors to stop all outdoor activity in their regions and have everyone move into protective caves. What startled Bran was the message content which was making its way through the valley in this people's customary way, neighbors warning neighbors until everyone in the valley knew. Of course, he had not expected that their noontime conversation in the caves would be repeated verbatim to all the leaders in the valley. That would have been quite ineffective and who knew what kinds of different decisions leaders would make based on such a lengthy verbatim account of what other people had discussed. The message that spread

throughout the valley had to be much more precise so that each leader knew exactly what he or she should do upon hearing it. But when he learned what the message content was, he could not make sense of it. Not because it was so short but because of what it said: It is happening again.

When Setan-me had finished briefing everybody on what was happening in the valley Bran wanted to ask her about the meaning of this message but before he could do so Setan-me asked him to offer them his opinion of what could happen and how they could protect themselves even better against what might come their way than they already had begun to do. In response the mission chief repeated his assessment of the situation. What he told them confirmed what Setan-me had just said before him. But he also added a few new things he had thought about during their hike back into the valley. After they had crossed the pass into the valley, it had become clear to him that he had overlooked something in his earlier assessment. It was the view of the valley itself, he told them, which had triggered those thoughts as they had hiked down the slopes.

»When we hiked down into the valley today, I was stunned by the simple fact that as far as I could see into the valley, I could not detect a single built-up structure of any significance. Yes, there are a few structures like the building in which we find ourselves now, but there are no above-surface living quarters anywhere, at least not any I could detect. Why that escaped me earlier I do not know but evidently there is not a single village on the valley floor, not even a few scattered houses. Is that really so? And if yes, is that true for all the valley or only for this region?«

»You are right Bran-mo,« replied Amote-mo after looking briefly at his fellow elders, »nowhere in the valley do people live in above-surface structures. Therefore, there are also no villages or other larger residential congregations on the valley floor where many people would live together. The few above-ground structures in the valley all serve distinct functions for the community and are used only for those purposes. Like our current gathering in this room.«

Bran was tempted to ask as to why there were no above-surface living quarters of any kind but being quite certain that he would not get a satisfying answer, at least not now, he continued where he had left off after thanking Amote-mo for his answer.

»When we became convinced that the people attacking us might carry with them some kind of weapon of mass destruction our initial focus was on understanding if we could somehow disable such a weapon. We concluded that this would not be impossible but certainly difficult. We keep working on how we might be able to achieve that but for now we must focus on how to best protect the people of the valley from such an attack. Because there are no large residential aggregations anywhere on the valley floor and because your people have a very efficient early warning system which will help move everyone to safe shelters in the mountains, we can be quite hopeful that such a weapon of mass destruction will initially have a limited effect if any at all. The constraint the enemy is facing is simple. Whatever weapon of mass destruction it uses, the enemy must be certain that it will only impact living beings for a short time because otherwise the enemy himself will never be able to occupy the valley. That is, unless the enemy had some kind of protection against the effect of such a weapon. It is a remote possibility but a possibility which I believe we must consider.«

Here Bran stopped to give the elders time to digest what he had just told them. It did not take them long to grasp the potential danger Bran had just alerted them to. After a quick discussion it was Setan-me who asked the question.

»Bran-mo, we do not know anything about such weapons. What kind of weapon could an enemy use which he himself could be protected against?«

»Setan-me, there are basically two possible scenarios, one of which is quite unlikely. The enemy could use a weapon against which he could protect himself wearing some kind of protective gear. But we believe that this is unlikely. We would have learned by now if the enemy had brought such protective gear along with him. The other scenario is much more likely. The enemy could have developed a biological weapon against which his troops are immune, but which would kill every other human not protected in this way.«

»Are you talking about some kind of deadly disease against which the enemy has inoculated himself but to which we all would be vulnerable?« interjected Amote-mo.

»Yes, Amote-mo. Unfortunately, we must consider such a possibility. We really have no idea about what this enemy is capable of and to which length these people will go in

trying to take this valley from your people. Just think about it in this way. Your enemy had no knowledge as to how many people lived in this valley nor about their way of living. As it is, if the enemy were to use so to say conventional weapons of mass destruction he would most surely fail. Your people will be well protected in the mountains against such weapons. This enemy we deal with would certainly have considered such a possibility even if he could not have known anything about the valley, its people, and how they lived. I believe, if the enemy plans to use a weapon of mass destruction it will be one that will remain lethal to your people long after it has been deployed while not harming the enemy himself at all.«

»In that case we must capture one of the enemy soldiers as soon as possible,« said Amote-mo. »If I understood you correctly Bran-mo, we may face a biological weapon against which enemy soldiers must have been inoculated. Hence, there must be what Agan-mo calls antibodies in the blood of these soldiers which we will not find in your or Kimal-mo's blood. Don't you agree?«

»I very much agree. The sooner we can capture one of their soldiers the better. Kimal-mo has brought communication equipment with him which we can use to contact our people facing the enemy. Ketan-mo and I will contact Unam-mo, Gil-mo, and Svan-mo right away unless there is anything more urgent.«

There was nothing more urgent than capturing one of the enemy soldiers. Using a relay station manned by Nale Buane and Sid Harper, their communications specialists from Central, to connect to their troops on the other side of the mountain, it took only twenty minutes to inform them about what they had to accomplish as quickly as possible. Once this was done Bran suggested that Kimal check in with Lucy while he himself would go to see Hakan Kassius.

»No need to go separate ways,« interjected Amote-mo who had been within earshot when Bran was talking to Kimal, »Lucy has moved in with her father and Igun-me is staying there as well, as she has been for the last few years. If you don't mind, I will walk to Agan-mo's home with both of you, so you do not get lost in the dark.«

Bran was happy to hear that Lucy and Hakan were now staying in the same place. When a few nights ago he had returned to the guesthouse from his first meeting with

Hakan he had told Lucy that he had just spoken to her father. At first, Lucy could not believe what he had told her. But as she realized that she might see her father again after some fourteen years, her emotions not only overwhelmed her but also Bran. With Lucy clinging to Bran who held her closely they had then stayed up for a long time without speaking much. Eventually, when Lucy fell asleep, he carried her to her bedroom. Next morning it was obvious that she was not only excited but also nervous about seeing her father again. He talked to her to calm her down and focus on what really was important. Her father was alive, and she would see him again. Nothing else really mattered. Some ten minutes after he and Kimal had left the guesthouse they had met Hakan and Igun-me who were on their way to see Lucy. Bran took Hakan aside and talked to him about Lucy's reaction on learning that her father was alive and well and that she would see him the next day. Hakan seemed not surprised, remarking that Lucy seemed not to have changed much in how she handled such emotional situations. He himself was notoriously bad at handling such situations and Lucy must have inherited some of that. But he assured Bran that everything would be all right. They would take it slowly because they both needed time to get to know each other again and Igun-me would help them with that. Bran was curious to hear how Igun-me could help and wanted to ask Hakan about it, but he and Igun-me were already moving away from them towards the guesthouse.

Bran was still wondering about this when he saw that they had arrived at Hakan's home. Lucy was already waiting for them outside the home. After giving Bran a hug and using the opportunity to whisper quickly into his ear that everything was all right, they entered the home where Hakan and Igun-me were sitting at a table looking over what looked like complicated graphs. Watching Kimal as they walked over to where Hakan and Igun-me were sitting, Bran could see that Kimal was at least as happy to see Igun-me as he himself was happy to see Lucy and Hakan. As they approached, Hakan got up and pointed towards another room which could better accommodate all of them. Igun-me brought them glasses and a pitcher with scented water and inquired whether they were hungry but none of them were. There they sat down and chatted for a while after which Amote-mo, Bran, and Hakan moved outside onto the terrace, leaving the three younger

people to themselves. Bran was smiling as he mentioned to Hakan that Lucy seemed to have taken up a new project, namely, to observe close-up how courtship between their two species worked. Hakan and Amote-mo both laughed as Bran remarked on what seemed to be going on between Igun-me and Kimal. Bran was surprised that the two of them knew about it until Hakan explained that such things worked quite differently here and that Igun-me had already consulted with both regarding this young man.

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When they sat down on the terrace looking out over the valley Bran listened for a while to Amote-mo who explained to him the courtship ritual of his people. Bran had already suspected that the roles of the two sexes in the valley's society differed from those in their oceanic civilization. Some of what Amote-mo now explained was amusing, some of it sounded a little strange but all of that would help him guide Kimal better if he really was serious about courting Igun-me. Bran suspected that Amote-mo was giving him this introduction to the finer details of courtship among the young of the people of the valley for this express purpose. Remembering that Amote-mo was not just one of this people's elders but also Igun-me's father he assured him that he would have a man-to-man talk with Kimal on the subject. It looked as if Amote-mo seemed relieved to hear this from Bran and a quick look at Hakan confirmed for Bran that he had interpreted Amote-mo's reaction to his assurance correctly.

As the lighthearted conversation they had about gender relationships and courtship behavior in their respective societies slowly teetered out Bran's mind returned to what he had heard this evening at the meeting of the elders. What did that mean? It was all happening again. What was happening again? Amote-mo had expected that Bran would ask that question and when they had entered Agan-mo's home earlier and Bran was held up for a few moments by Lucy's joyous welcome he had quickly told Agan-mo about it. And now as Bran asked the question it was not Amote-mo who answered it but Agan-mo.

»No apologies needed for asking this question Bran. Amote-mo told me earlier that he thought you would do so, and we both believed it better that I answered you. A

few days ago, the night when we saw each other again after fourteen years, you asked me what I meant with the birth defect of our civilization in some of my notes on our civilization's history. I told you then that I would answer your question; just not yet but soon enough. Well, the time to answer this question has come now. I know you have always been interested in better understanding the history of our society and how it emerged many thousands of years ago out of the chaos into which the *Great Cataclysm* had plunged humankind. Bran, getting a better understanding of that has kept me busy for much of my life. Have you ever wondered why our historical records seemed to have such neat and clear explanations for everything? Looking at you right now, I know that you had your own doubts in that regard. And you were right. You know, unlike with exact sciences, the study of history thrives on contending views. But over time, historians arrive at what you could call a consensus. In mathematics, once you have logically proven something, that will never change. Not so in the science of history. There always is room for new interpretations and alternate perspectives – let us call them other voices - of what has really happened at a certain time, how that came about and how it may have influenced future events. Provided those other voices base their views on history on the same kind of diligent study of the relevant sources they never really go away. The views they express eventually become part of history itself. Now, strangely, in the official history of our civilization you will never find any such other voices. Everything in our history seems streamlined towards leading its students or anyone else interested in it to the very same certain conclusions; foregone conclusions I might say. Or can you remember ever encountering an example of a different view of our history, different in a measurable way from the official one?«

»No, I can't Hakan,« replied Bran after thinking about it for a few moments. »And you are right, this has always bugged me and that is likely why I have been seeking to access some of the non-edited transcripts recovered from archaic satellite databases or from equally ancient records recovered from our space colonies. But they did not give much different accounts of what must have happened around the time of the *Great Cataclysm* and the *Period of False Hopes* following it. Have you discovered other sources which do give historical records that differ from the official version of our history?«

»Yes and no Bran. Yes, I found something which told me that the history of our civilization which we offer to our people is mostly fake, at least its most important parts are. But no, I did not discover any kind of historical records which would have told me so. You see, the likelihood of finding anything in our civilization's historical archives which would have differed from the official account was exceedingly small to begin with. Don't you think that those who constructed our history would not have made sure that there were no traces left in our historical records of anything which deviated from the official account? Once I was convinced that our historical records were not really telling us our history, but rather something someone wanted to pass off as our history, I knew I had to look outside of the science of history for evidence. Maybe, I thought, there is a chance that not all sciences have been equally cleansed of any trace of our true history. In that respect the compartmentalization of science has its advantages and disadvantages. Those who cleaned up our historical records were most likely trained historians and therefore focused on the science of history. But they forgot to search thoroughly for traces of historical records in other sciences which might point to a different history than the one they wanted us to believe was ours. Because of that, I found in the science of literature what I could not find any more in the science of history. You would be surprised Bran how many references to contemporary or past historical events one can find in dramas, novels, or biographies. I must admit, it takes a lot more effort to merge such references into a coherent picture than it does to interpret historical documents, but it can be done. To answer your question, I must first tell you that there was never a *Great Cataclysm* nor was there ever a *Period of False Hopes*. There was indeed a *Dark Sky Period*, however, it was certainly not the main reason human societies eventually collapsed.«

Looking at Bran, Hakan could tell that his friend was stunned by what he had just heard, and he paused to give Bran time to collect himself. Bran had always suspected that something was not right. When he had learned of the existence of Central a few months ago and how it had secretly controlled much of their lives for countless generations, it had been quite a revelation. But now to hear from Hakan that most of the history of their civilization was a fake? How could that be? And why?

»Is there anything left in our history that is not a lie?« he asked Hakan.

»The result of all of it is not a lie, Bran. At one point much of humankind had convinced itself that life on land had ceased to exist. However, not because of any natural catastrophe but because they had made it so. There have always been people like this Roan Quam and what he and his cronies plan to do today has happened before. The people of this valley continue to remember this through the stories they pass on from generation to generation. The ancestors of these people are the survivors of a genocide, a genocide committed by those who had moved to a life in the oceans, by our ancestors. Oceanic cities never could have accommodated the many millions which in the early years of oceanic civilization were still living on land, desperately seeking to survive in whichever way they could. At the time, our ancestors were still heavily relying on land-based resources which became ever scarcer. In the end, our ancestors resorted to using weapons of mass destruction to secure the resources they thought they could not live without. I was not any natural catastrophe which killed most land-based human populations, but it was the weapons of mass destruction of our ancestors. Those still living on land who survived sought refuge in areas far from ocean shores. As far as we know, this valley is the only such refuge where a human population managed to survive to this day. Now, the descendants of those who had set out to exterminate life on land are back to complete the job. That, Bran, is the meaning of "It is happening again".«

Hakan was finished with what he had wanted to say. He tried to remember how he had felt when he had first begun to understand it all. When his aircraft had crashed outside the valley and the people of the valley had taken him in, he had already known much but not all it. It was only through the conversations with Amote-mo that he fully began to comprehend what had really happened many thousands of years ago. But he knew instinctively that he was deluding himself. No one can ever fully comprehend what humans seemingly can do to each other. He had not known anything about Central's efforts to reengineer the human genome to make them are more peaceful species. Given what he knew about history, he could understand why some may have believed that this approach was necessary. But obviously it hadn't worked, because how else could the people of the valley be threatened with extinction again? Just as Hakan followed his thoughts in silence so did the other two and not another word was spoken until Amote-mo rose up

to wish Hakan and Bran a good night. He needed to return home to Setan-me. Hakan told Bran that he could stay overnight. Lucy and Igun-me were sharing a bedroom so he and Kimal could have the other remaining bedroom. Bran only nodded in agreement and followed Hakan who showed him the bedroom where Kimal was already asleep. When Bran was lying down on his bed, his mind was still grappling with what Hakan had just told him. How could he make sense of it all?

For a different reason than Bran, Lucy and Igun-me were also still awake. They had retired to their bedroom more than an hour ago but were still discussing differences in how human relations worked in their respective subspecies, among the people of the valley and among the people of the ocean.

»Are all your men like this Lucy-me?«

»You mean like Kimal?«

»Yes.«

»No Igun-me. There may be men who are similar in their behavior to Kimal but usually each man and of course each woman has his or her own character. Is that different with your people?«

»No, it is not Lucy-me. But that is not what I meant. I mean the way Kimal-mo behaves towards me?«

»Oh, now I understand. You mean if they would all fall in love with you?«

Lucy couldn't help but laugh under her blanket. But just as Igun-me kept being curious about everything related to men coming from the oceans and about Kimal in particular, Lucy was curious to understand Igun-me's people.

»Lucy, you might not see my face in this dark room, but I can see yours quite well. And I cannot only read it from the smile on your face that you enjoy teasing me like this quite a bit, I can also read that from your emotions. You are now my sister Lucy, and you should better understand my predicament and help me instead of teasing me.«

»You are right Igun-me. Of course, I will help you but sometimes I cannot resist a little teasing. Are you never tempted to tease someone, especially someone you are fond of?«

»Of course, Lucy. To even the score, how about yourself? Do you have a boyfriend?«

Lucy was not quite sure how to answer Igun-me's question. Did she still have a boyfriend? She had not spoken to Kareem since the day before they had headed out towards the valley. It was Fjodor who had encouraged her to talk to Kareem. Surprisingly, the conversation which she had with Kareem that day did not become adversarial at all as she first had feared. There was no recrimination, not from his side and not from her, they just had talked to each other like good friends. We are not lovers anymore, she had thought after they had hung up, we are back to being friends. Since then, with everything else that was happening around her, she had not given this much thought. Not only had she not thought about her relationship with Kareem anymore, she also had never really thought about what her relationship with Fjodor could become, what she wanted it to become.

»Lucy, given your silence on the matter, could it be that you have some difficulty figuring out who among your many admirers is your boyfriend?«

»Now it is you who is teasing me, Igun-me! But seriously, I do not know any more if I still have a boyfriend or if I am about to have a new boyfriend.«

»That sounds ominous and interesting. Lucy, you must tell me all about it. I promise, I will put all our species resources at your disposal to extricate yourself from this predicament of boyfriends which you find yourself in.«

For the next half hour Lucy told Igun-me about Kareem and his family and about Fjodor. In this way Igun-me learned much about men of Lucy's subspecies. In the end, she concluded that their men were not so different from the valley's men. But she wondered how a relationship could work where one could read the emotions of the other the way she could read Kimal's, but he could not read hers. But then, Lucy could not read her emotions either and they got along well, just as if they had been sisters for a long time and not just for a few days. More than that, she loved Hakan like a father and he loved her like a daughter, even though he could not read her emotions either in the same way she could read his. Maybe, Igun-me thought, just before her mind slipped into a dreamy sleep, maybe what worked for a sister relationship and a father-daughter relationship could also work for the relationship of a couple.

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Why did they not attack again the other night as they had done the night before? Railac Sono was certain that if they had suffered a similarly devastating attack last night than during the first night after their landing, the enemy could well have defeated them. Not defeated completely of course because they could have retreated out into the desert where nobody would be able to sneak up on them and where they also still had their special weapon. But the situation was bad enough as it was. Given the many wounded or traumatized soldiers, more than one third of their total force, they could no longer implement the triage system Railac Sono had ordered. Colonel Ximen's replacement, Major Iguno and Colonel Oufone had been adamant that if they were to implement the kind of triage system the general had asked for, the inevitable result would be instant mutiny. Given the kind of weapon this enemy possessed, why had they not attacked again in force under the cover of darkness? The only indication for potential enemy encounters last night were two missing soldiers in one of their more exposed outposts. But given the decline in troop morale following the viscous attack they had experienced the night before it would not have surprised the general if those two soldiers had just become deserters. After the two soldiers had not reported back every two hours to their subcommander they had sent out a small force to check on them when daylight broke. There was no indication that those two soldiers had ever occupied this outpost as they surely must have early in the night when they were still reporting back to their superior on schedule. If there had been a fight there should have been at least some trace of their former presence, like some little piece of their equipment left behind, leftover food items or packing. But there was nothing. Not a single shot had been fired all night, not by them and not by their enemy. Hence, unless someone had sneaked up on those two soldiers and had taken them out without leaving a trace they must have deserted.

When the general returned from his short inspection trip around their camp to clear his mind for this morning's staff meeting with his commanding officers, the latter were already waiting in front of his tent. A few minutes later they all sat around the makeshift conference table listening to the report of their senior medical officer. Captain Zulan and his physician colleague had examined many of the soldiers who during the

night before had been completely incapacitated without suffering any physical wounds. After Captain Zulan had finished his report, everybody waited for the general to ask the first question.

»Captain Zulan, are you one hundred percent certain that no chemical or biological weapon was used to attack these men?«

»We are certain General that no such weapon was used on these soldiers. All our tests for chemical or biological agents which could cause such harm came up negative.«

»But Captain, could the enemy not have used a chemical or biological agent to which our tests are not sensitive?«

»Impossible, General. All tests we ran on these soldiers indicate that they suffered no physical harm whatsoever, neither internally nor externally. Given their various ages and medical histories, these soldiers are all physically as healthy as they could expected to be.«

»How can you then explain that these soldiers do not function anymore? Will they ever function again?«

»We cannot say for certain yet, General. All we know is that these soldiers must have experienced something that completely traumatized them. The closest thing I have ever observed before was when someone had witnessed something extremely gruesome happening to someone close. Like with trapped miners which in rare cases we cannot save soon enough and they have to watch colleagues and friends dying gruesome death. Just like in such cases, I would expect the soldiers to return to normal at some point in time but just not anytime soon.«

The general looked around the table to see if any of his officers had a question but none of them did. After the captain and his physician colleague had left the tent, he asked Colonel Oufone for his status report. The general did not like what he heard but the numbers which Major Iguno reported were not any better. It was not just the thirty percent of their men who were injured or incapacitated which reduced their fighting strength, it was also the number of men they now needed to care for these people which reduced their fighting strength. Overall, including the troops they kept out there in the desert to protect their most valuable assets, the general and his officers concluded

that their fighting strength was down to fifty percent. The question they faced now was whether Colonel Oufone's forces should try to break out and seek to recombine with the main force. They could not use any aircraft to achieve that, the risk of losing more of them was just too high. Which meant that Colonel Oufone's forces would have to fight their way towards rejoining with the main force. Colonel Oufone maintained that the risk was too high. If they encountered resistance, they might be easily bogged down in much less favorable terrain, maybe unable to fight their way through to meet up with the general's troops. But given that the fighting strength of Colonel Oufone's troops had been reduced to barely one hundred, they might be easily overwhelmed. After listening to his officers, General Sono concluded that Colonel Oufone's troops would not do either. They would neither join Major Iguno's forces nor remain where they were. It was best if Colonel Oufone's troops retreated into the desert, joining the forces protecting their aircraft. There, his smaller force could not be easily attacked but would be able to quickly reinforce Major Iguno's troops if needed.

After making this decision the general and his officers discussed how to best stall the enemy until they themselves would be ready again to go into the offensive. Given their much-reduced troop strength it would have been unwise to continue with their plan to fight their way up the mountainside to cross into the valley before they could deploy their secret weapon.

»Given our current situation we have barely sufficient troops to move into the valley and extinguish any remaining resistance which may still exist. I believe it is unlikely that there will be many survivors after we deploy our weapon, but no weapon is perfect. Hence, our foremost objective must be that we preserve our troop strength to finish the job once our special weapon has done its work. Do any of you think differently?«

»As that seems not to be the case,« the general continued, »let's think about how we best achieve this objective. I was informed late yesterday that the control mechanism of our secret weapon has been damaged during the turmoil following our landing here. Our engineers only discovered this when they were testing the weapons system yesterday prior to the planned deployment for today. Somehow the electronics controlling weapon delivery malfunctioned during weapon system tests and the engineers have not discovered

yet why that is so. It could be several days before repairs are complete. What this means for us is that we will have to stall the enemy until then without incurring any more major losses ourselves. Colonel Oufone, Major Iguno, what are your suggestions?»

As the general and his officers looked towards the radio through which Colonel Oufone was paged into the meeting, waiting for the Colonel's voice to tell them what he proposed, a young officer sitting next to Major Iguno spoke up. Captain Yun Haomin, their intelligence officer, almost never spoke unless he was asked something. So, when they heard his voice, everyone immediately turned towards him.

»How do we know that this was not sabotage? What evidence do we have that the weapon system malfunction was caused by our enemy?»

Almost everyone looked at the intelligence officer with surprise, which was everyone expect Colonel Oufone who was sitting several kilometers away from them in his tent in front of his radio station. However, could they have seen the colonel's face when he listened to the captain's voice, the general and his officers would have been even more surprised.

»Why do you think Captain that this could have been sabotage?» asked the general, leaning forward in his chair in the direction of the captain.

»Don't you think it is peculiar General that none of the other aircraft out there in the desert suffered any similar damage to its electronics? Some of them had been much closer to the actual landing site than the aircraft carrying our secret weapons before they were all ordered to head out a safe distance into the desert. And why is it that the electronic delivery systems on all four of our aircraft carrying such weapons were damaged and not just on one or two?»

Railac Sono continued to look at the captain; he had a point. He himself had wondered why they had not discovered this damage immediately after landing at a safe distance out in the desert. But if this was sabotage, how could that have happened? These weapons systems and the aircraft were always guarded. He looked around the table to see if the other officers might be having the same thoughts he had.

»What do you think, Captain Haomin, if this was sabotage, how could it have happened? Who could have done it?» asked Major Iguno.

»Major Iguno, I believe this was sabotage. However, what I do not know yet is whether it was carried out by one of our own or if it was the enemy who did that.«

»Then what do you propose to do in order to find out who might be behind this possible sabotage?« asked the general.

»General, if the enemy has sabotaged our weapons systems, there is only one thing we can do - better protect those weapons. But if some of our own are responsible for this we had better find out as soon as possible. An unknown enemy within is much more dangerous than an enemy outside that we can see. I would like your permission to conduct an internal investigation to find out if we indeed have an enemy within.«

»Permission granted Captain. And I order all commanding officers to ensure full compliance with whatever you will require for this investigation. We cannot risk that our most important weapon could become unusable in a second sabotage attempt. Also, Colonel Oufone, this makes it even more important for your force to retreat to our desert camp. Protecting our secret weapons will be your responsibility while your troops are stationed out there. But now, let's get back to how we can best stall the enemy. I believe we were waiting for the suggestions of Colonel Oufone and Major Iguno.«

»General Sono,« came Colonel Oufone's voice through the radio, »with the small force under my command retreating to our desert camp, there is little my troops will be able to contribute towards stalling the enemy. That said, I believe our best chance to stall the enemy and keep him guessing what we are up to is to send small reconnaissance troops along the mountainside during daytime always at a safe distance to the enemy.«

»I recommend a similar approach, General,« added Major Iguno. »Our reconnaissance troops should not move up the mountain but only should move sideways or downwards from our position. In addition, some of our aircraft should explore the mountainsides further to our north and south, always from a safe distance. Both measures will force the enemy to thin out his troops which might make it also less likely that the enemy will try to attack us in force at this site again.«

The general waited for a few moments to see if there were any further comments or suggestions and then ordered Colonel Oufone and Major Iguno to implement this tactical effort to stall the enemy. Since Colonel Oufone's new base was the desert location, he

would oversee the aerial reconnaissance, and Major Iguno would take charge of foot patrol reconnaissance operations along the mountainside.

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By late afternoon Colonel Oufone's troops were slowly retreating towards the desert and if everything went well, they would arrive at the desert location after a several-hour-march just before midnight. However, while solving one problem, moving Colonel Oufone's troop to their desert location created another one. Around where Colonel Oufone's troops had landed, there were plenty of water sources but out there in the desert there were none. Realizing this, General Sono made the decision that all the wounded and otherwise incapacitated soldiers among Colonel Oufone's troops would be carried only as far into the desert as was necessary to move them safely along the mountainside towards the general's camp. This way all injured soldiers would be in one place which could be easily supplied with water. However, they still would now have to transport water out to their desert camp for an additional hundred soldiers. Things certainly were not going according to plan the general thought. He kept asking himself why they had not had better intelligence on the enemy. If they had only known a little more about their enemy's capabilities things would have developed quite differently. Had they known for example about the existence of those ray guns he never would have ordered his aircraft to bomb enemy forces equipped with them. And had he known about this stealth weapon of the enemy, capable of taking out many of his men without physically wounding them, he certainly would have chosen to land his forces further out in the desert. But worst of all, had they known the correct location of this homeland to begin with none of that would have occurred in the first place.

How could Roan Quam have failed them so badly? What was wrong with Roan Quam? He had known him for many years now, since their student days, and never had any doubt that Roan Quam was the leader they needed. But now, after all these failures Roan Quam seemingly was deserting them. They had talked on the radio every day since Railac Sono's troops had headed out to conquer the homeland. A couple of hours ago their last conversation had ended not just with a disagreement, they essentially had

parted company. Roan Quam had told his general that Central's troops were closing in and that their forces could no longer defend their headquarters. Railac Sono had then explained to him that this was nonsense, their forces deployed around the headquarters were in such strong and protected positions that it would take Central many months to kick them out. But Roan Quam was seemingly getting cold feet, and he told his general that he must trigger their contingency plan now. When Railac Sono understood what his leader was about to do he could not help but think that Roan Quam had not just shown himself incompetent when it really mattered but that he also was a coward. Of course, Railac Sono had not expressed what he thought about Roan Quam in words just like that but nevertheless, Roan Quam must have understood how his general felt. Roan Quam had reacted angrily and in turn faulted Railac Sono for what he perceived to be the general's failures.

But regardless of their current differences, as Roan Quam had described their falling out, he insisted that Railac Sono must carry out their plan no matter what the cost. Even if they would not be able to colonize the homeland themselves right now. If the homeland was cleansed of this other human subspecies their own species could then claim it and begin a new area for human life on land. And because nobody but themselves was inoculated against this biological agent it would most likely be their soldiers who would settle the homeland first. Without knowing what kind of biological agent had been used to remove these native people from the homeland, Central would need a long time to figure out an antidote. Hence, Railac Sono must make sure that their secret weapon would be deployed, the sooner the better. Whatever soldiers he had left should move with him then into the homeland while he, Roan Quam, would look for ways to send more settlers. A while ago, Railac Sono had mused, he would have executed Roan Quam's orders without much questioning. But he did not trust him anymore. Not for a moment did he believe that he would see Roan Quam again or that more troops or settlers would be coming to this homeland; not once Roan Quam had triggered their contingency plan.

Roan Quam was no less disappointed in his general than Railac Sono was disappointed in him when he heard that Roan Quam was going to put their contingency plan

into action. The way Roan Quam saw it, his general simply did not understand when it was better to cut losses than to keep fighting. He had suspected for quite a while that their relationship would soon come to a point where he would have to rid himself of the general. That point had now come a little sooner than he had expected. He had hoped that the general would succeed in taking the homeland after which it would have been convenient to make have him disappear. The task of terminating the general, once the homeland had been conquered, he had given to Colonel Ximen. According to the general Colonel Ximen had been one of the casualties during the night attack the enemy had launched right after they had landed outside the homeland. Well, there would have been several backups to make sure the general would outlast his victory in the homeland for too long. But none of that was necessary anymore. Central would now take care of everything. If he had told the general that their forces to the north which had been fighting Central's decoy expedition had capitulated, Railac Sono may have had second thoughts about what he was going to do. While Roan Quam thought it unlikely that the general would have considered surrender on hearing such news one never could tell for sure. It's better for him not to know. Railac Sono must stay focused on emptying the homeland of those other people, nothing else mattered. And he must do so quickly now because in a few days Central would inevitably be able to send additional troops to the homeland. If those arrived there before the general had deployed the weapon, they would have lost. If not, Roan Quam was confident that they would win in the end.

Why had the general at the end of their conversation asked him if they would see each other again? Roan Quam was not sure. The Railac Sono he knew was not the kind of man to ask a question to which he already knew the answer. The general did not know everything about their contingency plan, but he knew quite a bit of it, the things he needed to know in case he had to trigger it himself. Because of that, he must know that it would be very unlikely that they ever would see each other again. If he had known all the plan, he would have known that it was impossible that they would ever meet again. All what the contingency plan was about was to secure that their organization would survive. Roan Quam had always considered the possibility that their first attempt to take control of their species destiny could fail. But failure for him only meant that he or

maybe someone else, if he should not be around anymore, would have to try again. The important thing was not that they succeeded the first time but that they would succeed eventually. Over the last few weeks, he had called in a few favors people still owed him who were beholden to him in ways leaving them no choice but to betray Central or their city. Getting a single person out of his beleaguered headquarters was difficult but certainly not impossible. Roan Quam knew that unless something dramatically failed in the next couple of days he would soon live somewhere along the opposite shore of this ocean. There, he would be reborn as a new person, with a different name, a different face and a reengineered genetic fingerprint. The genetic engineering prowess of this oceanic civilization, developed over thousands of years had its use after all; one only had to be able and willing to pay for it. Once he was beyond Central's reach, he could follow the developments at leisure and decide what to do next.

Roan Quam has always made it his primary objective to know everything. However, that was impossible and so he did not know that a few of his officers at the army's headquarters were Railac Sono's agents. Ever since the day the general had told Roan Quam that he would be leading their forces towards the homeland himself and instead of dissuading him from going Roan Quam had encouraged him, Railac Sono suspected that something was wrong. Therefore, he had left a few of his most trusted men behind to closely watch what Roan Quam was up to. They had their own secret communication channel and late each night the general would listen closely to the accounts of his trusted men. It was through them that he learned about their forces in the north capitulating. In his last conversation with Roan Quam, he had asked him each time for an update of what was happening in the north. Roan Quam knew that radio communication between Railac Sono and their troops in the north was not possible, so he assumed that he was the only source giving the general an update on what was happening there. Every time Railac Sono had asked for an update Roan Quam had assured him that their forces and Central's forces were still in a stalemate. First the general thought that Roan Quam might withhold the news of their troops in the north capitulating because he did not want to affect morale. But he should have known, Railac Sono thought, that his morale would not be affected by that at all and that he certainly would not pass on such news

to his soldiers. So why did Roan Quam not tell him? There was only one explanation. He did not want to alert his general that there would likely be additional enemy troops on their way. So what? That only meant that he would have to finish his job even more quickly than he was already trying to do. All of it did not make much sense to Railac Sono, except that this was another betrayal.

When his agents at the army base began reporting to him that Roan Quam seemed to prepare his escape and was not issuing any orders regarding the defense of their headquarters it became clear to Railac Sono that Roan Quam's contingency plan was anything but that. Roan Quam was simply deserting his army and deserting their cause. In the light of that, there was only one more thing for the general to do. And that was to order his agents to execute his personal contingency plan. Roan Quam had been right, Railac Sono thought. They would not see each other again.

A little more than twenty-four hours later the lieutenant on duty knocked on Roan Quam's door. It took a little until the door opened just as much as was needed for Roan Quam to see who was standing outside.

»Lieutenant, what is it?«

»Mr. Quam, the aircraft is ready and waiting.«

»Alright Lieutenant, I will be with you in a few minutes,« answered Roan Quam and closed the door.

They are a day early, he thought, but better earlier than late and within less than fifteen minutes he had everything he needed. Closing the door behind him he followed the lieutenant through the night. After a ten-minute walk Roan Quam could see the waiting aircraft in the distance.

»Thank you, Lieutenant, I will find my way from here.«

»Very well Mr. Quam. Safe travels.«

When Roan Quam arrived at the aircraft the pilot greeted him and helped him on board. It was a small craft but capable of crossing the ocean without refueling stops. That was it, thought Roan Quam, now we only must get out over the ocean undetected. Within minutes they were airborne and out over the ocean. Everything had gone smoothly. It was a few hours after midnight and Roan Quam relaxed in his seat to sleep. When he

woke up, they were somewhere in the middle of this vast ocean. With a joke the pilot handed him something that had to pass for breakfast; for now. Roan Quam looked out over the ocean which was home to the civilization he had sought to destroy so it could be reborn. He had failed the first time, but he would eventually succeed. Roan Quam had not quite finished this thought when the aircraft exploded.

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They had been working day and night, analyzing the blood samples taken from their prisoners and developing an antidote for it. Finding the difference between the blood samples from Bran and Kimal and the blood taken from the captured soldiers was easy. But unfortunately, what they discovered were not simple antibodies which they themselves could have quickly produced. Instead of the expected antibodies, the soldier's blood contained some kind of biological complex which would presumably neutralize the biological agent of the weapon when encountering it. Copying antibodies and reproducing them in quantity to inoculate everybody would have been quite simple. But copying a biological machine without knowing what it had been programmed to do was entirely something else. They were running out of time.

»Bran, please let's proceed with my plan. It is the only realistic option left to prevent a catastrophe.«

Bran was looking at Kimal. He knew that Kimal was most likely right, but he first had to talk to Hakan to see if there still might be a chance they could come up with an antidote. He knocked on the glass screen to get the attention of one of the scientists and showed her the sign. The scientist only nodded and walked to the next room from which she returned with Hakan and Amote-mo following her. Bran sat down next to Kimal. Hakan and Amote-mo would need about ten minutes to remove their protective clothing and pass through the decontamination lock. When they came out the four of them walked outside and without having to ask the question Bran got his answer from Hakan.

»Bran, I don't think we will be able to produce a vaccine in time to be useful. I am sorry. Even if we had the resources of a Crowden Institute or a Haman Institute it might

not be possible. We have no idea if the biological agent this weapon presumably disperses becomes active on body contact or if it must be inhaled to become lethal.«

»We must destroy this weapon before it destroys us,« added Amote-mo, »even if many of our people die in the effort to destroy this weapon it will be better than my whole people perishing.«

»We will destroy it tonight, Amote-mo,« replied Bran, »and if what Kimal has suggested works then only a few might have to give their life to save your people. We will be leaving in about two hours.«

The two scientists went back into the laboratory while Bran and Kimal walked to Hakan's home to get their equipment and to change. Lucy and Igun-me were still out when they arrived. Packing took each of them only a few minutes and then they sat down in Hakan's living room to wait for Igun-me and Lucy to return. To shorten their wait time, Bran began to tease Kimal about his progress with Igun-me.

»I don't want to rush things Bran,« Kimal retorted, »I really like her very much. She will need time, and I need time. We both come from different people, but for me it is as if I have known her for a long time.«

»So, I guess you are planning to stay in the valley once this is all over,« asked Bran.

»Yes Bran, this is what I would like to do, if that is possible.«

»Why should it not be possible Kimal? Hakan has been living with these people for some fourteen years.«

»Maybe they don't want me to stay.«

»Don't be silly Kimal. Clearly Igun-me likes you too and I can't see her parents objecting to you staying here.«

»I hope you are right Bran and... oh look, I believe they are back!«

Igun-me and Lucy entered both laughing and did not stop laughing once they saw Bran and Kimal waiting for them in the living room. After approaching the two, they stopped and unrolled a bundle that each of them had been carrying, thus handing them their new uniforms.

»With greetings from the best tailors and seamstresses of the valley,« said Lucy,

»let's hope we measured everything correctly last night.

Bran and Kimal went to their bedroom to change into their new outfits and a few moments later returned dressed as soldiers of Roan Quam's army. According to the captured soldiers the insignia on their uniforms identified them as common soldiers. Given Kimal's age, he could easily pass as a private. But for Bran it would be a little more difficult to get away with it, at least in broad daylight. But with some hair color and under the cover of a moonless dark night nobody would become suspicious because Bran still moved around like a young man.

»Well, I guess it is time to say our goodbyes Kimal. We must leave in a few minutes. Ketan-mo and his men are waiting for us.«

With that he indicated to Lucy to follow him outside on the terrace. Lucy got the hint and winked at Igun-me as she followed Bran onto the terrace.

»You feel right at home here, do you Lucy?« Bran asked her with a smile when they were outside.

»Yes, I do Bran. As it is, Kimal is not the only one planning to stay here. Do you think you can bring back Fjodor with you from the expedition camp site in the valley next time you return.«

»Do you think he will want to stay in this valley with you?« asked Bran, barely able to hide his grin.

»What are you grinning about Bran, there is nothing to grin here. And yes, I believe he will want to stay with me in this valley. Of course, for scientific reasons only,« she said, now grinning herself.

»Well, that's great for science!« Bran countered her last remark grinning even more.

Before they could continue with their banter Kimal came out and called for Bran. It was time to leave. After Bran and Kimal had left the home Lucy turned to Igun-me but before she could even open her mouth Igun-me laughingly signaled her not to ask any question now about her goodbye with Kimal.

When Kimal and Bran arrived at the people's ground to meet with Ketan-mo they could see that he had assembled a much larger contingent this time. Bran estimated

that over one hundred young men were sitting on the hillsides surrounding the people's ground. When Bran quizzingly looked at Ketan-mo he told him it was much better to attack with a larger force as the pain and stress which each of them would have to experience during the attack would be quite a bit less. So, Bran thought, they really do experience some of the same pain they have to inflict on their enemy to incapacitate him. What a clever way to prevent war if the attacker must share some of the pain he inflicts on the ones being attacked. We could learn a lot from these people if we were ready for that. Before he could follow this thought any further Bran's attention was drawn to some strange looking devices some of Ketan-me's men were carrying.

»What are these«? he asked Ketan-mo pointing to one of the men carrying such a device.

»These are amplifiers Bran-mo,« replied Ketan-mo and then added, »but they are not ordinary sound amplifiers. Explaining the details would be too difficult but essentially, they amplify emotions if one knows how to use them. With their help these hundred men can project the force of roughly a thousand men attacking. The advantage is that only the enemy must endure this amplification and there is no additional pain for us.«

Bran nodded that he had understood and silently thought himself lucky that he would not be at the receiving end of this emotional force weapon. After a few exchanges with several of his men Ketan-me signaled to Bran that they would begin their march up to the pass. They left the site of the people's ground in the early afternoon and reached the pass some four hours later. The physical strength of these people continued to surprise Kimal and Bran. Both were physically strong but were sweating profusely to keep pace with the people of the valley. From the pass down they moved slowly and carefully not to be detected by the enemy and reached the cave headquarters where Gil, Svan and Unam-mo were expecting them. Ketan-mo's men retreated deep into the caves to prepare themselves for tonight's attack while Ketan-mo, Bran, and Kimal were updated by Gil, Svan and Unam-mo on the current situation. That the enemy had dissolved the smaller camp made the job for Ketan-mo's force somewhat easier. But with more soldiers now out there potentially guarding those weapons of mass destruction, Bran's

and Kimal's job had become more difficult. It did not take much to convince Bran and Kimal that instead of just the two of them sneaking up on the enemy's site out there in the desert, Ketan-mo and a few of his people should go with them. It would be a pitch-black, moonless night and Ketan-mo and his people could guide them out there not just more quickly but also more safely. Once out there, Ketan-mo's people would stay back and only spring into action in an emergency. It would be up to Bran and Kimal to make the final approach undetected and to cripple the aircraft which were carrying those weapons of mass destruction.

»How will you know which aircraft to destroy?« asked Ketan-mo.

»I am certain those will be easy to identify as they will have additional protection around them,« answered Bran.

»What if tomorrow the enemy moves the weapon to another still functioning aircraft?« came the next question from Ketan-mo.

»More important than destroying the aircraft which carry those weapons is to destroy the weapons delivery mechanism. I discussed this at length with Agan-mo and we were both quite certain that the weapons delivery mechanism must be hardwired into the aircraft. So, if we destroy the aircraft, we will also destroy the delivery mechanism. But we must be careful not to damage the weapons themselves too much. If we cannot do that and the biological weapons agent somehow is released none of us would likely survive this, but the enemy's soldiers would.«

Everyone understood the risks they were taking. But all of them knew what was at stake. If their mission succeeded but they would not make it back themselves, it would be worth it. It was just after midnight when Bran, Kimal, and Ketan-mo with several of his men headed downhill towards the desert. About an hour later, the hundred plus men led by Unam-mo also moved downhill to slowly encircle the enemy's camp from all sides but the desert. Gil and Svan with the rest of the expedition team and the forces of Central along with several of the valley people supporting them as guides stayed back to block enemy forces from crossing the pass into the valley. Ketan-mo led the small task force which was to destroy the delivery system for the enemy's weapons of mass destruction not directly out into the desert. Only after hiking for more than half an hour parallel to

the desert rim and above the enemy's main encampment did he lead them out into the desert. Their plan was to move out into the desert far enough so they could approach the enemy camp coming from the desert where the enemy would least likely expect an attack. It took them almost two hours to move into position. Some two hundred meters away from the enemy position, even so Bran and Kimal could not detect anything yet, Ketan-mo and his man had already detected the parked aircraft. As Bran had predicted, there were guards positioned around some aircraft, four of them; those must be the ones equipped with those weapons. Except for the six guards protecting the aircraft, they could not see anyone else. The enemy camp was shrouded in darkness, only the guards' flashlights occasionally scanned the horizon in different directions. Ketan-me pulled out the signaling device, inflated the balloon and then released it. As he had explained it to them, at a certain height the balloon would emit a light signal at a wavelength which just like the enemy, Bran and Kimal would not be able to see, but which could easily be detected by Unam-mo and his men. This signal would be the sign for Unam-mo to launch the attack on the enemy. Sure enough, a little more than a minute after Ketan-mo launched the balloon they could hear screams echoing through the night. Even though they were a few kilometers out in the desert there could be not doubt of what was happening. Now they had to wait and observe how the enemy's forces here at their desert site would react.

Colonel Oufone immediately realized what was happening. Given the distance from which these terrifying screams were coming he concluded that this night's attack was even more massive than the first such attack they had suffered. The general had given him unambiguous orders regarding what it was he must do if there was another enemy attack, and he believed that the general's forces might be overwhelmed. What a terrible weapon the enemy must possess, the Colonel thought, and still, these people were not even physically hurting them. From his medical officer he had learned that all soldiers hurt in the first attack would highly likely see a full recovery, but it would take time. This enemy, if it was an enemy at all, was only defending his homeland and did so without killing his attackers. How could he, in good conscience, order their weapons of mass destruction now being deployed immediately as the general had ordered in case

his position should be overrun? Even before he had learned that the enemy's weapon only incapacitated their soldiers for many weeks but nothing more, Colonel Oufone had already resolved that he could not and would not follow the general's orders. When the officer on duty stormed into his tent asking for orders, he told him that they must move in force to support the general's troops and only leave a small contingent behind to protect the site. Within fifteen minutes the Colonel and the bulk of his troops stationed at the desert site were on their way to support the general and his troops. The Colonel knew that he was not marching to help the general fight an enemy but to help care for all the incapacitated soldiers he expected to find there.

Bran, Kimal, Ketan-mo and his men had been waiting for this moment. After the enemy troops headed out of the desert site had covered about half the distance towards the enemy's encampment on the foothills of the mountains they sprang into action. Within a few minutes Ketan-mo and his men approached the guards and overpowered them so quickly and effectively that Bran had not even heard a sound. Signaling Bran and Kimal with one of the guard's flashlights that they could get to work, it took the two of them less than a minute to get to the four aircraft which had been parked separately from the others. They opened the door to one of the aircraft. There was no way they could disable the weapon delivery system in total darkness. Bran considered the two choices they had. Boobytrapping the aircraft and then blowing them up from a safe distance. Or using a flashlight to dismantle the weapons delivery systems. The downside of the first option was that the biological agent these weapons carried could possibly be released. The second option carried the risk that they might be detected. Most of the soldiers had left the site but there were still enough close by which could cause a problem. Bran briefly explained to Ketan-mo that they would have to use flashlights to have a chance of disabling the weapons systems. As Bran and Kimal went to work inside the first aircraft Ketan-mo and his men positioned themselves in a half circle about a hundred meters out in the direction from where enemy soldiers detecting their activity would likely approach. It took Bran and Kimal about ten minutes to identify the components of the delivery system and then almost another ten minutes to fully disable it. The delivery system on the second aircraft they disabled in a little more than five minutes. But just as they

went to work on the third aircraft, they heard shouting coming from somewhere in the camp and a few moments later they knew that they had been detected. They worked feverishly, and just as Ketan-mo and his men were beginning to fight off the approaching soldiers, they had dismantled the third delivery system and moved to the last aircraft. Suddenly, a few enemy soldiers were coming right up to them. They must have gone around Ketan-mo's men was all that Bran could think before these soldiers began to shoot and he and Kimal had dropped to the ground and began to shoot back.

»Kimal, we must disable this last aircraft now. You stay here on the ground and hold them off while I try to get to the aircraft. Once I am inside the aircraft, they cannot harm me much anymore.«

Bran wanted to get up and race towards the last aircraft, but he could not. Kimal was holding him down.

»No Bran, you won't go, I will. I am quicker than you and I am a smaller target. You must stay down and distract them. I will get this done.«

Kimal had almost shouted his last words and before Bran had even a chance to react, Kimal was already racing towards the fourth aircraft. In the darkness of the night, it would be difficult for enemy soldiers to detect Kimal. Bran knew that they could only guess where Kimal was moving but when they redirected their gunfire towards the fourth aircraft it was clear that they knew what Kimal might be after. Bran took his and Kimal's weapon, which he had left behind, to redirect these soldiers' attention. Shooting and rolling on the ground he changed his position several times to keep the enemy guessing how many they were and where their exact position was. Just when Bran thought Kimal should have finished dismantling the fourth delivery system he felt Kimal dropping next to him. Even in the dark of the night Bran could see that Kimal was grinning, at least he thought so. The job was done, now they could head back. But where were Ketan-mo and his men and how could they get out of here with the enemy still firing at what they thought their position was? Bran and Kimal slowly robbed their way back to the third, the second and finally the first aircraft they had disabled. Somewhere between the second and the first aircraft Ketan-mo joined them. The soldiers which had fired at Bran and Kimal had stopped firing.

They were almost out in the desert when soldiers began to fire at them from another direction. Distracted for a moment, neither Ketan-mo and his men nor Bran and Kimal had noticed two more soldiers approaching their position from behind. Before Ketan-mo, who had noticed them first, could even alert them, the first shot rang through the night and hit him. In a fraction of a second Kimal moved in front of Ketan-mo and the second shot now hit him and not Ketan-mo. The next two shots that rang through the night came from Bran's rifle and both enemy soldiers dropped dead. Bran checked how badly Ketan-mo and Kimal were hurt. Ketan-mo had a flesh wound in his left shoulder, painful but not life threatening. Kimal, however, had been hit in the abdomen and was bleeding heavily. Bran worked frenetically to stop the bleeding and with help from Ketan-mo who was back on his feet he was able to stop it for now. Ketan-mo's men had disabled the soldiers whose distracting gunfire had allowed the two attackers to sneak up on them. With that, their path out of the enemy camp was clear. After a few more minutes, carrying Kimal on a makeshift stretcher, they were on their way back to the cave. They moved fast and two hours later they arrived in the cave. There they changed Kimal's bandage and immediately transported him back to the valley. After another five hours, Kimal was lying on the operating table and after about another hour it was clear that he would survive his injuries.

New Beginning

31

A little more than half a year had passed since the combined forces of the people of the valley, of Central and the city had defeated Roan Quam's army led by his general Railac Sono. The general was awaiting trial for attempted genocide along with all his commanding officers except for one. No trial was brought against Colonel Oufone, who had sabotaged the delivery systems for the weapons of mass destruction on the day of the landing of General Railac's troops outside the homeland. Rather, he stayed at a secret well-protected facility and would be the prosecution's main witness testifying about the intent of the general to exterminate the people of the valley. But the trial kept being postponed because Central did not yet want to give up finding evidence for General Railac's contention that Roan Quam had been killed. A dead person could not be prosecuted. But until they had some kind of proof that Roan Quam was dead and not just a fugitive, Central wanted to continue the search for Roan Quam's whereabouts or his remains. Finding an aircraft which had not carried a transponder was of course quite difficult, and in the middle of the Atlantic Ocean maybe even impossible. But they would try for another couple of months. If by then no trace of Roan Quam could be found he would be tried in absentia.

Bran was looking out into the ocean through the bull's-eye window in Carleen's flat, usually hidden behind a fake wall. Since she had first shown it to him, he had been standing often in front of it, gazing out into the darkness of the ocean. Alwyn Maar had once mentioned to him that he had one of these windows in his study. Looking through such a window himself into the opaqueness of this ocean he could understand what Alwyn Maar had told him back then. But now that they had begun seriously planning their future on land, life in the ocean seemed less like the voluntary imprisonment Alwyn Maar had called it. Bran was not really looking out into the ocean but rather was looking into himself and so he did not notice the mirror image of Carleen reflected in the bull's-

eye window as she approached him from behind. Only when she gently slung her arms around him and kissed him on the neck did his mind register that he had been lost in thought.

»You know Bran,« she whispered into his ear, »if you continue to stare through that window your thoughts will eventually drill a whole right through it and sink us all.«

Bran turned around to kiss her. For the last four months he had been staying mostly with Carleen in her apartment in the Crowden Institute. He thought of them as the happiest months of his life. Many years back, when they were young lovers, they had lived together for a little more than a year. Bran had many fond memories of this time, but his happiness back then felt different from how he felt now. Sometimes he thought that when they were young, they were simply happy without really knowing what happiness was. When he had mentioned it to Carleen, she had only smiled at him and commented that he should not think that much about happiness but just be happy. But later, she must have thought about it herself because she came back and told him that thinking about it, she felt the same way. Maybe she had added, this is the difference between young love and mature love.

»Are you sure you want to do this Carleen?« Bran asked still holding her tightly.

»Yes, I am Bran. If I ever was certain of anything then this is it. I have devoted almost my whole career to the success of this institute, and I guess I have achieved much of what I had once set out to do. But now it is our time, Bran.«

»And the fact that you will be leading the establishment of a joint research institute with the people of the valley has nothing to do with your departure from your post here?« asked Bran, barely hiding a grin.

»First, I am not leaving my post here, I am officially going on a sabbatical; second, I am really going to be with you; and third, yes Bran, working with these people to create a joint research institute is a challenge I very much look forward to.«

»I guess we will both lead busy lives in the valley. And Carleen, I could have thought of no one better qualified than you for the job. Of course, I had to abstain when the vote for the nomination of the founding co-president of the new institute came up. But I never doubted that they would choose you.«

»Bran, I almost forgot why I came in here!« Carleen said moving herself gently out of his embrace. »We need to get going, or we will be late for our dinner with Juliet and Peer.«

Bran had not forgotten about it, but Carleen was right, they better be going or else they would be late. After quickly changing they were on their way to the Aksun family home. When they got there, they were not the first guests to arrive. Eireen Sawarov and Han Nakamoto greeted them in the Aksun living room, each with a drink in hand. Bran couldn't remember Peer mentioning that anyone else was invited besides him and Carleen.

»Bran, why didn't you tell me we would see Council Woman Sawarov and Chief of Security Han Nakamoto tonight?« Carleen scolded Bran and greeted the council woman and the chief of security with a smile.

»I must have forgotten, Carleen,« Bran replied with a broad smile as he walked over to greet them.

»Council Woman Sawarov,« said the mission chief, please allow me to call you Eireen tonight because in the Aksun home all guests must be on a first name basis.«

»With pleasure Mission Chief, or better Bran I should say,« answered the council woman giving him one of her genuine smiles.«

Where had the council woman's fake smile gone wondered Bran as he walked over to the chief of security to greet him. Ever since Kimal, thinking he would not survive his abdominal gunshot wound, had told him about Eireen Sawarov being his half-sister, the mission chief had thought about talking to her. But at the time he had promised Kimal that he would keep it a secret.

At dinner, he and Carleen listened to the chairman, the council woman and the chief of security tell them about the latest developments in the city. Bran had been a little out of touch with what was going on in the city over the past months. Returning from the expedition Carleen had asked him to take over as head of the history recovery panel. She had gotten the panel to a good start but now needed to focus on the Crowden Institute itself as she was preparing for their new life in the valley. So, it was this evening when they learned that the city was about to amend its constitution. For many weeks now the

city council together with all district councils had been working on drafting a coherent development program for the future of their city. As the chairman had explained it, so many things needed to be changed because of what they had learned following the skull discovery. And it would have been irresponsible to go about making all those required changes without thinking things through carefully. That had taken time but now they were close to the finish line. The city's proposals would be soon published and then citizens would have a full month to submit comments and proposed changes. Once these would have been reviewed and reduced to a set of recommended changes, the city council would vote on them.

»How much of what has happened since the skull discovery do you expect to disclose to the public? Will there ever be full disclosure?«

»Bran, this is the one question where we do not have agreement yet,« replied Peer Aksun. »Just telling our citizens that they and their ancestors have been lied to without being able to offer them an explanation which would be half-way satisfying might do much more harm than good. The council agrees on that, doesn't it, Eireen?«

»Yes Peer, it does,« said Eireen Sawarov. »At the same time, there is agreement within the council that it is of the utmost importance that we restore the outlines of our true history as soon as possible. Central has promised to make it a priority but we do not know how long it will take to accomplish this.« After which she added with a smile, »you as the head of the history recovery panel surely know this, Bran, right?«

»So, until then, will our schools not offer history classes anymore?« asked Carleen while Bran was nodding in agreement with the council woman's comment.

»Not quite, Carleen,« said Peer looking briefly to the council woman, »but we have not decided yet. One option would be to focus on local history, our city's history.«

But before her husband or the council woman could say anything more on the topic Juliet Aksun reprimanded her husband for talking too much business at the dinner table. And then she turned with a smile to Han Nakamoto thanking him for setting a better example.

»Now, Carleen and Bran,« Juliet Aksun continued, »you must tell us everything about your preparations for living among these people!«

Carleen and Bran were grateful for the switch in topics. Not that they were not interested anymore in the affairs of the city. However, they felt that a discussion of the efforts to rediscover the true history of their oceanic civilization and what came before it still had too many pitfalls. A fact which the Crowden Institute president as the former and Bran Taliesin as the current head of the history recovery panel knew better than most. And that was exactly why they did not want to get into a discussion about it.

»What do you want to know Juliet, if we have already packed?« asked Carleen Nuratu jokingly.

»Well, have you?« countered Juliet Aksun with a laugh. »But what interests me more is if there will be a little ceremony before the two of you leave this city?«

Carleen briefly looked at Bran. Anyone who knew her better would have noticed that she had blushed a little when Juliet Aksun had asked her this question.

»No Juliet, there won't be a little ceremony,« responded Bran before Carleen could answer the question, »that ceremony will take place in the valley.«

»Is this even legal, Peer?« Juliet Aksun asked her husband with an amused smile.

»There are no laws against it, Juliet,« chimed in Eireen Sawarov, »Kimal and his partner Igun-me are planning for a ceremony in the valley too?«

»Well,« Carleen Nuratu added, »then there might be three such ceremonies because from what I am hearing from Lucy, she and Fjodor plan to tie the knot there too.«

Peer Aksun was laughing as he pointed at his partner Juliet. She, he said, had thought to elicit confirmation for one such ceremony this evening and now she had received confirmation for three. They had just made her evening, Juliet admitted as they all joined in laughter.

»So, when will the two of you be leaving for the valley?« Juliet Aksun asked after they had all calmed down a bit.

»In about two weeks Juliet,« replied Carleen Nuratu. »You and Peer must come visit us.«

»For the ceremony?«

Carleen looked again at Bran who slightly pressed her hand below the table in agreement.

»Sure Juliet,« Carleen Nuratu then said, »we will inform all of you in a timely manner so you can plan for the trip.«

»Maybe I should ask Kimal to coordinate with both of you,« offered Eireen Sawarov. »I am the only living relative he knows of, and he has already asked me to be there when the time comes.«

Bran knew that what the council woman had said was not quite true. Since she was his half-sister, Kimal was also somewhat related to him. He had been wondering about what to do with the knowledge that she was his half-sister. But maybe there was an opportunity here. Picking up the thread from Eireen Sawarov, Bran was now looking at Peer and Juliet.

»What Eireen just said reminds me of something. My friends have always been part of my family and since my adoptive parents passed, they have become my only family. Han and Nala were wonderful parents so I never had any reason to look for who my blood relatives might be. Of course, until recently finding out one's blood relatives would have been impossible anyway but with the laws changed, I could see if there are still blood relatives of mine to possibly invite to our ceremony. Carleen, what do you think?«

Carleen Nuratu had no idea what had triggered Bran to think seriously about finding still existing blood relatives. He never ever had bothered about who he might be genetically related to. But if that was something he wanted then it would be fine with her and to answer his question she said so, now slightly squeezing his hand. While he had spoken Bran had not looked a single time at Eireen Sawarov but even without that he could tell that she looked at him now differently. He could still not see if she wanted him to know whether he was her half-brother or not. Why could she not just tell him or give him a sign either way?

When Carleen and Bran had returned to her apartment, he told her about the council woman being his half-sister. Kimal would understand, he thought, that he could not keep this a secret from the woman he loved. Carleen was surprised and a little amused. You could not stand this woman until quite recently and then she is your half-sister? Now what does that tell us about sisterly or brotherly love she asked him teasingly. But she had a point and Bran knew it.

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After her first sabbatical year had passed Carleen Nuratu asked for and received an extended leave without pay for another year but once that year had passed too, she relinquished her position as president of the Crowden Institute. By that time, she and her co-president Setan-me were running a thriving research institute in the valley. Among the institute's scientists were also women and men she had recruited from several of Central's research institutes, including of course the Crowden Institute. Among these scientists joining the Valley Research Institute were Manu Orontes, Ives Dubois, and Song-Ho Lee. The marvelous facial reconstruction of the skull whose discovery had triggered the events which eventually also led to the establishment of the Valley Research Institute was now proudly displayed in the entrance hall of the institute. Appropriately, this entrance hall was also the expanded and developed entrance to an extensive cave system that housed the Valley Research Institute.

Carleen Nuratu was not the only one to change jobs during that time. Some two years after the defeat of Roan Quam's army, city council chairman Peer Aksun had relinquished his post because with Alwyn Maar retiring, he had been elected as Central's new board chairman. As Peer and Juliet Aksun left the city for a life in the Haman Institute and the city associated with it, it was Eireen Sawarov who was unanimously elected as the city's council chairwoman. Eireen Sawarov was certainly not the first council chairwoman the city had but very few citizens would have been able to tell when it had been the last time that a woman was their elected leader. While Alwyn Maar retired from Central's board, he did not retire completely but rather moved to the valley to join Hakan Kassius as one of the Valley Research Institute's distinguished associates. There, they worked alongside young scientists on several projects without being permanent staff members of the institute. He and Hakan along with a few others, including also Amote-mo, were essentially free lancers who either worked on their own projects or supported one or more of the institute's projects and could freely use its not inconsiderable resources.

The trial of general Railac Sono and his officers took place about eighteen months after they had been taken prisoner and lasted for a little more than four months. The jury verdict was unanimous. The general and his officers were found guilty of fomenting an

armed insurrection, of murder in more than a thousand cases and of attempted genocide. They would spend the rest of their lives in several different mining facilities on the southern continent once known as Australia. There in the middle of a vast desert they would have to work as common laborers, each of them at a different location. The search for Roan Quam and the aircraft on which he had disappeared failed. He was tried in absentia and then officially declared as deceased. As for the soldiers serving in Roan Quam's army, most of them had been employees of corporations which the general or the former board member Quam had indirectly controlled. The incentives they were given to join Roan Quam's army were substantial, but they still could have said no. However, they were never told about what it was they would have to fight for, certainly not that they would have to commit genocide. After a long debate it was decided that these soldiers, all of them men, could not be allowed to return to their native cities for a period of ten years but would have to live onshore, at a place they could choose. Most of them had no family but those who had could have their families join them onshore. If after this ten-year period they had not committed any additional offenses, they would be allowed to return to their native cities.

The mission of the Valley Research Institute was two-fold. Its first objective was to thoroughly understand the genetic differences between the two species living on the planet today and to find out how these differences manifested themselves physiologically. The second and equally important objective of this institute was to rediscover the past, the past they had shared when they were still one species and their separate pasts after they had branched off from their common human ancestor. Regarding the first objective, initially the capability of the people of the valley to read emotions was the focus of the institute's research effort. It was easy to locate which areas of the brain were involved in this emotion sensing capability. But as with all brain functions it was much more difficult to really understand what was going on. It was not that the brain of the valley people had just added new functional areas but evidently it was also using some much more ancient parts of the human brain to sense the emotions of other people. Initially, some scientists thought this capability was in some way a unique evolutionary strategy just as, for example, the capability of bats to find their way through echo location was.

Of course, the whole thing also caught on for the simple reason that just like bats the people of the valley had lived in cave or cave-like environments for a long time. That could explain the evolution of more sensitive visual receptors which enabled the people of the valley to see much better in the darkness of the night than any of the people from the ocean ever could. However, it provided no explanation for the capability of the people of the valley to read emotions.

While understanding their emotion-reading capability remained elusive for now, understanding how these people could influence emotions was much easier. As it turned out, in one way the vocal apparatus of the people of the valley resembled that of the people from the ocean but it also possessed additional components which enabled these people to produce sound at frequencies which the people of the ocean could not hear. Recording the sound modulations in this frequency range the people of the valley used to influence emotions of others, scientists quickly built an apparatus which could accurately reproduce such modulations. Subjecting humans then to a low volume of such modulated sound quickly showed that this was indeed how the people of the valley could trigger emotions in others. How the people of the valley coordinated their individual efforts to influence the emotions of others was more difficult to explain. Just turning up the volume of such a recorded modulation would for example not increase the emotional impact on another human being proportionally. Somehow, when the people of the valley attacked their enemies, they not only must add their individual voices but also must synchronize them in some way. Some scholars began to believe that the valley people's weapon was more like a melody that the attackers sang together, and that it was this melody that inflicted emotional pain on the enemy.

There was also something else which became only evident once some of the people of the valley visited oceanic cities. While all of them were fascinated by these cities in the ocean, after all, their structures could be perceived as caves in the ocean, none of them wanted to live there. As it were, few of them were able to stay for longer than a few days. The reason for that was simple. The emotional noise in such an oceanic city exceeded by far what people of the valley could tolerate for more than a few days. As this became clear, the former mission chief also began to understand why there were

no villages on the valley floor of their homeland. The people of the valley could not live together in close spaces for long because they could not shut out emotions of other peoples. There was no switch they could use to turn off the hardware in their brains which allowed them to sense other people's emotions. Hence, they had to live spread out thinly over the valley. Living in caves or cave-like structures in small groups or just as a family was the only way these people could live. That also explained why there were only some eighty-thousands of them living in this valley, which could have easily supported up to one million people. For the people of the valley, their sensitivity to the emotions of others limited how many of them could live in the valley and in this way served as a kind of population control.

Another remarkable difference was the physical strength of the two species. To their surprise scientists discovered that this physical strength difference was in no way related to the intake of food which of course varied somewhat between the species. The main reasons for the greater physical strength were rooted in a different metabolism and the ability of the valley people to tolerate a higher oxygen intake without negative side effects. Many other smaller differences were discovered which were no less interesting than the more visible physiological differences. The people of the valley had evolved immunity for certain kinds of diseases which people of the ocean remained susceptible to. Cancerous diseases, which had become an eminently curable disease among the people of the oceans, were virtually unknown among the people of the valley. Much of what scientists of the Valley Research Institute learned about the genetic differences between the two species and how they related to their ability to live on land was invaluable for the effort of oceanic civilizations to resettle on land.

Central's new board chairman, Peer Aksun, had wanted his former mission chief to join him at Central in the effort to get the recolonization of land started. Bran had told his old friend that he would help him in any way he could, but that he had other priorities. The former mission chief decided to stay in the valley and focus his effort on his role as the head of the history recovery panel and to help the Valley Research Institute to achieve one of its main objectives, the rediscovery of human history. Together with Hakan Kassius, Amote-mo, and Alwyn Maar, the former mission chief used the resources

the history recovery panel could provide to support the institute's effort of rediscovering their past. Carleen Nuratu, when she headed the panel, had begun to pull together all relevant documents which Central and the oceanic cities still held in their archives. That momentous effort was still ongoing and only had a chance of success because they had the full cooperation of Central and of most cities. Mog Sinan had tasked a large team not just to support them in this effort but also to help the Valley Research Institute with acquiring the hardware it would need for that. That hardware consisted mostly of an enormous local database engine into which everything was downloaded via a dedicated satellite link and ancillary hardware to access that database locally from anywhere in the valley.

More than seventy percent of the Valley Research Institute staff were valley people. The scientists who had come from oceanic cities to the valley to join the institute were just a blip in the local population. Their presence was welcomed and noted but did not really become visible unless a larger group of them came together at one of the local events to which the people of the valley had invited them. There were quite a few interspecies marriages because most young scientists from outside who had joined the institute were single. Many of these couples also had children. However, not like in oceanic cities where human embryos did not mature in the female womb anymore but like in the valley where women gave live birth themselves. Setan-me became a doula and mid-wife to several of them, including to her own daughter Igun-me as well as to Lucy. All children of interspecies marriages were healthy, and it would remain to be seen which genes would express themselves over time in their capabilities and their physiology. While he certainly was also curious as to how his grandchildren from Lucy and Fjodor and from Igun-me and Kimal would differ, all of that was much less relevant to Hakan Kassius than just having his two granddaughters around himself as often as possible. Amote-mo and Agan-mo would continue to enjoy their evenings out on the terrace, either at Amote-mo's or at Agan-mo's home, but the long silences which had characterized their conversation were now often punctuated by two toddlers having their own conversations.

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Early on they had decided that they would have to tackle the rediscovery of their history in steps. First, they must understand what became before the so-called *Great Cataclysm*, so they could understand what caused it. Then, they would have to tackle the history of the *Great Cataclysm* itself before they could move on to the *Period of False Hopes* and finally get to the *Dark Sky Period* and what followed it. Finding historical records or references which could help them understand what may have led to what became known as the *Great Cataclysm* was difficult, if not impossible. So, they had to follow Hakan's approach and look for descriptions of temporary or past events in the literature of the day, much of which had been preserved. It took them well over a year to realize that their point of departure had to be the time of maritime discovery, more than five hundred years before the event that the oceanic civilization had labeled the *Great Cataclysm*. All their sources were translations from the original languages in which these books were written into the Oceanic language of their time. They quickly realized how much more differentiated the human world must have been back then. Where there were now two languages, the Oceanic language and the Valley language, there had once been many more. And instead of the two distinct cultures of the people of the ocean and of the valley people there had existed a kaleidoscope of cultures. Some of the people carrying those cultures and speaking those languages were numerous and powerful and others much less so. However, their technology was comparable, at least mostly. During the age of maritime discovery some countries began to occupy regions in other countries, initially to establish trading outposts. But that quickly changed as these colonies expanded and became part of the land of the colonizers, who were now no longer colonizers but conquerors. While those conquerors possessed some more advanced technology it was not yet sufficient to assure them total domination over their subject people.

The turning point was marked by the beginning of industrialization, which quickly gave the few countries in which it took place a technological advantage. It was then that the age of discovery morphed into the age of empire building. Within less than a century, a few countries controlled much of the rest of the world. At one point, one of them controlled about a quarter of the planet's land masses. The gap between rich

and poor widened rapidly. That was not only true between those who lived in the industrializing countries and those who were their subjects in the colonies. It was also the case for the wealth gap between rich and poor in the industrialized countries themselves. Historic novels describing the living conditions of workers in the industrializing countries, including child laborers as young as under ten years, painted a gruesome picture of the life of the working people. But it was even worse in the colonies. There the matter of race added to the already great misery these people had to endure, including the enslavement of millions. All of it, the rule of kings and queens, the power of the few over the many, the subjugation of whole people, and of course slavery, was sanctioned by religion. Kings and queens ruled by the grace of God and were only subject to divine judgment but not to the judgment of humans. How could people ever believe that there was a divine plan which appointed the few to exploit the many? Well, eventually they stopped believing it. Even before kings had to abdicate or where just killed outright, some of them had to share their power with their noblemen and the wealthiest in their societies. But this ruling class became even more of a burden to the people as they exploited them more systematically than the often-erratic kings and queens. At which point one country decided to cut off the heads not only of its king and queen, but also of many nobles and declared itself a republic. This republic which was born through terror then became a republic bent on conquest. The power of the people it turned out, was no less malevolent than the power of kings, queens, the noble class and rich burghers, but it was vastly more efficient in utilizing a country's resources for the means of conquest and subjugation.

As Bran Taliesin, Hakan Kassius, and Alwyn Maar began to understand the enormity of human transgressions against all laws of humanity or nature they began to appreciate a little more what may have motivated those who at the beginning of their oceanic civilization had decided to delete these chapters of their history. Amote-mo had a tough time acknowledging that this was what their common ancestors had committed. But at the same time, he now wondered less why long ago the ancestors of his people had to come to this valley, seeking refuge from extermination. Mass murder and genocide seemed to be part and parcel of the human package. Even to this day, as the recent effort of this Roan Quam to kill his people demonstrated. But then, they were just getting

started and when their study of history before the *Great Cataclysm* crossed over into the twentieth century it became even worse; much worse. It seemed as if all human transgressions predating the twentieth century, as horrible as they were, were nothing else but warm-up exercises for what was to come. Wars, revolutions and genocides were nothing new for humankind, but the scale on which they now occurred was new. It was technology which made the mass murder of millions possible. Killing always had been a gruesome experience. Killing an enemy while one had to look him in the eye must never have been easy, at least not for most people; and almost always it also killed something in the killer too. Killing anonymously was not only less bloody an exercise but also quite a bit easier on the killer's conscience. What also seemed to have helped was to picture the enemy as essentially non-human. Killing vermin was easier than killing people. It was at that point that Bran, Hakan, Alwyn, and Amote-mo decided to take a break from their study of this part of human history. It was just too much.

It had been Carleen Nuratu and Setan-me who had recommended that they step back for a moment and take a break. The two co-presidents of the Valley Research Institute had become good friends and as such they also talked about their married life. For weeks, both had watched their partners having more and more nightmares or not being able to sleep at all. In addition, Setan-me also keenly felt the emotional stress which the study of this horrible part of human history caused Amote-mo. While the four men had halted their study of history, they continued to discuss what they had discovered so far. Violence among the people of the valley was virtually unknown and Bran had experienced firsthand how emotionally difficult it was for these people to attack an enemy. Oceanic civilization was also peaceful, however, for a different reason. They had never discussed this before with Amote-mo but now they shared with him how their society had dealt with violence. After thinking about it, Amote-mo concluded that the people of the ocean had basically done the same as his people, only in their case, they had to engineer into their DNA what was the result of natural evolution for the people of the valley. In essence, his people's difficulty of experiencing emotional suffering of others was in some way the natural analog to the genetic engineering of the people of the ocean. The conclusion was inevitable: humans are violent by nature. How otherwise could they have

committed all those crimes? When he was asked whether he thought oceanic civilization should continue to edit the human genome to reduce the human proclivity for violence he did not hesitate a moment to give his answer. Most certainly he said. Just imagine, he added, how many more Roan Quams or Railac Sonos there might be?

»I believe,« commented Hakan after Amote-mo had spoken, »that it would be much better if we became more like your people rather than continuing to edit our genome in this way. As far as I can tell, the decline of oceanic civilization must be due in some way to this genetic engineering. Being more docile somehow makes us less entrepreneurial, less curious, and less inventive.«

»But Agan-mo,« replied Amote-mo, »what if this genetic engineering has nothing to do with this decline that you observe? What if this decline is due to the way your people live? If your people now move back onto land while keeping this genome modification in place, could they not become more entrepreneurial again, more curious, and more inventive?«

»Hakan,« Bran interjected, »Amote-mo has a point. This is something that we or better Central's board and the cities must consider. Don't you think so?«

After looking at Alwyn Maar who nodded in support of what Bran just had said, Hakan agreed that this needed to be investigated. Learning about the time before the *Great Cataclysm*, he had himself become skeptical if stopping the genome modifications addressing human violence would be such a good idea. They must bring this up in their next discussion with Peer Aksun. In addition, Hakan suggested that they write a short synopsis about their current understanding of history from the age or maritime discovery up to the end of this Second World War for Central's board to circulate with city representatives. It would certainly help them in deciding whether to hold on to genome engineering or to stop it.

When they continued their study of history it first looked as if things had been getting better after this Second Word War. Of course, there were still many wars, but all smaller ones. Genocides did still occur but not on the scale of what had happened during this Second World War. Revolutions still ate their children as they seemingly did when tens of millions had to perish in what then had been the planet's most populous

country. But overall, living conditions seemed to have slowly improved for most people with many leading lives their ancestors could only have dreamed of. One technological revolution seemed to follow the next one with each of them increasing the standard of living of many. Despite all those wars and genocides, world population grew dramatically in the twentieth century, from just over one and a half billion to a little over six billion; and it continued to grow. But now humanity had begun a completely different war: a war against nature. As more and more people consumed more and more, the strain on resources became ever greater. Already in the last third of the twentieth century humans for the first time consumed more resources before year end than the planet could regenerate in a year. Not even half a century later humans consumed the planet's yearly renewable resources in half a year.

So far humankind had won the battle to avoid an all-out nuclear war but was slowly losing its battle against nature. A side effect of industrialization, first noticed in the second half of the twentieth century, had been the accumulation of so-called greenhouse gases in the atmosphere. Such gases, prominent among them carbon dioxide, acted like a blanket which reflected much of the infrared radiation coming from the planet's surface which otherwise would have been dumped into outer space. The result was a slowly warming climate. There were many efforts to stop this climate warming, but they only delayed the inevitable. In the end, short-term monetary interests proved too powerful an adversary. Global warming continued unabated. When the impact of this climate change became noticeable it was already too late to do much about it. The rate and severity at which natural catastrophes devastated whole regions continued to increase year after year. But the climate crisis was not the only one humankind faced. For centuries, technology had brought immeasurable benefits to humanity, but some of its applications were now plunging it into an even deeper crisis. Everybody now had instant easy access to all kinds of information and never had it been so easy to manipulate the masses with fake information. Those who controlled the gateways to these information platforms held the keys to manipulate the masses into believing anything. It became increasingly difficult to verify what was true and what was not and government actors as well as private enterprises used this to further their agenda. Open societies were much

more vulnerable to such attacks than closed societies. The result was that open societies slowly collapsed and became closed societies. None of that changed of course reality and eventually even fake news could not pretend anymore that all was fine once the polar ice cap in the north was gone and the south polar ice cap was rapidly melting away. When sea levels rose not centimeters anymore but meters and then many meters, much of the coastal lands which had supported a rich agriculture were lost. Wars being fought over access to drinkable water and food resources became almost inevitable.

Coming to this point in human history and comparing that with what their oceanic history had told them about the beginning of the so-called *Great Cataclysm*, Bran Taliesin, Hakan Kassius and Alwyn Maar agreed that this must mark the transition to this *Great Cataclysm*. Amote-mo, not having any oceanic history background offered no opinion other than that his people had no recollections of anything going so far back in time.

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There were different interpretations of the word cataclysm. Common to all of them was that it signified a singular catastrophic event. Oceanic history spoke of the *Great Cataclysm* as something that lasted about five thousand years. How could an event last for five thousand years? Oceanic history remained silent on that. What kind of singular catastrophic event could have cast its shadow over the following five thousand years? The history of the centuries leading up to this so-called *Great Cataclysm* was full of all kinds of cataclysmic events, the consequences of which over time became more and more catastrophic for humankind. How could all those countries have failed so badly for so long? Humankind had been sleepwalking towards an abyss, an abyss of its own making. From the literature of the time, it was clear that many must have understood this, and some had warned that humankind was on a path of self-destruction. There was much debate, and many books had been written about it. Climate change became a popular backdrop in many works of fiction at the time. But there was no real course correction, generation after generation of leaders continued to pretend that things could go on like this forever, well knowing that this was not the case.

By the end of the twenty-first century the average global temperature had risen by more than four degrees Celsius and sea levels, already meters above where they had been a hundred years earlier, kept rising. Millions of people now died every year from ever more severe weather events and even more millions were dying from malnutrition and diseases. At the beginning of the twenty-first century there still existed a set of international norms and rules and the respective international bodies which could coordinate a collaborative approach of humankind to address the most severe problems. But slowly all of that changed. As more and more countries morphed from open societies into closed societies under various authoritarian forms of leadership, international collaboration began to fail. The rulers of the most powerful of those closed societies argued for a multipolar world which must no longer be dominated by the wealthiest countries. But what they really were after was not a multipolar world but a world under their domination. Never in human history had so many enjoyed the freedom to live their own lives according to their wishes than in the early twenty-first century. And never had so many cultures and subcultures been able to express themselves as freely. What a multipolar world, according to the leaders of those closed societies, would look like was quite different from that. Only what the ruling elites of those closed societies approved was allowed. Those not conforming to the model citizen which these countries envisioned ended up in jail or dead.

When Bran read through the literature describing the lives of citizens in these closed societies he was thinking about his half-sister Eireen Sawarov. If she had ever tried to lead a movement like the one that she had helped to prominence in her own city, she would not have grown old. She would have been quickly eliminated. But surprisingly it must have been women and men not unlike his half-sister fighting for what they believed was right who eventually helped to destroy the open societies which had allowed them to thrive. Just like Roan Quam had tried to use his half-sister to destroy their city with her help from inside so had authoritarian rulers of closed societies in the twenty-first century used the tools of their time to manipulate people in open societies for the same purpose. Since a couple of years everyone knew that the current council chairwoman Eireen Sawarov was his half-sister. Therefore, he could freely share his thoughts about

the role of people like his half-sister in open societies with Hakan, Alwyn and Amote-mo. Hakan, even though he likely had not thought about Bran's half-sister in this context, had some time ago already considered what Bran was still wondering about.

»I believe open societies very much need people like your half-sister, Bran. But they also must protect themselves against people like your half-sister being used by the Roan Quam's of this world. Governments of open societies must walk a fine line here. On the one hand they must protect the freedoms which allow people like your half-sister to challenge accepted views on the other hand they must set limits as to what kind of protests are acceptable and which are not; and they must enforce these limits. Incidentally, our friend Peer Aksun handled this challenge beautifully.«

»Yes, Hakan,« replied Bran, »you are right about that. Sometimes I wonder what would have happened if after the skull theft the city had forced a conflict with Eireen Sawarov and her movement. If Peer had not tried to find common ground with the council woman at that time, who knows, perhaps Roan Quam would have achieved his goal of fomenting a civil war. If that had happened and if it had spread to other cities, which would have been likely, Roan Quam's army could have succeeded.«

»He most likely would have succeeded,« added Alwyn, »because with similar movements like the one in your city becoming more powerful also in other cities, Central would have been forced to deal with this situation and likely would not have discovered Roan Quam's army. In addition, there would have been hostility against an organization like Central being suspected of secretly manipulating people. That in turn could have been the end of Central and with that of any coordinated opposition to Roan Quam.«

»Then I guess my people must be quite grateful to your half-sister Bran-mo,« said Amote-mo, »it is about time you introduced us to her properly.«

»But Amote-mo, you did meet her briefly when Carleen and I had our ceremony here some two years ago. Don't you remember?«

»Of course, I remember Bran-mo. But someone who may have helped save my people deserves more than a simple handshake greeting at a wedding.«

Laughingly Bran agreed to see to it that his half-sister would visit the valley again soon and then Amote-mo could have his wish. But it would not be easy because from

his now regular conversations with her he had a good understanding of how busy she was. Then returning to the topic at hand he asked Hakan why he believed so many open societies failed in the twentieth century. What was it that made closed societies attractive?

»Before I can try to answer your question Bran, we need to look at our individual liberties,« began Hakan. »Our individual liberties are a wonderful thing but if we use them to change an open society in a way which will restrict the liberties of others then this cannot be tolerated. Individual rights always come with individual responsibilities. Each citizen in an open society carries the implicit responsibility to uphold and defend that which makes this society an open society. This is quite different in a closed society. There, few would fight to uphold the restrictions imposed on them by authoritarian rule. In a totalitarian society without separation of powers between the legislative, executive and judicial branches, this would simply be too dangerous. The restrictions of individual liberties in a closed society can only be kept in place by force. Now, there is nothing worse for a closed society than to live next to an open society. Closed societies cannot want their citizens to know what life in an open society is like. So, they try to keep this information from them. They can do so by manipulating and controlling the information available to their citizens. Or they can seek to convert still existing open societies into closed ones. Both of that happened in the twenty-first century. The result of which was that at the end of it there was barely an open society left.«

»I accept all that Hakan, but it does not answer the question as to why specifically in the twenty-first century so many open societies turned into closed societies.«

»Let me share my thoughts on this Bran,« Alwyn jumped in, »I am curious whether Hakan will agree with me. First, facing seemingly insurmountable challenges I believe it is part of human nature to look for simple answers. And in the twenty-first century those seemingly insurmountable challenges quickly multiplied. While the governments of open societies were trying to explain these challenges and what could be done about them there were others who either asserted that these challenges did not exist or that there were simple solutions to them which only they could implement. Parallel to such multiplying challenges, the overall economic situation got worse everywhere. Now in a

closed society that it not a big problem, people will just have to live with less and anyone complaining won't be able to do that for long. In an open society, however, one either solves the problem in a way that everybody can accept the solution, or one fails to solve the problem and things get progressively worse. Open societies in the twenty-first century failed to solve such problems, which continued to make the economic situation of most of their citizens worse. Since their governments could not solve these problems, people were looking for others who could. And again, people were looking for simple answers and those came from people whose objective was not just to gain power but to gain absolute power. It sounds strange but people elected those leaders who eventually turned open societies into closed ones. Now Hakan, am I getting close?«

»Very close, Alwyn« replied Hakan, »the only thing I would add is that practically all of those who became in this way elected leaders of open societies and turned them into closed ones had received massive support from leaders of closed societies. Without outside forces helping to manipulate the electorate in open societies none of that would likely ever have happened. It was quite a devious scheme that rulers of closed societies executed, and it worked.«

»All that sounds like in the end closed societies will always win. Or not?«

It was Amote-mo who had asked the question, but Bran had similar thoughts. Were open societies just inherently defenseless against closed societies? The people of the valley had lived in an open society for a very long time. From Amote-mo's comments during their discussion it was clear that the concept of a closed society was not just something they did not know but to them it was an alien concept. How could people ever choose not to live free? Amote-mo freely admitted that among his people such discussions would be perceived as quite incomprehensible. But what about their oceanic civilization, Bran wondered. What would happen if they began to rebuild land-based civilization, what would they turn into? And what about their oceanic civilization? It looked as if it embraced the concept of open society but was that true? Bran looked at Alwyn Maar when he asked the question.

»I understand why you are asking this question, Bran,« replied Alwyn after looking at Bran for a few moments without saying anything. »But I fear I am in no better

position to answer this question than you or Hakan are. Just like the two of you, I was not present at the founding of the oceanic civilization, nor was I privy to the thoughts of those who conceived Central and ultimately decided to keep this organization secret. All I can go by is how cities govern themselves and how Central interacts with them. I think you will agree with me that each oceanic city taken by itself represents an open society. So viewed from that perspective I believe our oceanic civilization represents an association of many open societies. The question really is in which way the secretive existence of Central restricted these many open societies. I do not think that anything Central did was ever designed to turn the open societies of our oceanic cities into more closed ones. But I believe there is a more important question which we must ask. If Central had not existed and had not done what it did, would our oceanic cities still be open societies today?«

»Alwyn, I believe you are pointing out something important here,« said Hakan after waiting a little to see if Alwyn was finished yet, »something which I believe can also help us understand the history of the twenty-first century. You know, there have been scholars who maintained that just like physics has its laws of nature, that there are societal laws which govern human civilizations. Now, I don't really believe that such laws do exist. However, I believe that certain developments in human societies make other subsequent developments more likely or unlikely. I think that the conditions existing at the beginning of the early twenty-first century were uniquely favorable towards certain developments which eventually put open societies in an exceedingly difficult position where they became just so much more vulnerable to the internal and external onslaught seeking to convert them into closed societies. For centuries human societies had progressed towards ever more open societies but as they did so they failed to recognize certain dangers. Although some people eventually realized that trees cannot grow infinitely into the sky, most continued to act as if the planet's resources could support unlimited growth forever. Looking at the living planet like we would look at a human body, the diagnosis should have been that human societies had become a cancer threatening the survival of the planet's ecosystem which supported all life on it. It was only in this cancerous environment that to an increasing number of people closed societies became more attractive

as the potential cure. In the end the conversion of open societies into closed ones was not the cure but more like an injection which almost killed the patient instead of curing him.«

»Using this argument Hakan,« asked Bran, »I could then argue that Central served as a kind of antidote, preventing a recurrence of this cancer in our oceanic civilization. Just as the limited area of this valley combined with the emotional sensitivity of these people preventing dense settlements protected the valley's civilization from this cancer.«

»Yes Bran, I believe you could say that,« replied Hakan after thinking about it for a moment.«

»But that means if people from our oceanic civilization move back to a civilization on land something needs to be in place which will prevent this cancer from emerging again.«

Hakan and Alwyn nodded in agreement with Bran, while Amote-mo wondered what would happen if people seeking to move back to a life on land refused to be vaccinated against this cancer in any way.

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There were no sources which could have educated them about how long this so-called *Great Cataclysm* had lasted. But they were certain that the five thousand years which oceanic history books claimed that it lasted were fiction. Nailing down the beginning and end of the subsequent *Period of False Hopes* was even more difficult. The four of them eventually concluded that the *Great Cataclysm* as well as the *Period of False Hopes* were fictional periods put into the history books of oceanic civilizations to give people a psychological distance to what happened back then. Probably because that could make them less inclined to ask questions about what really happened then and there, or even before those periods presumably leading up to the establishment of their oceanic civilization. The one firm data point they had was the beginning of the *Dark Sky Period*. The traces of the beginning of the enormous volcanic eruptions which brought it about could be found in the geological record. Discussing the date for its beginning with geologists from the Valley Research Institute they suggested searching for another

geological marker to bracket the period between the beginning of the *Great Cataclysm* and the *Dark Sky Period*. It was Ives Dubois who came up with the idea of using the plastic which had been deposited many thousands of years ago on ocean floors as their geological marker. Plastic was an invention of the twentieth century and so could not have been deposited there before then. They only had to get an ocean floor core sample and identify the first layer with incorporated plastic particles to determine the time elapsed between this event and the beginning of the *Dark Sky Period* with less than a two-hundred-year uncertainty; maybe even better than that.

It took almost a full year from getting a core sample of the ocean floor to sequencing its layer structure and determining the age of each layer. The result was astounding. Not more than two thousand years could have passed between the onset of the *Great Cataclysm*, which was the end of the twenty-first century, and the volcanic eruptions triggering the *Dark Sky Period*. The five thousand years of the *Great Cataclysm* and the fifteen thousand years into the *Period of False Hopes* when oceanic history books claimed the *Dark Sky Period* set in had all gone up in smoke, being reduced to a mere two thousand years, give or take a century on either side. Whoever, Bran thought, had devised this human history from before the oceanic civilization must have been very sure that no one would ever discover that the *Great Cataclysm* and the *Period of False Hopes* were nothing but historical fiction. With the help of Peer Aksun, Alwyn Maar had managed to start a project within Central whose goal was to understand the origins of this official version of human history that oceanic cities had been teaching their students for who knows how long. This project progressed slowly and the results it produced were meager. Those at Central working on the project concluded that much effort must have been spent long ago to obscure the sources from which the official version of history their civilization possessed had been generated. The origins of their official version of history remained obscure except for the fact that it must have been crafted very early on and certainly had been in place in the oldest oceanic cities which predated the beginning of the *Dark Sky Period*.

To anyone still believing that the *Great Cataclysm* and the *Period of False Hopes* represented real historical periods and who therefore must have thought that the *Dark Sky*

Period began about twenty thousand years after the onset of the *Great Cataclysm*, such a finding would not have made a difference. But to those like Bran Taliesin, Hakan Kassius, Alwyn Maar, Amote-mo and a few others who now knew that only two thousand years and not twenty thousand years had passed between the onset of the *Great Cataclysm* and the beginning of the *Dark Sky Period* it made an enormous difference. Whoever devised this fictional history for this time period must have had a living memory of what had really happened in the two thousand years after the onset of the *Great Cataclysm*. Hakan argued that given the intellectual laziness one often encountered among scholars that the fictional twenty-thousand-year time span was the simple result of multiplying the true two-thousand-year time span by a factor of ten. With that, he also believed it likely that the one to three division between the duration of the *Great Cataclysm* and the fifteen thousand years into the *Period of False Hopes* when the *Dark Sky Period* began reflected a real distinction between two periods in history. The twenty-first century, he argued, was likely followed by a five-hundred-year period with its own characteristics which in turn was followed by a fifteen-hundred-year period which must have been significantly different in some other respects.

Oceanic history claimed that at the beginning of the *Dark Sky Period* the planet's human population was just above one billion people. At the end of the twenty-first century the planet's human population numbered twelve billion. The eleven billion population decrease in twenty thousand years proclaimed in their official history books already indicated that something terrible must have happened in that time frame. But with that time frame now shrunk to two thousand years the question was what could have produced an average population reduction of some five hundred fifty million people each century? There was nothing that would have told them anything more about this population decline. They all suspected that much of it must have happened early on and that this was what differentiated the five first five hundred years of the two thousand years separating the onset of the *Great Cataclysm* from the beginning of the *Dark Sky Period* from the fifteen hundred years following it. While natural catastrophes, aggravated by the ever-increasing impact of climate change, could certainly have accounted for many millions of people dying every year they all were convinced that it was much more likely that this

enormous decline in the planet's population was mostly human caused. Thermonuclear war - it was Alwyn Maar who first spoke out what Hakan Kassius and Bran Taliesin were thinking as well. But before they could discuss it, they had to explain what it meant to Amote-mo, whose people had no idea what a thermonuclear weapon was. That was not easy as first Amote-mo's mind refused to accept that humans could possibly conceive of such a weapon. But when Bran reminded him of the weapons of mass destruction Roan Quam had planned to use on his people he became quiet. Hakan, Bran and Alwyn could of course not read Amote-mo's emotions as he could read theirs. Although they saw how desperate he was, they could not sense the true despair of their friend when he realized that the destruction that people will inflict on each other and on their environment knows no bounds. When Amote-mo returned to his home that night, Setan-me could feel right away that something was wrong.

»What is it Amote-mo? What is bothering you?« asked Setan-me looking at her partner with considerable concern.

»Oh Setan-me, I wanted to learn about our history but what I am learning is something quite different. The stories our ancestors brought into this valley tell us how beautiful and how full of life this planet once was. They also tell us that much of it was destroyed. What they do not tell us is that it was the ancestors of our ancestors who destroyed all of it. Human evolution seemingly had only one objective. To equip humans with the technology they needed to destroy a living world.«

»Remember Amote-mo, we talked about how difficult it may be for you to learn what happened long ago, when everything was destroyed and our ancestors sought refuge in this valley. But you were convinced that you had to do this.«

»I know Setan-me. I just did not expect it to be so difficult.«

»And you still believe that all of us must learn about those things? What can be achieved by our young people learning about these heinous crimes humans have continued to commit throughout history? Our people have lived here peacefully and understand themselves to be peaceful people. For our people, violence always has been an aberration, and we resort to using violence ourselves only if we absolutely must, only if there is no other choice left. We are a quite different people in that respect, Amote-mo. Without

their genome modification, who knows what they would be capable of doing? I can understand that they want to know all about this history as they will need that as motivation to keep these genome modifications in place; maybe even make them hereditary.»

»Setan-me, this is something they are discussing. For now, only a few know about this terrible history of humankind but once the current leaders of Central and of the oceanic cities learn about it I am almost certain that they will seek the support of their people in making this genome modification hereditary. Even Agan-mo is becoming convinced that it is not this genome modification which is the cause for the decline of their civilization's technological capabilities but that it is the fact that they have imprisoned themselves in the oceans.»

»You do see the irony of this Amote-mo, do you?«

»What do you mean?«

»Don't you remember how at his trial the general of this army which came here to kill us all had justified their actions?«

»Yes, I do remember it, Setan-me. He said they needed to go back to life on land because the thousands of years his people had lived in the oceans had put them into an evolutionary stasis. Only resettling on land could put an end to his people's evolutionary slumber. Unfortunately, our valley was the only habitable area on this planet they knew of.»

»So how is this different from what your friends are thinking today?«

»Well, for one, this Roan Quam would certainly not have left their genome modification making them a more peaceful people in place. And second, men like Agan-mo have a conscience. With leaders like him the people from the ocean would never attack us. Of that, I am sure.»

»So Amote-mo, what if the leaders of Agan-mo's people decide not to leave this genome modification in place. And what if at some point in the future they elected leaders who have no conscience?«

»Setan-me, these are my concerns too and I have expressed them to my friends. They understand and they are discussing this with their leaders. I am confident that they will put something in place which will prevent a recurrence of events which brought

this army to our valley, seeking to kill us all.«

»Your friends are good men, Amote-mo. I just hope that all their leaders are like them. But there is something else you need to discuss with them. There are many more of them than there are of us. As we now know for certain, our two species can produce fertile offspring. Combining these two facts the logical conclusion is that at some point our species will completely vanish. The only trace that will be left from our species are a few gene modifications in the genome of the people from the ocean. Is this something we want? We must decide for ourselves whether we want that. And the sooner we make this decision, the better.«

»But Setan-me, you love your granddaughter, right?« asked Amote-mo now with a boyish smile.«

»Of course, I do, and I always will. But our family and our people are not the same thing. We have responsibilities for both and that is why we must ask such questions.«

And family was what now took precedence as Kimal brought his daughter Helen-me into the room where Amote-mo and Setan-me were sitting. The little girl was strenuously demanding to see her granddaddy. As she got her wish and Amote-mo held her in his arms she began exploring his face with her little hands just like she always did to welcome him home.

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After almost four years of working to recover the history of their species, Bran Taliesin, Hakan Kassius, Alwyn Maar and Amote-mo concluded that they had achieved what they had set out to do. The outlines of the history of their species were now clearly visible again but much more work would be required to add flesh to this skeleton which they had put together. With the first trained historians now getting their college degrees there would soon be many more historians who could carry on the work which they had begun. The outline of human history from the age of maritime discovery to their present day had become the basis on which oceanic city councils and Central's board discussed the measures which would have to be taken so history would not repeat itself.

After more than half a year of deliberations an overwhelming majority of city council representatives voted to keep the genome editing process in place. When the measure was then submitted for final approval by Central's board it did so unanimously. Different from the past, genome editing while still being coordinated through Central would now be under public oversight and scrutiny. After an even longer deliberation another major decision was made. Anyone who wanted to take part in this resettlement program, which was intended to slowly build a second human civilization on land over the course of many years, had to agree to a permanent, that is a heritable, genome modification that would reduce people's propensity for violence.

Before, however, any such resettlement could begin in earnest, much work had to be done. A systematic satellite search for land areas providing possibly favorable conditions for human resettlement had come up empty. It would take several more years until their satellite coverage of the planet's surface would be able to map all the planet's surface areas at the detail required. For now, they only were able to map a little more than half of the planet's continental areas for habitable land. That meant that there was still hope that they could find such places, but it also meant that they had to come up with an alternative plan. The former mission chief was asked to lead a team whose task it was to evaluate methods of turning barren landscapes into fertile ones. To keep things simple, Central's chairman Peer Aksun had proposed to the board to create a new office within Central, the office of the mission chief. With that Bran Taliesin was mission chief again, now working for Central but again reporting to Peer Aksun, Central's chairman. When Peer had first asked his friend to become his mission chief again and had told him what he was supposed to do, Bran had jokingly commented that this would be a good exercise for the future terraforming required to rebuild the human outposts on Mars or build new ones somewhere else. While they both laughed about this at the time they also knew that terraforming their own planet would teach them a lot they, or better those who would come long after them, could use later in less friendly environments.

How should they go about trying to terraform their planet? They had zero experience and starting somewhere in a barren landscape far from their onshore facilities would be very difficult. The most reasonable approach would be to start from the coast and

extend the stretch of the coast occupied by onshore facilities further inland. However, who would want to live next to industrial plants, many of which produced toxic exhaust and waste. Quickly, it became clear that they needed to change how their onshore industries worked. It was not difficult to convince the city council representatives, which had become the parliament of their oceanic civilization, that they could not continue to pollute land and air if they desired a future on land for their civilization. Their oceanic cities recycled everything, they had learned by necessity not to produce waste and not to pollute their environments. Oceanic cities were self-contained, and this is how their industries would also have to work in the future. That would be more expensive but there was no alternative. Once they began to move back to land again in greater number their industries on land would also grow. They had to make sure that this growth would be a growth from a clean industrial core. If they allowed new industries to be as polluting as their current onshore industrial complexes, they would have repeated the mistakes of the past. Mog Sinan and Soeren Nook, still serving as Central's chief science officer and chief industrial officer respectively, were tasked with leading the effort to clean up their onshore industrial complexes. It was clear to both of them that their goal had to be to minimize the ecological footprint of their civilization returning to land. They must not repeat the mistakes of the twentieth and twenty-first centuries.

In search of the solution to a different problem, Central's mission chief and his team identified another possibility to go about terraforming. Listening to the concerns of their cousin species regarding their much smaller number compared to the millions of people living in the oceanic civilizations, Central's board realized that additional measures were required. Just because there were many more of them than the valley people, this must not mean that the valley people remained confined to their homeland while the people from the ocean tried to colonize the rest of the planet. Terraforming had to benefit both people equally, that much was clear. And if that led to a substantial increase in the valley people's population then this would also alleviate their fears of becoming extinct by being absorbed into the much larger population of the people from the ocean. The most obvious way to go about this was of course to increase the settlement area of the people of the valley. It was also the best way for both people to begin their terraforming

efforts. By extending the habitable area of the people of the valley into the desert around them their population number could increase and both people could use the knowledge and the resources of the valley to turn the barren landscapes surrounding the valley into fertile settlement areas into which the people of the valley could expand. It would be a slow process but also a natural process much more likely to succeed than terraforming an isolated area in the middle of nowhere from scratch. And it would give the people of the valley time to adapt to new living conditions outside mountainous areas. Terraforming and resettlement on land would be processes taking many generations.

But before they could even think about beginning to extend the settlement area of the people of the valley, they needed to understand it much better. The valley was a little paradise with its unique flora and fauna. They had to understand which plants with a little help would be able to colonize a barren landscape and which animal could adapt to new ecosystems. Biological diversity was another challenge. Compared to the barren landscapes surrounding the valley it was indeed a paradise, home to a rich ecosystem. However, compared to the biological diversity which once existed on the planet, the ecosystem of the valley was only a small garden with a limited variety of plants and animal life. Along with the ongoing search for other habitable areas on the planet's land surface an extensive search to discover what other plants or animal life might be useful for terraforming was underway. Bran knew that it would take time for this search to produce results, and those results might be quite meager. Therefore, he advocated for a different kind of search. Some of the historical records they had encountered during their efforts to rediscover what happened before the *Great Cataclysm* had included references to seed banks. Such seed banks were first established in the twentieth century with the explicit purpose of ensuring the preservation of diverse food crops people all over the world had relied on before mass food production had begun. By the twenty-first century many of those original food crops of humankind had been replaced by a few genetically engineered food crops with much higher yields and less prone to pest infestation. Bran reasoned with Central's board that if some of these preserved seeds of original food crops still existed in one of those seed banks and they could discover where that was, it could solve many problems for them. Central's board agreed. Chances to locate such a seed

bank and then to find still usable seeds in there would be slim but they must try. There were of course other resources they could use but that would take time. The human colony on Mars always had to be self-sufficient, at least to some extent so it could bridge potential food supply shortages caused by problems in space travel. Therefore, Mars had its own small seed bank and unless those seeds had all been consumed by desperate colonists seeking to survive, they should still be there. However, it would take many years before humans would be able to travel to Mars again. That certainly would not happen in his lifetime and not in the next few generations either.

A couple of years after Bran Taliesin had accepted his new position as Central's mission chief the governing reform which oceanic cities and Central's board had been debating went in effect. The body of city council representatives had officially become the parliament of the cities while Central had become in a way their ruling senate. With that, the oceanic civilization had chosen to adopt a two-chamber governing system modeled on some of the democratic governments still existing in the twenty-first century. The people of the valley were represented in this governing structure as well. Based on their relative population strength, the people of the valley had been allocated seats in parliament. They also had their own permanent representative on Central's board, and it was Amote-mo who first served in this position for a couple of years. The ruling senate was also expanded by creating additional board positions, one of them being Central's chief of police. Only a few weeks after Han Nakamoto had accepted this position for a tenure of four years he faced his first challenge. General Railac Sono had escaped and only a couple of weeks after this had happened Sati Oufone, his former colonel who had testified against him at his trial, was found dead in his flat.

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