THE MIRACLE OF CREATION IN PLANTS

HARUN YAHYA

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ABOUT THE AUTHOR

The author, who writes under the pen-name HARUN YAHYA, was born in Ankara in 1956. He studied arts at Istanbul's Mimar Sinan University and philosophy at Istanbul University. Since the 1980s, the author has published many books on political, faith-related and scientific issues. Harun Yahya is well-known as an author who has written very important works disclosing the forgery of evolutionists, the invalidity of their claims and the dark liaisons between Darwinism and bloody ideologies.

His pen-name is made up of the names "Harun" (Aaron) and "Yahya" (John), in memory of the two esteemed prophets who fought against lack of faith. The Prophet's seal on the cover of the author’s books has a symbolic meaning linked to their contents. This seal represents the Qur'an as the last Book by God and the last word of Him and our Prophet, the last of all the prophets. Under the guidance of the Qur'an and Sunnah, the author makes it his main goal to disprove each one of the fundamental tenets of disbelieving ideologies and to say the "last word", so as to completely silence the objections raised against religion. The seal of the Prophet, who attained ultimate wisdom and moral perfection, is used as a sign of his intention of saying this last word.

All these works by the author centre around one goal: to convey the message of the Qur'an to people and thus to encourage them to think about basic faith-related issues, such as the existence of God, His unity and the hereafter, and to remind them of some important issues.

Harun Yahya enjoys a wide readership in many countries such as India, America, England, Indonesia, Poland, Bosnia, Spain and Brazil. His books have been translated into many languages, and English, French, German, Italian, Portuguese, Urdu, Arabic, Albanian, Russian, Serbo-Croat (Bosnian), Uygur Turkish, and Indonesian versions are available.

Greatly appreciated all around the world, these works have been instrumental in many people putting their faith in God and in many others gaining a deeper insight into their faith. The wisdom, and the sincere and easy-to-understand style employed give these books a distinct touch which directly strikes any one who reads or examines them. Immune to objections, these works are characterised by their features of rapid effectiveness, definite results and irrefutability. The explanations provided in the books are undeniable, explicit and sincere, and enrich the reader with definitive answers. It is unlikely that those who read these books and give a serious thought to them can any longer sincerely advocate the materialistic philosophy, atheism and any other perverted ideology or philosophy. Even if they continue to advocate, this proves to be only a sentimental insistence since these books refute these ideologies from their very basis. All contemporary movements of denial are ideologically defeated today, thanks to the collection of books written by Harun Yahya.

There is no doubt that these features result from the wisdom and lucidity endowed them by God. The author certainly does not feel proud of himself; he merely intends to serve as a means in one's search for God's right path. Furthermore, the author makes no material gains from his books. Neither the writer, nor those who are instrumental in publishing and making these books accessible to the reader, make any material gains. They merely serve to earn the good pleasure of God.

Considering these facts, those who encourage people to read these books, which open the "eyes" of the heart and guide them in becoming more devoted servants of God, render an invaluable service.

Meanwhile, it would just be a waste of time and energy to propagate books which create confusion in people's minds, lead people into ideological chaos, and which clearly have no strong and precise effects in removing the doubts in peoples' hearts. It is apparent that it is impossible for books devised to put the stress on author's literary power rather than the noble goal of saving people from loss of faith, to have such a great effect. Those who doubt this can readily see that the sole aim of Harun Yahya's books is to overcome disbelief and to disseminate the moral values of the Qur'an. The success, impact and sincerity this service has rendered are manifest in the reader's conviction.

One point needs to be kept in mind: The main reason for the continuing cruelty and conflict, and all the ordeals Muslims undergo is the ideological prevalence of lack of religion. These things can only come to an end with the ideological defeat of lack of faith and by ensuring that everybody knows about the wonders of creation and Qur'anic morality, so that people can live by it. Considering the state of the world today, which forces people into the downward spiral of violence, corruption and conflict, it is clear that this service has to be provided more speedily and effectively. Otherwise, it may be too late.

It is no exaggeration to say that the Harun Yahya series have assumed this leading role. By the Will of God, these books will be the means through which people in the 21st century will attain the peace and bliss, justice and happiness promised in the Qur'an.

The works of the author include The Disasters Darwinism Brought to Humanity, Communism in Ambush, The 'Secret Hand' in Bosnia, The Holocaust Hoax, Behind the Scenes of Terrorism, Israel's Kurdish Card, Solution: The Morals of the Qur'an, The Evolution Deceit, Perished Nations, For Men of Understanding, The Prophet Musa, The Golden Age, Allah's Artistry in Colour, Glory is Everywhere, The Truth of the Life of This World, Knowing the Truth, The Dark Magic of Darwinism, The Religion of Darwinism, The Qur'an Leads the Way to Science, The Real Origin of Life, The Consciousness of the Cell, The Creation of the Universe, Miracles of the Qur'an, The Design in Nature, Self-Sacrifice and Intelligent Behaviour Models in Animals, Children Darwin Was Lying!, The End of Darwinism, Deep Thinking, Never Plead Ignorance.

The author's other works on Qu’ranic topics include: Devoted to Allah, Abandoning the Society of Ignorance, Paradise, Knowledge of the Qur'an, Qur'an Index, Emigrating for the Cause of Allah, The Character of Hypocrites in the Qur'an, The Secrets of the Hypocrite, The Names of Allah, Communicating the Message and Disputing in the Qur'an, Answers from the Qur'an, Death Resurrection Hell, The Struggle of the Messengers, The Avowed Enemy of Man: Satan, Idolatry, The Religion of the Ignorant, The Arrogance of Satan, Prayer in the Qur'an, The Importance of Conscience in the Qur'an, The Day of Resurrection, Never Forget, Disregarded Judgements of the Qur'an, Human Characters in the Society of Ignorance, The Importance of Patience in the Qur'an, General Information from the Qur'an, The Mature Faith, Before You Regret, Our Messengers Say, The Mercy of Believers, The

Fear of Allah, The Nightmare of Disbelief, Prophet Isa Will Come, Beauties Presented by the Qur'an for Life, Bouquet of the Beauties of Allah 1-2-3-4, The Iniquity Called "Mockery", The Secret of the Test, The True Wisdom According to the Qur'an, The Struggle with the Religion of Irreligion, The School of Yusuf, The Alliance of the Good, Slanders Spread Against Muslims Throughout History, The Importance of Following the Good Word, Why Do You Deceive Yourself?, Islam: The Religion of Ease, Enthusiasm and Vigor in the Qur'an, Seeing Good in Everything, How does the Unwise Interpret the Qur'an?, Some Secrets of the Qur'an, The Courage of Believers, Being Hopeful in the Qur'an, Justice and Tolerance in the Qur'an.

TO THE READER

The reason why a special chapter is assigned to collapse of the theory of evolution is that this theory constitutes the basis of all anti-spiritual philosophies. Since Darwinism rejects the fact of creation, and therefore the existence of Allah, during the last 140 years it has caused many people to abandon their faith or fall into doubt. Therefore, showing that this theory is a deception is a very important duty, which is strongly related to the deen. It is imperative that this important service is rendered to all people. Some of our readers may find the chance to read only one of our books. Therefore, we think it appropriate to spare a chapter for a summary of this subject.

Another point to be stressed is related to the content of the book. In all the books of the author, faith-related issues are told in the light of the Qur’anic verses and people are invited to learn Allah’s verses and live by them. All the subjects that concern Allah’s verses

are explained in such a way as to leave no room for doubt or question marks in the reader’s mind.

The sincere, plain and fluent style employed ensures that everyone of every age and from every social group can easily understand the books. This effective and lucid way of recounting makes the books read quickly. Even those people who rigorously reject spirituality are influenced by the facts recounted in these books and cannot refute the truthfulness of their contents.

This book and all the other works of the author can be read by individuals or studied in a group at a time of conversation. The reading of the books by a group of readers willing to profit from them will be useful in the sense that readers can relate their own reflections and experiences to one another.

In addition, it will be a great service to the deen to contribute to the presentation and reading of these books, which are written solely for the good pleasure of Allah. All the books of the author are extremely convincing. For this reason, for those who want to communicate the deen to other people, one of the most effective methods is to encourage them to read these books.

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INTRODUCTION

L et us ask a question about something we all know very well, the "seed." What is the difference between a seed, in its shell as hard as tree bark, and tree bark itself? Questions like this are rarely asked, because tree bark and seeds are insignificant details for people in their busy daily lives. The commonly held view is that there are more important and essential things to worry about in the immediate environment.

This logic is quite widespread among people who only cast a superficial eye over their environment. For these people, knowing enough to meet their needs-regardless of

the subject-is quite sufficient. According to this shallow thinking, everything going on around us is familiar and ordinary, and there is definitely a "known" and "familiar" explanation for everything. Flies fly because they have wings, the moon is just always in the sky. The earth is protected from threats that might come from space because it has an atmosphere. The oxygen balance never goes wrong. People feel, see, smell.

But one who, abandoning this narrow view and looking at whatever is going on around him as if he were coming across everything for the first time, and lifting the curtain of familiarity which restricts his view, will see a wide horizon open up before him. He will start to think, asking the questions "why", "how", "for what?" more frequently, and will observe the world around him from this perspective. Explanations which used to satisfy him will no longer be sufficient. He will begin to grasp that there is something extraordinary in everything, in what goes on in the environment, in the features living things possess. As he begins to think, familiarity will give way to wonder. In the end he will see that everything was created and planned in a superior and perfect way by a Creator possessing endless power, knowledge, and wisdom. From that moment he will be able to see the power and sovereignty of God, the Lord of all the worlds, over all the living creatures He has created.

In the creation of the heavens and earth, and the alternation of the night and day, and the ships which sail the seas to people's benefit, and the water which God sends down from the sky-by which He brings the earth to life when it was dead and scatters about in it creatures of every kind-and the varying direction of the winds, and the clouds subservient between heaven and earth, there are Signs for people who use their intellect." (Surat al-Baqara: 164)

THE WORLD OF PLANTS

T he existence of plants is essential for the survival of living things on the earth. For the importance of this sentence to be fully grasped, we must ask: "What are the most important elements for human life?" Of course, basic needs such as oxygen, water, and nourishment come to mind as the answers to this question. And green plants are the most important factor in ensuring the balance of these basic needs on the earth. And there are other balances in the world, of great importance to all living things, not just human beings, such as temperature control and maintaining the correct proportion of gases in the atmosphere, and again it is green plants which maintain the entire equilibrium.

And the activities of green plants do not end there. As is known, the main source of energy for life on earth is the Sun. But human beings and animals are unable to make direct use of solar energy, because their bodies lack the systems to use this energy as it is. For this reason solar energy can reach human beings and animals as usable energy only through the food produced by plants. For example, while sipping tea, we are actually sipping solar energy, and as we eat bread, we are munching solar energy. The strength in our muscles is really nothing other than solar energy in a different form. Plants store this form of energy for us in the molecules in their bodies by carrying out complicated processes. The position for animals is no different from that of human beings. They are fed by plants, deriving solar energy from the plants' energy, which they store in packets.

Plants being able to produce their own nutrition and maintain themselves, in contrast to other living things, is due to their cell structure, which enables them to employ solar energy directly, unlike human or animal cells. With the help of this structure, plant cells turn energy from the sun into energy which people and animals can absorb through nutrition. They store this energy as food through the special procesesses concealed in their structure. These processes are collectively known as photosynthesis.

The necessary mechanism, or more accurately the miniature factory, by means of which plants are able to carry out photosynthesis, is found in their leaves. The transportation system, with its own very special features, for carrying necessary materials such as minerals and water, functions within plants' stems and roots. The reproductive system too has been specially designed in every species of plant.

There are complex structures within each and every one of these mechanisms. And these mechanisms function in connection with one another. If one is missing, the others cannot carry out their tasks. As an example let us take a plant which just lacks a transport system. It is impossible for such a plant to carry out photosynthesis, because the vessels necessary to carry the essential water are missing. Even if the plant managed to produce food, it would be unable to transport this to other parts of the body, and would eventually die.

As in this example, all the systems present in a plant are obliged to function flawlessly. Any flaws or defects in the existing structure will mean that the plant cannot carry out its functions, and this will result in the death of the plant and the disappearance of the species.

When these structures are studied in detail and in depth in the chapters that follow, a most complex and quite flawless design will emerge. When the variety of plants in the world is considered and evaluated, these extraordinary structures seem even more striking. There are more than 500,000 types of plant in the world. And each species possesses its own special planning within itself and features particular to that species. Together with the same perfect basic systems found in all of them, there is also an unparalleled diversity in terms of reproductive systems, defence mechanisms, colour, and design. The only unchanging thing in all this is the reality that the parts of the plants (leaves, roots, stems) and many other mechanisms, must exist at once and with no defects so that the general system, the body, can function.

Modern scientists attribute to such systems an "irreducible complexity." In the same way that a motor will not work if one of its cogs is missing, in plants the absence of just one system, or a single functional failure in any one of the parts of the system, will lead to the death of the plant.

All of a plant's systems have this feature of irreducible complexity. The complex systems, which must all be present at the same time, and this unbelievable variety bring to mind the question: "How did these perfect systems in plants emerge?"

Once again, let us ask some questions to find the answer to this one. Let us think how the functioning of the most important and best known of the mechanisms in plants, photosynthesis, and the transport systems linked to it, came about.

Can the trees and flowers which we see all around us at all times have themselves formed such perfect systems as to bring about a phenomenon such as photosynthesis, some parts of which are still not fully understood, in their own bodies? Did plants choose to use carbon dioxide (CO_2), of the gases in the air, to produce food? Did they themselves determine the amount of CO_2 they would use? Could plants have designed those mechanisms which make up the root system and which enable them to take the materials necessary for photosynthesis from the soil? Did plants bring about a transport system where different types of tubes are used for transporting nutrients and water?

As ever, defenders of the theory of evolution searching for an answer to the question of how plants emerged have resorted to "chance" as their only remedy. They have claimed that from one species of plant which came about by chance, an infinite variety of plants have emerged, again by chance, and that features such as smell, taste, and colour, particular to each species, again came about by chance. But they have been unable to give any scientific proof of these claims. Evolutionists explain moss turning into a strawberry plant, or a poplar, or a rose bush, by saying that conditions brought about by chance differentiated them. Whereas when just one plant cell is observed, a system so complex will be seen as could not have come about by minute changes over time.

This complex system and other mechanisms in plants definitively disprove the coincidence scenarios put forward as evolutionist logic. In this situation just one result emerges.

Every structure in plants has been specially planned and designed. And this shows us that there is a Superior Intelligence which drew up this flawless plan. And the owner of this superior intelligence, God, the Lord of all the worlds, shows proofs of His flawless creation to human beings. God announces His dominion over living creatures and His incomparable creation in this verse:

He is the Originator of the heavens and the earth. That is God, your Lord. There is no deity but Him, the Creator of everything. So worship Him. He is Responsible for everything. (Surat al-An'am: 101-102)

AND A PLANT IS BORN

P lants, which have a most important role in the world's ecological balance and, indeed, in the continuation of life, possess a relatively more effective reproductive system than other living creatures. Thanks to this, they multiply without any difficulty. Sometimes it will be enough for a plant stalk to be cut and placed in the ground for the plant to multiply, at others for an insect to land on a flower.

The internally quite complex reproduction system of plants, although seemingly a very simple process, leaves scientists astounded.

A New Life Begins with the Leaving of the Parent Plant

Some plants do not have separate genders, but continue the reproduction of the species as one gender by special means. The new generation which emerges as a result of reproduction in this manner is an exact copy of the generation which brought it into being. The best known asexual reproduction method of plants is the modifying of stems and separating into different parts.

This way of reproducing (modified stems or division), realised with the assistance of some special enzymes, is typical of a large number of plants. For example, grasses and strawberries multiply by using horizontal stems known as "stolons." The potato, a plant which grows underground, multiplies by forming rhizomes (horizontal stems), which enlarge at the ends into tubes.

For some species of plants it is enough if a part of their leaves falls to the ground for another plant to grow. For example, the *Bryophyllum daigremontianum* produces young plantlets spontaneously on the margins of its leaves. Eventually these drop to the ground and begin an independent life.[1]

In some plants, such as the begonia, when the leaves which fall from it are placed on wet sand, young plantlets soon grow around the leaf base. And again in a short time, these plantlets begin to form a new plant resembling the parent plant.[2]

Bearing these examples in mind, what is fundamentally necessary for a plant to reproduce by putting out a part of itself? Let us think! It is easy to answer this question when the genetic make-up of plants is examined.

Like other living creatures, plants' structural characteristics are encoded in the DNA in their cells. In other words, how a plant will reproduce, how it will breathe, how it will come by its nutrients, its colour, smell, taste, the amount of sugar in it, and other such information, is without exception to be found in all of that plant's cells. The cells in the roots of the plant possess the knowledge of how the leaves will carry out photosynthesis, and the cells in the leaves possess the knowledge of how the roots will take water from

the soil. In short, there exist a code and a blueprint for the formation of a complete new plant in every extension that leaves a plant. All the features of the mother plant, based on its in-built genetic information, are to be found, complete, down to the last detail in every cell of every little part that splits off from it.

So, in that case, how and by whom was the information that can form a complete new plant installed in every part of the plant?

The probability of all the information being totally complete and the same inside every cell of a plant cannot be attributed to chance. Nor can it be attributed to the plant itself, or the minerals in the soil that carry out this process. These are all parts of the system which make up the plant. Just as it takes a factory engineer to program production line robots, since the robots cannot come by the instructions themselves, so there must be some being which gives to plants the necessary formula for growth and reproduction, since the plants, like the robots, cannot acquire these by themselves.

It is, of course God who implanted the necessary information in the plants' cells, as in all other living things in the world. It is He who without any doubt created everything in complete form, and who is aware of all creation. God draws attention to this truth in several holy verses:

He created the seven heavens one above the other. You will find no flaw in the creation of the All-Merciful. Look again-do you see any gaps? Then look again and again. Your eyes will become dazzled and exhausted. (Surat al-Mulk: 3-4)

Do you not see that God sends down water from the sky and then in the morning the earth is covered in green? God is All-Subtle, All-Aware. (Surat al-Hajj: 63)

Sexually Reproducing Plants

Reproduction carried out by means of the male and female reproductive organs in the flowers of plants is called sexual reproduction. Flowers show differences in features, such as shape, colour, the casing of reproductive cells, and petals. But despite this variety in structure, all flowers serve the same basic functions. These are to produce reproductive cells, prepare them for dispersal, and to fertilise other reproductive cells which reach them.

Pollens, which emerge at the time flowers start to open, are plants' male reproductive cells. Their functions are to reach the female organs in flowers of the same species and to ensure the continuation of their species of plant.

Every plant has its own method, or mechanism, which it uses to send its pollen out. Some plants make use of insects, others of the force of the wind. The most important point in the fertilisation of plants is without doubt the fact that each plant can only fertilise another plant of the same species. For this reason it is most important that the right pollen should go to the right plant.

So, how is it that there is no confusion during fertilisation, especially in the months of spring when there are so many varieties of pollen in the air? How does pollen stand up to its long journeys and changing conditions?

The answer to all these questions will be given when we examine the structure of pollen and the dispersal systems.

Pollens: Perfectly Packaged Genes

Pollen, a fine powdery substance, is first produced in flowers' male reproductive organs, and then moves to the outer part of the flower. Having reached there it begins to mature and becomes ready to fertilise the next generation. This is the first stage in the life of pollen.

Let us first cast a glance at the structure of pollen. Pollen is made up of micro-organisms invisible to the naked eye (each beech tree pollen grain is 2 microns in size, and each pumpkin pollen grain is 200 microns in size) (1 micron = 1/1,000 mm). A pollen grain consists of two sperm cells (generative cells) contained within a larger cell(tube cell).

Each grain of pollen may be likened to a sort of box. Inside are the plant's reproductive cells. It is essential for these cells to be well concealed to protect their life and keep them safe from external dangers. For this reason the structure of the box is very strong. The box is surrounded by a wall called the "sporoderm." The outermost layer of this wall, called exine, is the most resistant material known in the organic world, and its chemical make-up has not yet been fully analysed. This material is generally very resistant to damage from acids or enzymes. It is furthermore unaffected by high temperature and pressure. As we have seen, very detailed precautions have been taken to protect the pollen, which is essential for the continued existence of plants. The grains have been very specially wrapped up. Thanks to this, whatever method the pollen is dispersed by, it can remain alive even miles away from the parent plant. Besides the fact that pollen grains are coated with a very resistant material, they are also dispersed in very large numbers, which guarantees the multiplication of that plant.

As we have seen from the detailed structure of pollen, God reveals to us His incomparable art in all the things He creates and wishes us to think about them. Attention is drawn to this is many verses in the Qur'an. The following verse is particularly illuminating:

On the earth there are diverse regions side by side and gardens of grapes and cultivated fields, and palm-trees sharing one root and others with individual roots, all watered with the same water. And We make some things better to eat than others. There are Signs in that for people who use their reason. (Surat ar-Ra'd: 4)

Generally speaking, there are two different ways that pollen reaches the flowers to fertilise it. In the process of dispersal, the first stage in the fertilisation process, the pollen may stick to the body of a bee, butterfly, or other insect, and have itself carried that way, or may be borne along by air currents.

Pollens Which Open Their Sails to the Wind

Many plants in the world make use of the wind to disperse their pollen, for the continuation of the species. Plants such as oak, willow, poplar, pines, grasses, wheat, etc. are wind pollinated. The wind takes the minute particles from the plants, carries them to other plants of the same species, and thus ensures fertilisation.

There are still many points which scientists are at a loss to explain, and many questions still awaiting answers regarding wind pollination. For example, how does each of the thousands of varieties of pollen borne by the wind recognise plants of its own species? How is it that the pollen given off by the plant manage to reach the plant's female organs without getting stuck anywhere? Although the probabilities of fertilisation are quite low, how is it that thousands of plants are fertilised in this way, and furthermore have been for millions of years?

To provide the answers to these questions, Cornell University's Karl J. Niklas and his team set out to study plants which pollinate by the wind. The results they produced were exceedingly surprising. Niklas and his team discovered that wind pollinated plants have aerodynamic flower structures to enable them to attract large quantities of pollen from the air.

And what is this aerodynamic structure in plants? What effect does it have? To provide the answers to these questions, we shall first have to explain what is meant by "aerodynamic structure." Forces originating in air currents operate on bodies moving in the air. Thanks to these forces, known as aerodynamic forces, bodies which manage to move in the air are known as "aerodynamically structured bodies." Some plants which employ wind pollination use this aerodynamic structure in a most effective manner. The best example of this is to be seen in pine cones.

Aerodynamic cones

Perhaps the most important question which led Karl Niklas and his team to make a study of wind pollination was "How is it that with this great number of pollens in the air the pollen from one plant is not caught by another species of plant and reaches other plants only of its own species?" This was the question which led scientists to study plants which fertilise by the wind, in particular pine cones.

In trees with cones, known for their long lives and height, the cones form male and female structures. Male and female cones can be on different trees as well as on the same tree. There are specially designed channels on the cones to draw to themselves the currents which carry the pollen. The pollen can easily reach the reproductive areas, thanks to these channels.

Female cones are larger than male cones and grow singly. The female cones consist of a central axis having arranged around it numerous sporophylls - leaf-like structures. These are structures in the form of casings resembling fish scales. It is at the base of these scales that two ovules (parts where eggs are formed) develop. When the cones are ready to pollinate, these cases open up into two sides. In this way they enable pollen from male cones to enter.

In addition, there are special assisting structures which enable pollen to enter the cone with ease. For example, the scales of the female cone are covered with sticky hairs. Thanks to these hairs, the pollen can easily be taken inside for fertilisation. After fertilisation, the female cones turn into wooden structures containing a seed. Later on, the seeds bring forth new plants under suitable conditions. Female cones also possess another striking property. The area where the egg forms (ovule) is very close to the centre of the cone. It would apparently be difficult for the pollen to reach this area. Because, in order to reach the inner part of the cone, it has to enter a special path which leads to the centre. Although at first sight this looks as if it might be a disadvantage to the fertilisation of cones, studies revealed that this was not the case.

To find out how this particular fertilisation system in the cones works, an experiment was carried out by preparing a model cone. The motion of small balloons filled with helium and left in currents of air was observed. It was found that these small balloons easily followed the air currents and possessed the property of being able to easily enter the narrow corridors in the cone.

Subsequently, the movements of the balloons in this experimental model were filmed using a special photographic technique. These images were then analysed with the help of a computer and the direction and speed of the wind were established.

According to the results from the computer, it was discovered that cones altered the movement of the wind in three ways. First, the direction of the wind is turned towards the centre by means of the leaves. Then later, the wind in this region is twisted and pulled into the area where the eggs are formed. In the second movement, the wind, which spins like a whirlpool and touches all the little casings, is then directed towards the region which opens to the centre of the cone. Thirdly, thanks to its protuberances which give rise to small currents, the cone turns the wind downwards and directs it towards the casings.

Thanks to these movements most of the pollen in the air reaches the desired destination. And here there is no doubt that the point most worthy of note is that these three operations, which complement each other, must necessarily be coterminous. The perfect planning of the cones emerges at this point.

The theory of evolution claims that, as with all living things, there was a phased development over time in plants, too. According to evolutionists, the reason for the flawless structure of plants is coincidence. To appreciate the invalidity of this claim it will suffice to examine the faultless structure of the cones' reproductive system.

It is not possible for any living species to perpetuate itself without a reproductive system. This inevitable truth also applies to pine trees and their cones, of course. In other words, the reproductive system in the cones must have existed together with pine trees when they first emerged. It is not possible for the cones' perfect structure to have come into existence of its own accord over a period of time in different stages. Because it is necessary for the structure which leads the wind to the cones, for another structure which later directs the wind into the channels, and for the channels which lead to the area where the eggs are, to have come into existence at the same time with no detail missing. If one of these structures were missing, it would not be possible for this reproductive system to work. It only remains to say that the impossibility of the egg cell in the cone and the sperm cells which will fertilise it having come into existence by themselves by chance is another cul-de-sac from the point of view of the theory of evolution.

For all the parts of such a system to have emerged at the same time by coincidence, when it is impossible for even one part to have done so, is quite inconceivable. Scientific findings invalidate the theory of evolution's claims of emergence by chance from every point of view. For this reason, it is quite evident that if from the moment cones first appeared, they were in perfect form and possessed a flawless system, it was because they had been created by God.

Pine trees have other features which speed up the trapping of pollens. For example, female cones are generally formed at the tips of branches. This reduces the loss of pollen to a minimum.

Moreover, the leaves around the cones help more pollen to fall on the cones by reducing the speed of the air currents. The symmetrical arrangement of the leaves around the cones assists in the trapping of pollens coming from all directions.

Like all pollens, pine pollens have different shapes, sizes, and densities according to their species. For example, the pollen of one species are of a density that prevents them from following the air currents set up by cones of another species. For this reason they leave the current set up by the cone and fall to the ground. All varieties of cone set up air currents most suited to their own species of pollen. This feature of cones does not just serve to trap pollens. Plants use this filtration of the air currents for very different functions. For example, by this method female cones are able to change the direction of fungus pollens which could damage their egg cells.

The precautions taken by plants so that their pollen, thrown into the air at random, can reach their own species, are not limited to these. A plant's producing a great deal more pollen than is required to some extent guarantees the pollination process. Thanks to this the plant is not affected by pollen losses which could come about for various reasons. For example, every male cone on a pine tree produces more than 5 million grains of pollen a year, and one pine tree on its own produces in the region of 12.5 billion grains of pollen a year, which is an extraordinary number when compared to other living things.[3]

Even so, pollens borne by the wind still face a number of obstacles. One of these is leaves. Therefore when pollens are discharged into the air, some plants (hazelnut, walnut, etc.) open their flowers before their leaves, so that pollination may take place while their leaves are still undeveloped. Flowers are found on three parts of cereals and pines to facilitate pollination. In this case, the leaves are so organised as not to be an obstacle to the movement of the pollen.

By means of these pre-arrangements, pollens can go some considerable distances. The distance varies with the species. For example, pollens with air sacs can travel much greater distances than other species. It has been established that pine pollens with two such air sacs can be carried up to 300 kilometres on high air currents.[4] Equally important is the fact that thousands of varieties of pollen travel such distances in the air, carried on the same wind, but without any confusion between them.

Pollens Aimed at their Target

To have a better understanding of the amazing features of plants which are fertilised by means of the wind, let us take another example:

Rockets have to follow a pre-determined trajectory to reach their targets. For this reason, very careful calculations have to go into the planning of the rocket if it is to reach its target. For instance, the rocket's features, its motor capacity and flight speed, along with particulars of weather conditions, such as air density, must be programmed in detail. Furthermore, there has to be exact knowledge of the structure of the target area and the prevailing conditions there. And these factors have to be arrived at by making the minutest measurements. Otherwise the rocket will go off course and fail to reach its target. For a rocket to successfully hit its target, many engineers have to work together and think everything out in great detail. It is clear that success in aiming at and hitting the target is the product of teamwork, fine calculation, and superior technology.

The flawless reproduction system in cones resembles rockets' being aimed at a target, in that everything is very accurately pre-planned with very sensitive adjustments. Many details, such as the direction of the air current, the different thicknesses of cones, the shape of the leaves, etc., have been specially taken into account and reproduction plans built on the basis of this information.

The existence of such complex structures in plants raises the question of how these mechanisms came about. Let us answer that question with another. Can this structure in cones be the work of chance?

The system in-built in the rockets is the result of long years of study and hard work by highly intelligent and knowledgeable engineers who are experts in their field. The complex structures in the cones, which have nearly the same working system as rockets, have been especially planned in the same way. To claim that a rocket could have come about by chance and say that it could hit a target by following a random trajectory is just

as illogical as claiming that the extraordinary movements of pollen, aimed at the target in much the same way, and the detailed structure in the cones, could have come about as the result of coincidences.

And, of course, it is impossible that pollens could have the ability and knowledge to find their different ways on this journey. At the end of the day, pollen is a collection of cells. Going even deeper, it is something made up of unconscious atoms. There is no doubt that a cone's possession of a system so replete with detailed information about fertilisation is the result of its perfect creation by God, the Almighty and All-Knowing.

Another important point in the fertilisation of pine trees is the wind's being kept under control. The winds' performing their transport duties in such a flawless way is without doubt due to God, the Lord of all the worlds who directs the whole affair from heavens to earth. God refers to this in a verse:

And We send the fecundating winds. (Surat al-Hijr: 22)

All the plants in the world, without exception, perform such operations. Each and every species has known what it has to do since it first appeared. This event, which happens with the assistance of wind currents, has been going on for millions of years with no difficulty, despite being based on unlikely probabilities. As we have seen, everything happens in its due place and with perfect timing, because each one of these mechanisms is obliged to work in unison with all of the others and at the same point in time. If one of them were absent, that would mean the end of that species of plant.

It is clear that these systems, which have no intelligence, will, or consciousness of their own, neither in part nor as a whole, play their role in these unbelievable events by the order and through the creation of God, Possessor of infinite power and knowledge, who controls everything every second and has planned everything down to the tiniest detail. The coming into existence of every living and non-living thing, and every event, result from God's creation. God reveals this secret in a holy verse:

It is God Who created the seven heavens and of the earth the same number, the Command descending down through all of them, so that you might know that God has power over all things and that God encompasses all things in His knowledge. (Surat at-Talaq: 12)

To illustrate this point, let us imagine that we see a faultless technological implement, factory, or building, every detail of which has been planned with forethought: we feel no doubt that each one of these has a planner. We know, of course, that they were made by knowledgeable people and that there was control over every stage. Nobody can then stand up and claim that these things came about by themselves over time. We appreciate, respect, and praise the intelligence of those who planned them and what their skill produced.

And all living things were created together with systems planned down to the finest detail and dependent on the most sensitive balances. We see this wherever we look, without exception. There is no doubt that it is God who is worthy of praise here, who created all living creatures with all the abilities they possess. Like everything in the world, plants too maintain their existence thanks to the systems especially created by God, in other words they are under His control:

Everything in the heavens and on the earth belongs to Him. God is Rich Beyond Need and Praiseworthy. (Surat al-Hajj: 64)

The keys of the Unseen are in His possession. No one knows them but Him. He knows everything in the land and on the sea. No leaf falls without His knowing it. There is no seed in the darkness of the earth, and nothing moist or dry which is not recorded in a Clear Book. (Surat al-An'am: 59)

Pollinators On Duty

As we have already mentioned, some plant species reproduce by having their pollen carried by animals such as insects, birds, bees, and butterflies.

The relationship between plants, which allow animals to disperse their pollen, and the animals which perform this duty amazes observers. Because in order to set up and perpetuate this system of mutual give and take, these living creatures attract and influence each other in quite expert ways. Generally speaking, it was at first thought that in their relationship with animals, plants played a very small role. Whereas researchers have put forward results completely at odds with this opinion. Plants, playing a very active role, directly influence animals' behaviour patterns.They have perfected strategies by which they direct the animals which will carry their pollen.

For example, plants' colour signals indicate to birds and other animals which fruits are ripe and ready for dispersal. The amount of nectar present, linked to the colour of flowers, increases the chances of fertilisation by encouraging the pollinator to stay on the plant longer. And specific floral odors attract the right pollinators at exactly the right time.[5]

Plants also sometimes use methods of deception to initiate the pollen-carrying process. The animal which is to carry out the particle spreading, generally falls into a trap laid by the plant, and in this way the plant achieves it aim.

Methods used by Plants: Colour, Shape, and Scent

As well as informing pollinators the presence of flowers, colour also helps to advertise their nectar reward status. When a pollinator approaches, the flower gives off stimulatory signals, such as scent, to show the insect the way to the nectar site. The colour patterning of flowers directs the pollinator to the centre where the nectar is located, and thus enables fertilisation.[6]

Plants too know about the guiding function of the colours they possess. In fact, they deceive animals by employing this feature in a most conscious manner. Some plants which have no nectar use the colour features of nectar-producing flowers to attract insects to them. One very good example of this is the red *cephelanthera*, a species of orchid, and blue bellflowers which grow in forest regions in Mediterranean climates. While the the bellflowers give off a nectar which is most attractive to bees, the red *cephelanthera* does not possess the characteristics to do this. But it is the same wild bee, known locally as the "leafcutter," which carries out the fertilisation of both these totally different plants. While the leafcutter bees are fertilising the blue bellflowers, they feel the need to fertilise the red *cephelanthera* too. Bees fertilising a plant with no nectar attracted scientists' interest and they researched the reason for the bee's behaviour.

The answer to this question came as the result of research carried out with a device called a "spectrophotometer." From this it was realised that the leafcutter bees are unable to distinguish between the respective wavelengths of the light given off by the two different flowers. In other words, although human beings can distinguish between the light wavelengths given off by the blue bellflower and the red *cephelanthera*, since they can see the difference in colour between the flowers, wild bees cannot see the difference. Colour is an important factor for pollinators, and the bee, which goes to the blue bellflower, which gives off pollen, also visits and enables the fertilisation of the red *cephelanthera* which grows beside it, and which it sees as being the same colour. As we see, this orchid continues down the generations thanks to its "hidden resemblance" to blue bellflower.[7]

Some species of plant actually announce their pollen reward to insects by changing the colour of their blossoms. The following is an example:

In a letter, naturalist Fritz Muller discussed a plant called *Lantana*, which grows in the Brazilian forests:

> We have here a Lantana the flowers of which last three days, being yellow on the first, orange on the second, purple on the third. This plant is visited by various butterflies. As far as I have seen the purple flowers are never touched. Some species inserted their proboscis (mouth parts) both into yellow and orange flowers, others… exclusively into the yellow flowers of the first day. This is, I think, an interesting case. Of the flowers fell off at the end of the first day the inflorescence (flower) would be much less conspicuous, if they did not change their color much time would be much less conspicuous, if they did not change their color much time

would be lost by the butterflies inserting their proboscis in already fertilized flowers.[8]

As Muller observed, the flower's changing colour is in the interests of both the plant and the pollinator. Plants whose flowers change colour offer the fertilising agents a lot of nectar when the flowers are young. As the flowers grow older, not only does their colour change, but they also contain less nectar. By correctly interpreting the color changes the pollinators save energy by not fruitlessly visiting plants which have little or no nectar.

Another of the methods which plants use to attract birds or insects is the scent given off by their flowers. Scents, which are just pleasant to us, actually serve to attract insects. The scent given off by flowers has the property of showing the way to the insects around it. When an insect smells the scent it realises that there is delicious nectar stored up for it nearly. It then heads straight for the source of the smell. When it reaches the flower, it will try to get the nectar and pollen will stick to it. The same insect will also leave behind pollen which stuck to it from another flower it visited, and will thus bring about fertilisation. It is not even aware of the important job it does. Its only aim is to reach the nectar it smells.

Plants' Deception Methods

We said that some plants use methods of deception. These plants do not have nectar with which to attract insects. These kinds of plants are fertilised by their making use of their similarities to insects. One species of orchid, the mirror orchid, possesses the shape and colour of a female bee in order to attract bees. This species of orchid is even able to give off a suitable chemical signal to attract male bees, and produces an effective pheromone (a special chemical).

The Cyprus bee orchid is another of the plants which imitate insects to ensure their fertilisation. The number of orchids employing this technique is quite large, and the methods used differ from one to the other. Some imitate a female bee with its head pointing upwards, others have the head pointing downwards. For example, the yellow bee orchid uses the second method. For this reason their modes of fertilisation differ.[9]

Another species of orchid which imitates female bees is the dragon orchid. The lip of the dragon orchid's flower mimics the wingless female wasp so competently that only male wasps show any interest in them. Some members of the orchid family manage to attract insects to them, even if they have no nectar to offer. They secure the landing of male wasps on an area in the lower part of the flower by imitating the female wasp and giving off an attractive scent. The wasp which lands on the flower attempts to mate, and as a result, the orchid's pollinea are fixed on his body. Thanks to this deception, it deposits the pollen stuck on its body on another flower on which it lands with the same aim.[10]

Another plant which imitates the features of female animals is the hammer orchid. The reproductive mechanism of this orchid, which grows in dry grasslands of South Australia, is quite amazing. The hammer orchid has just one leaf, in the shape of a heart, and shows a total resemblance to the female wasp. While the male wasps fly, the females have no wings, and spend most of their time in the soil. When the time comes for the females to mate, they come out from under the ground so that the males can find them, and climb to the top of a tall plant stem. Once atop, they give off their mating smell and await the arrival of a male.

A special feature of the male wasps is that they reach the orchids two weeks before the females. This is a most interesting situation, because there are no female wasps around, only orchids which look just like female wasps and which are waiting for fertilisation. And when the male wasps come to the orchids, they smell an odour similar to that given off by female wasps. This is emitted by the orchid. Under the influence of this smell, the male wasps land on the orchid leaves. This triggers the plant's spring-loaded 'elbow' joint causing the wasp to fall on its reproductive organ. While the wasp attempts to escape from the flower, two pollen-laden sacs stick to the back of its head or to its back. In this way, when the wasp goes to other orchids, the pollen stuck to its back serves to fertilise them.[11] As we have seen, there is a most harmonious relationship between the hammer orchid and the wasp. This symbiosis is most important for the reproduction of the plant. Because if successful pollination did not take place, in other words, if the pollen were not to be transported from the insect to another plant of the same species, then fertilisation would not take place.

There are many examples in nature of such accord as exists between the hammer orchid and the wild bees. Sometimes differences between flowers can be the reason for such a relationship. For example, it is very easy for some insects to enter some flowers, because that part of the flower where the pollen lies is open, and insects and bees can easily enter these regions and reach the pollen. Some plants have a nectar entrance of such a size as can be entered only by certain animals. For instance, in some situations bees push themselves through these gaps so as to reach the nectar in the flower. It is very difficult, even impossible, for other living things to do what the bee does so very easily.

Bees and other insects, on the other hand, are unable to fertilise flowers with long corolla (petals) tubes. Only long-tongued insects, such as butterflies and moths can fertilise these flowers.[12]

As we have seen from all these examples, there is a totally flawless harmony between insects, whose bodily structure is entirely suited to that of the plants, and the plants themselves.

It is impossible for the reciprocity in such a "lock and key" relationship to have come about by chance, as the evolutionists claim. Which means that to expect this to come about by chance contradicts the logic of the theory of evolution as maintained by evolutionists. According to the evolutionists' claims about natural selection, a life form

which is not adapted to its environment either has to develop new mechanisms within itself or must slowly disappear. In this situation, according to the mechanism of natural selection, these plants, not being fertilizable by insects by reason of their particular flower structure, would either have disappeared or have had to change the form of their flowers. And in the same way, insects which can fertilise only these flowers because of the structure of their mouths, would either have disappeared for lack of food or have changed the structure of the organs they use to gather food.

But when we look at plants with long corolla tubes, or other plants, we see that they have developed no adaptation, in other words, a change or other supplementary mechanism. Again, no adaptation of any sort is to be seen in living creatures such as butterflies and moths.

These flowers, benefiting from a symbiotic relationship with the pollinators which fertilise them, have carried on living for many years, right up to the present.

What has been explained so far is just a short summary of methods employed by some different species of plant to survive down the generations. You will find all these details in any biology book, but those same sources are unable to provide a satisfactory explanation of the reasons for plants employing this pollen dispersal process. Because in every process carried out, features such as thought, reasoning, decision-making, and calculation-that we cannot ascribe to plants-are in evidence: we all know that a plant does not have the consciousness to perform such activities. Imagine the scenario we should be faced with if we said that a plant carried out all these processes of its own volition:

The plant "calculates" that its aerodynamic structure is suited to pollen dispersal by wind, and every subsequent generation employs the same method. Others "understand" that they will not be able to make sufficient use of the wind and, for this reason, make use of insects to carry their pollen. They "know" that they have to attract insects to themselves in order to be able to multiply, and try various methods to bring this about. They particularly identify what insects like. After finding which nectar and scents are effective for which insects, they produce scents by a variety of chemical processes and give them off when they have established the exact time to do so. They identify the taste in the nectar that insects will find pleasant and the totality of the substances in it, and produce these themselves. If the scent and nectar are not enough to draw insects to them, they decide to try another method, and, to suit this situation, make "deceptive imitations". Furthermore, they "calculate" the volume of pollen which will reach another plant of the same species and also the distance it has to travel, and on the basis of this, begin to produce it in the most suitable quantities and at the most appropriate time. They "think" of the possibilities that might prevent the pollen from reaching its destination and "take precautions" against them.

Of course, such a scenario could not ever be a reality: in fact, this scenario breaks all the rules of logic. None of the above-mentioned strategies could be devised by an ordinary plant, because a plant cannot reason, cannot calculate time, cannot determine

size and shape, cannot calculate the strength and direction of the wind, cannot determine for itself what kind of techniques it will need for fertilisation, cannot think that it will have to attract an insect it has never seen, and furthermore, cannot decide what methods it will need to be able to do any or all of these things.

No matter how much the details multiply, from what direction the subject is approached, and what logic is employed, the conclusion that there is something extraordinary in the relationship between plants and animals will not change.

These living things were created in harmony with one another. This flawless system of mutual benefit shows us that the force which created both flowers and insects knows both kinds of living things very well, is aware of all their needs, and created them to be complementary to one another. Both living things are the work of the Lord of all the worlds, God, who knows them very well, who indeed knows everything. They are charged with presenting God's greatness, His supreme power, and His flawless art to men.

A plant has no knowledge of its own existence, nor of the miraculous functions it performs, because it is under the control of God, who planned its every feature, who created everything in the universe, and who continues to create at every moment. This truth is announced to us by God in the Qur'an:

Shrubs and trees both bow down in prostration (to Him). (Surat ar-Rahman: 6)

The Pollination and Reproduction of Underwater Plants

Contrary to popular belief, reproduction by means of pollen is not limited to land plants. There are sea plants, too, which reproduce by this method. The first plant living in the open sea and reproducing by the pollination method, called "Zostera," was discovered in 1787 by the Italian botanist Filippo Cavolini.[15]

The reason for the belief that pollination is restricted to land plants was that the grains of land plant pollens that made contact with water split and ceased to function.

Studies carried out on plants which reproduce by pollination in water, show that this is another subject on which the theory of evolution finds itself in a quandary.

Plants which disperse their pollen by water are found in 31 genera in 11 different families, and in very different places, from northern Sweden to southern Argentina, from 40 metres below sea level to 4,800 metres high in Lake Titicaca in the Andes Mountains. From the ecological point of view, they live under very different conditions, from tropical rain forests to seasonal desert pools.[16]

The evolutionists' difficulties on this subject stem from the theory of evolution itself. Because, according to this theory, pollination was a method of reproduction which began to be used by plants after they started to live on land. Yet, it is known that there are

some sea plants which use this method. For this reason evolutionists have named these plants "flowering plants which have gone back to the water." And yet the evolutionists have been unable to give any logical and scientific explanation of either when the plants went back to the water, the reasons which made them do so, how they went back to the water, or what shape the intermediate forms took.

Another problem for evolutionists arises from certain properties of water. As we revealed earlier, water is not at all a suitable environment for pollen to spread in, and generally leads to splitting in individual seeds. It is also difficult to make predictions about the movement of the water. There may be quite irregular currents in water, tides may suddenly sink plants, or carry them considerable distances on the surface. Notwithstanding these factors, aquatic plants use the water they grow in as a pollinator with great success, having been created in such a way as to be able to operate from below the surface. Here are some examples of these plants:

Vallisneria

Male *Vallisneria* flowers develop in that part of the plant which remains under water. Then, in order to reach plants with female characteristics, they leave the main body and float free. The flower is created to rise easily to the surface once it is free. At this point the flower looks like a globular bud. Its leaves have closed over it and wrapped up the flower like the peel of an orange. This particular structural form provides protection from the negative effects of the water for that part which carries the pollen. When the flowers rise to the surface, the petals, which were formerly closed, separate from one another and curl back, spreading over the surface of the water. The organs which carry the pollen emerge above the leaves. These function like miniature sails, able to move in even the slightest breeze. They also keep the *Vallisneria*'s pollen above the surface of the water.

As for the flowers of the female plant, they float on the water, on the end of a long stalk rooted in the lake or pond bed. The leaves of the female flower open on the surface, forming a slight depression. This depression serves to create a gravitational pull on the male plant when it approaches the female plant. In fact, as the male flower passes by the female it is drawn towards it and the two flowers meet. In this way the pollen reaches the female flower's reproductive organ and pollination takes place.[17]

The male flower's protecting the pollen while it is closed in the water, its rising up and opening on the surface, and its adopting a form enabling it to move comfortably on the water are details requiring especial consideration. These features of the flower resemble those of the lifeboats used on seacraft, which open automatically on being thrown into the sea. These boats emerged as the result of long joint studies by the designers of many industrial products. The planning faults which emerged when the boats were first produced, and again the flaws which emerged when trials were carried

out on the boat, were taken in hand again, the faults were put right, and as a result of repeated tests a properly functioning system was arrived at.

Let us consider these studies in the context of the *Vallisneria*'s position: Unlike the designers of the lifeboat, the *Vallisneria* did not have more than one chance. The first *Vallisneria* in the world had only one chance. Only the use of a system which was completely successful from the first test would ensure the chance of survival for later generations. A faulty system would not pollinate the female flower, and the plant would disappear from the world, as it would never be able to multiply. As we have seen, it is impossible for the *Vallisneria*'s pollination strategy to have come about in stages. Ab initio, this plant was created with a structure enabling it to send out its pollen in water.

Halodule

Another water plant which possesses an effective pollination strategy is the *Halodule*, which grows along sandy coasts in the Fiji Islands. This plant's floating long, noodlelike pollens sway from under the water to the surface. This design enables the *Halodule* to hit even more marks than the *Vallisneria*. Furthermore, the pollen noodles have coatings of proteins and carbohydrates that make them sticky. They adhere to one another on the surface of the water and form long rafts. Millions of floral search vehicles of this type are carried along as the tide returns to the shallow pools where the female plants float. With the collision of these search vehicles with the female plant's reproductive organs on the water's surface, pollination takes place easily and successfully.[18]

Thalassia

So far we have discussed plants, whose pollen is transported above or on the surface of the water. In this case the movement of the pollen is two-dimensional. Some species have pollination systems that operate in three dimensions - that is, below the surface.

Underwater pollination strategies are harder to implement than above-surface ones. Because in three-dimensional pollination, the results of even the slightest change in the movement of the pollen will have far-reaching effects. For this reason, it is much harder for the pollen to connect with the female organ under water than it is on the surface.

Nevertheless, *Thalassia*, a Caribbean plant, always lives under water, because it has been created with a pollination strategy to make the seemingly difficult conditions for pollination easier. *Thalassia* releases its round pollen under water, embedded in elongated strands. They are carried along by the waves, then stick to female flowers' reproductive organs and thus enable the plant to multiply.[19]

The pollen of the *Thalassia* and the *Halodule* being sent out embedded in strands increases the distance the search vehicles go. There is no doubt that this intelligent design is the work of God, who created both water plants and their pollination strategies in water, and who is aware of all creation.

THE SEED’S FLAWLESS DESIGN

Whether by means of the wind, or whether by means of other carriers, male pollens which reach female flower organs have reached the end of their journey. Everything is ready for the forming of the seed. The most important step in sexual reproduction is seed formation. It will be useful to examine this formation, starting right from the general structure of the flower.

In the center of most flowers are one or more carpels, the "female" reproductive parts. The carpel has a swollen end, called the stigma, under which there is a stalk, called the style, and at the bottom an ovary, which contains the blueprint for the seeds.

Pollen coming from male organs lands on the stigma, the surface of which is covered with a sticky liquid, and then reaches the ovary by means of the style. This sticky liquid has a very important function. As long as the pollen grains are unable to reach the ovary beneath the style, they will not be able to fertilise the seeds. This liquid ensures that by making them stick together the pollen does not go to waste. The seed is formed only when male and female reproductive cells come together.

After landing on the stigma, each individual pollen, in other words, each male reproductive cell, develops a thin tube downwards, and enters the ovary through the style. There are two sperm cells in each one of these pollen tubes. The tube grows down, and enters the ovary, and the sperm cells come free. In this way the nucleus of one of the sperm cells unites with the egg in the ovary. This fertilized egg cell develops into the embryo, which will form the seek. The nucleus of the second sperm cell unites with the two nuclei of the central cell and they form a specialized tissue which surrounds and nourishes the embryo. This development is known as fertilisation.

After fertilisation, the egg is wrapped up in a coat, and the embryo enters upon a kind of rest period, and grows to become a seed with the food sources stored around it.

In every seed which is formed by the joining of male and female sex cells, there is an embryo plant and a supply of food. This is a very important detail for the development of the seed, because, in the early stages, when it is underground, the seed has no roots or leaves able to produce nutrients, and it will need a food source to be able to grow during this time.

The embryo and the food store surrounding it are actually what we call fruit. These structures possess high levels of proteins and carbohydrates, because their function is to feed the seeds. This being the case, they form an indispensable source of nourishment for both human beings and other living things. Every fruit possesses the best qualities for protecting and nourishing the seeds it contains. The fleshy part, a quantity of water, and the structure of the external skin have the most effective forms for protecting the seed.

There is another important detail here. Each plant can fertilise only another plant of the same species. If a plant's pollen lands on the stigma of another species, the plant

understands this and does not allow the pollen to grow out a tube to reach to its ovary; as a result the seed does not develop because there is no fertilisation.[20]

For instance, if pollen from wheat flowers is carried to an apple tree, that tree will not produce apples. It will be useful at this point to stop and reflect a little on the extraordinary nature of this. The flower of one species of plant recognises the pollen coming from the flower of a plant of the same species. If it is from its own species, it may start the process of fertilisation. If the pollen is not from its own species, the plant will not begin the fertilisation process. So how did the stigma of the female flower, which can distinguish pollen from its own species according to certain criteria, learn to carry out this identification? How does it know that it has to close down its mechanism against foreign pollen? There is no doubt that the intelligence which controls the plant's every detail designed this mechanism in the flower in the most subtle way so as to guarantee the perpetuation of the species from generation to generation.

What kind of environment the embryo seed would develop in, what it would require during the stages of its development, what it would find when it emerged from the soil, what kind of protection it would need, and all other exigencies were thought of in advance, and the seed was designed with these needs in mind. The external layers protecting the seeds (seed coats) are generally very hard. This structure protects the seed from any external threats it will face and exhibits modifications according to the environment in which it is found. For example, in the final stage of the development of some seeds a resistant waxy substance forms on the external surfaces, thanks to which the seeds become resistant to the effects of water and gas.

And the flawless structures in a flower's life do not end here. The seed coats may be covered with different substances according to the species of the plant; for instance, a single bean will be covered in a thin membrane, and a cherry seed will be protected by a hard, woody coat. The coats of seeds which have to be resistant to water are harder and thicker than others. Again, seeds have been given very different shapes and sizes according to their species. The amount of nourishment is different between those seeds which have to last for a long time before sprouting (for example coconut seeds) and those which begin to sprout a short while after coming into contact with water (melon, water melon, etc.).

As we have seen, seeds have very intricate systems to enable them reproduce easily and to endure without any breakdown. The intelligence to be seen in each stage of the systems specially designed for plants to reproduce, is a clear proof that these systems were created by God, the possessor of superior knowledge.

Time to Spread: the Dispersal of Seeds

The methods employed by plants when spreading their seeds, each one of which is most effective, vary with the structure of the seeds of each plant. For example, seeds

which are small and light enough to fly on a very slight breeze, immediately fall off when stirred by the wind and are fertilised without any difficulty. It is enough for some plants to reproduce for their seeds simply to fall to the ground. Others disperse their seeds by a natural catapult method, in other words, they fire their seeds off. This is brought about by the release of the tension which forms when the seed is growing inside its coat. The seed coats of some plants split open after drying in the sun, and others open and disperse their contents when affected by such external factors as the wind or animals.

Plants Which Disperse Their Seeds by Bursting

The Mediterranean Squirting Cucumber

When we examine the methods employed in the dispersal process, which is exceedingly important to the reproduction of plants, we see that they are built upon the most sensitive of balances. For instance, some plants, such as the Mediterranean squirting cucumber, use their own power to spread their seeds. As Mediterranean squirting cucumbers begin to ripen, they begin to fill with a slimy juice. Some time later the pressure exerted by this liquid builds up to such an extent that the outer skin of the cucumber cannot resist it and bursts off its stalk. When this happens, the cucumber sprays the liquid inside it like the trail of a rocket being fired into the air. Behind the cucumber comes a trail of slime and with it, seeds.[21]

The mechanisms here are very sensitive; the seed-pods fill with liquid when the cucumber begins to fully mature, and the explosion takes place at the time when maturation is complete. If this system began to work prematurely, the cucumber's bursting off its stalk before the seeds were formed would serve no purpose. Such an eventuality would mean the end of that species of plant. But no such risk presents itself, thanks to its pre-planned perfect timing. The claim that these mechanisms, which have each had to be present right from the start, evolved as the result of a period of change lasting hundreds, thousands, and even millions of years, is certainly not founded on intelligence, logic, or science.

The seed-pods, the liquid inside them, the seeds, the maturing of the seeds- everything must come into existence at the same time. The uninterrupted perpetuation of such a system, which has functioned perfectly right up until today, shows that it emerged at the very outset in a complete and flawless form. In other words, it was created by one Creator.

The Broom and the Hura Tree

The reproduction of the broom again takes place with the self-opening method, but in a manner exactly opposite to that of the Mediterranean squirting cucumber. The bursting of the seeds of the broom happens not with an increase of liquid, but with its evaporation. As a pod warms on a summer's day, the side facing the sun dries faster than that in the shade. The pod splits suddenly into two halves as a result of the difference in pressure between the two sides, and in this way the tiny black seeds inside are dispersed in all directions.

One of the most successful plants which disperses its seeds by bursting is the Brazilian tree known as the "Hura." When the tree dries out and the time comes to disperse its seeds, it can hurl them up to a distance of some 12 metres. This is a considerable distance for a tree.[22]

Helicopter Seeds

European maples and sycamores have a very interesting design. These seeds are equipped with only a single wing which sprout from just one side. The weight of the seed and the length of the wing are so well balanced that these seeds also spin. Sycamores often grow in relatively isolated locations, and there the wind can give the seeds considerable assistance. Spinning around themselves, helicopter seeds can travel great distances in even a slight breeze.[23]

The seeds inside the pods of *Bertholletia* trees, which grow in South America, stay where they are for a while after falling to the ground. The reason for this is that they have no properties to attract animals' attention. They have no smell, for instance, their exteriors are not striking to look at, and furthermore they are very difficult to break. For this tree to reproduce, the pods, containing the nuts, have to be taken out of the shells and buried underground.

But none of these negative properties are a problem for the *Bertholletia*, because there is a creature sharing the same environment with it that can overcome all these shortcomings.

The agouti, a rodent which lives in South America, knows that there is food for it under this thick, odourless shell. Thanks to the agouti's chisel-sharp front teeth, it can easily cut through the tough pod shell to get to the seed. There are about 20 nuts inside each shell. And this is more than the agouti can eat at one go. The agouti therefore stuffs the nuts in its cheek pouches and covers them up after burying them in little holes it digs. Although it carries out this process in order to find and eat the nuts later, fortunately, the agouti does not have a perfect memory and the majority of the seeds are forgotten and left to germinate into a new tree about a year later.[24] This harmony is not, of course, one which arose by chance. These living things did not discover one another by chance. These living things were created. This complementarity, of which there are countless examples in nature, is the product of a superior wisdom. God, the Possessor of

this superior wisdom, creates both living things with all these characteristics and their symbiotic connection.

Seeds Which Can Withstand All Conditions

As a rule, reproductive cells in living things die shortly after leaving their own natural environments. But this does not apply to plants. Both plant pollen and seeds can remain alive miles away from the parent plant. And furthermore, it is not important how much time passes after leaving the parent plant. There are seeds which remain viable after years, or even hundreds of years.

The *lupine*, found in the arctic tundra, is a fine example of plant seeds being able to survive for long periods. The seeds of the plant feel the need for the warm weather of certain times of the year in order to germinate. When they feel that the heat is insufficient, even if all the other conditions are met, the seeds do not burst, but wait in the frozen soil for the temperature to rise. When the perfect environment is attained, they start to grow and finally germinate, taking no account of the length of time that has passed since they left the parent plant. Seeds have even been found in the fissures between rocks that have lasted out for hundreds of years without sprouting or spoiling.

This is a most interesting situation. What does it mean for a plant to be aware of its external environment? Since the plant will not be able to manage this by itself, let us consider what other possibilities there might be. A mechanism inside the plant might inform it of the situation. The plant may then suddenly arrest its development, as if an order had been given. But in that case how did such a system develop? Did the plant devise this system by thinking about it for itself? How did it produce the technical necessities within itself?

Of course the plant did not construct this system itself. All this information is always in the plant seed, hidden in the genetic code, right from when the plant first emerged. The *lupine* in any case possesses a system which can arrest its development when it comes across cold weather. It is impossible for such a structure to come about on its own. No matter how long the imaginary formation time which evolutionists call the "evolutionary period," and whatever coincidences take place during it, the formation of such a system which informs plants about the weather situation is completely impossible.

In the same way, seeds of *Mimosa Glomerata* were kept in dry storage in a herbarium, and germinated at once when soaked in water. Another example of a plant with highly resistant seeds is the *Albizia Julibrissin*. Its seeds, kept in London's British Museum herbarium, germinated after no less than 147 years, when became soaked during efforts to put out a fire in the building during the Second World War.[25]

Because air temperatures are low in tundra regions, spoiling takes place slowly. So much so that some seeds, taken from inside 10,000 year-old glaciers, can return to life when taken to laboratories and given the necessary amounts of heat and moisture.[26]

As we all know, the substance of the seed contains a certain quantity of nutrition with an outer shell reminiscent of wood. The idea that it could have a thermometer inside it, that it could have any way of exchanging information with the outside world, and that it could have the ability to decide on its actions, on the basis of the information it receives as a result of its own capacities must be described as illogical, or even "irrational." We are faced with an extraordinary substance, which looks like a small piece of wood from the outside, with no link between the enclosed place it is in and the outside world, yet which can measure air temperatures and in later stages decide whether the heat is sufficient for development. A piece of wood which possesses such perfect mechanisms as to realise that unfavourable conditions will later damage its development after germinating, which knows what it has to do to arrest its development the moment it senses such unfavourable conditions, and to continue its development from where it left off when temperatures rise to the necessary level.

This extraordinary mechanism in seeds with this resistant structure cannot be explained by means of chance as the evolutionists claim. In fact, seeds were designed, or in other words created, in such a way as to resist difficult conditions.

Without doubt God, the Lord of all the worlds, shows us evidence of His creation and His own existence even in these little seeds.

It is He Who sends down water from the sky. Thus We bring forth plants of every type with it; We produce green vegetation from it. We produce close-growing grain from it and the palm trees laden with clusters of dates close at hand produced from pollen, as well as orchards full of grapes, olives and pomegranates, which are so similar and yet dissimilar. Look at their fruit as He causes it to grow and ripen. In that there are signs for people who believe. (Surat al-An'am: 99)

Seeds Which can Stay in Water for 80 Days

Alongside seeds which can resist cold weather conditions, others possess structures which allow them to stay in water for a long time. There are even seeds which can remain in water for as long as 80 days without germinating or spoiling. The most famous of these is the coconut. For the coconut seed to be transported in safety, it is placed within a very hard shell. Everything needed for a long journey, a supply of rich food and a half-a-pint or so of water, is ready inside it. On the outside, it is fitted with a fibre float that keeps it on the surface of the water.

The sea bean is another plant which sends its seeds by water. Its seeds are not as large as coconuts, and even after a year at sea, it can still be viable.[27]

As seen from these two examples, the most important property of plants which multiply by using water as a vehicle is that the seeds germinate only when they reach dry land. Actually, this is a most interesting and exceptional situation, because as we know, plant seeds usually begin to germinate as soon as they come into contact with water. But this does not apply to these particular plants. Because of the particular structure of their seeds, plants which disperse their seeds by water do not abide by this rule. If these plants began to germinate as soon as they came into contact with water, as other plants do, they would long since have died out. Whereas these plants are able to survive by reason of general mechanisms suited to the conditions in which they live.

All plants in the world possess the structures best suited to them. These exceptional features bring to mind the question: "How is it that such resistance should have come about in just those species of plants which need it?" Let us take an example-the coconut is the answer to this question:

1. Palm seeds will need a resistant structure in order to be able to spend a long time in water, and for this reason their shells are quite hard. The shells also have water-resistant properties.

This is not a coincidence!

2. They will need more nourishment than normal on their long journeys, and the exact quantity of food necessary is placed inside the coconut seed-package.

This too is not the work of coincidence!

3. They open the moment they "know" they have arrived on dry land.

There is no way this is a coincidence!

As we have seen, these seeds, with their hard shells, their nutrition stores, their sizes, and in short, all their special features, have been designed to be resistant for long periods when necessary. If this finely calculated structure, the shell thickness of which is exactly measured, and the required store of nutrition had had to come about as the result of coincidences, the seed would have germinated before it reached the land, in other words, it would have died.

Of course, no such thing happens, thanks to the sensitive controls over the germination of these seeds. There is absolutely no doubt that the amount of food and water in the seeds, when they are to come to land, and in short all the precautions taken, could not have come about by means of any intelligence or abilities of the seeds themselves.

All these fine calculations and measurements were flawlessly carried out by God, who created the seeds, who knows all their needs and characteristics, and who possesses infinite knowledge and intelligence.

Everything has its measure with Him. (Surah ar-Ra'd: 8)

As for the earth, We stretched it out and set upon it immovable mountains and made everything grow in due proportion on it. (Surat al-Hijr: 19)

The Ant - A Hired Porter

Some seeds have features which are structurally different from those most widely known. The most surprising facts emerge when one examines them. As an example, let us take a seed which is covered in an oily, edible tissue. This oily tissue, which may look quite ordinary at first sight, is actually a most important detail for the survival of that plant species. For that is why ants show an interest in that particular plant. The multiplication of these plants takes place by means of ants, unlike most plant species. The plant, which is unable to place its seeds under the ground by itself, has chosen to do so by having ants carry them. The oily tissue around the seeds is a most attractive food for ants, which eagerly gather the seeds up and carry them to their nests, where they bury them underground.

It might be thought that the seeds' being food is the reason why the ants make such a great effort, but that would be wrong. Despite all the effort the ants make to carry the seeds to their nests, they eat only the external casing, and leave the fleshy inside part. In this way, the ants obtain something to eat, and that part of the seed which carries out the reproduction of the plant is left buried in the soil.[28] It would be scientifically completely unrealistic to claim that ants do all this knowingly, or that the plant arranged its seed to have certain features that would appeal to a particular species of ant, or planned to live in the same environment as them.

There can be no argument that the consciousness which organized this flawless reciprocity belongs neither to the plant, nor to the ant. It belongs to a Creator, who knows all the properties of these two living things, and made them for one another. In other words, it is God, their Creator, who gave them that consciousness.

Everyone in the heavens and earth belongs to Him. All are submissive to Him. (Surat ar-Rum: 26)

The Seed Becomes a Plant

First stage: Germination

Seeds, which resemble little bits of dry wood, are actually bearers of genetic codes which have thousands of pieces of information about plants inside them. All the information about the plant the seed will later produce is hidden inside it. Complete

information about it, from the little hairs on the end of its roots, to the tubes inside its stem, its flowers, and the fruit it will bear, exists inside the seed, down to very last tiny detail.

After fertilization, the first stage in a seed's becoming a flower is germination The seed, waiting under the ground, is only wakened into action when factors such as warmth, moisture, and light come together. Before that, it is dormant. When the time comes, it wakes up and starts to grow.

There are a number of stages in the germination process. In the first place, the seed must taken in water so that the cells inside it become hydrated and capable of metabolic activity. Once metabolic activity begins, the root and the shoot begin to grow, and at this stage the cells start to divide. In order for particular functions to be brought about by specialized tissues, the cells have to differentiate. All these processes require a great deal of energy.

For the seed to grow, it needs nourishment. But the seed needs a preliminary source of food until it can obtain the required minerals from its roots. So, where does the seed find the nutrients it needs to grow?

The answer to this question lies in the construction of the seed. The seed's stored food reserves which forms together with it during the fertilization process is used by the seed until it gives off a shoot and appears above the ground. Seeds need the supplementary nutriments in their bodies until they reach the stage of being able to produce their own food.

When all of the conditions are just right, germination begins. The seed takes in water from the soil and the embryo cells start to divide. Later, the seed coat opens. First tiny roots, the beginning of the root system, appear and grow downwards in the soil. Following the development of the tiny roots, the buds which will produce the stem and leaves develop.

Germination begins under the earth, then the new little plant heads up towards the light and grows ever stronger. Once the first leaves have opened, the plant can begin to produce its own nutrition by means of photosynthesis.

What has been explained so far is actually common knowledge, having frequently come under observation. Plants emerging from seeds under the soil is something which everyone is perfectly familiar with. But while the seedling is growing, a true miracle takes place. Seedlings, which weigh only a matter of grams, have no difficulty in making a hole through what may be some kilograms of earth on top of them. The seedling's only aim is to emerge from the soil and reach the light. Plants which have begun to germinate move their slender trunks as if in empty space and slowly head for the daylight, as if there were no heavy weight on top of them. They emerge from the soil in the face of the force of gravity, ignoring in other words all the physical laws which apply to them.

The tiny seed and its roots just half a millimetre wide come to no harm from the soil, which normally tends to rot things and destroy them. Quite the contrary, they rapidly grow and develop.

Experiments were carried out to stop seedlings reaching the daylight by closing off the escape route on top of them by various methods. The results were very surprising. The seedlings put out shoots long enough to get around any obstacle on top of them, or else created pressure where they lay and again succeeded in reaching daylight. While plants are growing they can create considerable pressure where they are. For example, a seedling growing in the cracks of a newly built road can actually open the cracks up still further. In short, they brook no obstacles as they head toward the daylight.

Shoots always grow vertically as they emerge from the soil. As they do this, they oppose the force of gravity. The roots, on the other hand, obey the force of gravity as they head downwards. This raises the question: "How is it that two organs formed on the same plant should start growing in different directions?" In order to answer this, let us have a look at some of the mechanisms in plants.

Two factors govern the growth of plants: light and gravity. The first root and shoot which emerge from the seed possess systems which are very sensitive to these two factors.

There are cells in the root of a germinating plant which can sense gravitational signals. In the shoot, which heads upwards, there are other, light-sensitive, cells. This sensitivity of the cells to light and gravity governs the different parts of the plant's heading in the correct direction. These two stimuli also enable the direction of growth of the root and shoot to be corrected if they are not entirely vertical.[29]

If we have another look at what we have already established, it will be seen that we are in the face of an extraordinary situation here. The cells which make up the plant are beginning to grow different from one another, and are changing shape to form the different parts of the plant. Furthermore, as we have seen, the shoot and the root are growing in opposite directions.

Let us now consider the root's heading down into the depth of the soil with the force of gravity, together with the shoot's heading up towards the surface. The movement of these structures, which present an image of being quite powerless, as they split the soil, will bring many questions to mind. In particular, there is an important moment of decision at this point. Who, or what, is it which establishes the moment, in other words the time the cells begin to divide, and which shows them what direction to go in? How is it that every cells acts with the knowledge of which region it is to take its place in? How is it that no confusion arises, for example, how is it that the root cells never start to head upwards?

There is basically only one answer to all questions of this sort. It is clearly not the plant itself which takes and implements this decision, or sets up the necessary systems so that no confusion arises and forms them within its own body. Neither is it possible for these systems to have come about through the intervention of any other living thing. And the cells which make up the plant cannot do it. All these factors show us that plants are all directed and governed by another force. In other words, there must exist a higher intelligence which created all the structures they possess, leading the cells to make their

decisions and showing them which way to go in order to perform their functions. There is no doubt that this superior wisdom belongs to God, the Lord of all the Worlds.

Shoots Which Brook No Obstacles

A shoot which emerges from the soil may not always find itself in a suitable environment. It may, for instance, find itself under the shadow of a rock or a large plant. In such a situation, if it continues to grow, it will find it difficult to carry out photosynthesis, because it cannot receive direct sunlight. If the shoot does find itself in such a situation when it emerges, it changes its direction of growth towards the source of light. This process, known as phototropism, shows that shoots have a light-sensitive orientation system. When we compare them to animals and human beings, plants are in a more advantageous position as regards light perception, because human beings, for example, can perceive light only with their eyes. Whereas plants have at least three quite distinct photo-receptor mechanisms. For this reason they never confuse direction. Thanks to their flawless orientation systems, based on light and the force of gravity, they easily find their way.

Alongside light-sensitive systems, within plants, there are also localized areas of cell division. These areas, known as meristems, are generally found at the tips of the growing roots and stems. If the cells in the growth areas always grow in the same way during germination, this leads the stem to grow straight. Every plant takes shape according to the growth direction of the plant cells in the meristems of roots and shoots. If the growth of these cells is more on one side and less on the other, then the stem of the plant will grow at an angle. If conditions are appropriate, plant growth starts at the same moment in all areas. The sprouting plant directs its stem straight to the light which it badly needs. On the other hand, the roots, which will provide the necessary water and minerals for the plant from the soil, grow in the most appropriate way thanks to their gravity-sensitive direction systems. At first sight it might be thought that roots spread under ground at random. Whereas actually, thanks to this sensitive system, the root extensions progress like rockets, locked on to their targets in a controlled manner.

The growth controlled by these mechanisms is different from plant to plant, because the growth of every plant takes place in conformity with its own genetic information. For this reason, maximum growth rates are different for every plant. For example, the *lupine* attains its maximum growth rate at about ten days of age, the cornstalk in its sixth week, the beech tree after a quarter-century.[30]

Germination is the first stage in a tiny body's becoming a plant several metres long and weighing tons. While the roots of slow-growing plants head down, and the branches up, the systems inside them (food transport systems, reproductive systems, hormones which control the upward and sideways growth of the plant and then make it stop) all emerge together, and there is no delay or imperfection in the emergence of any of them.

This is most important. For instance, while a plant's reproductive mechanisms are developing on the one hand, the transport tubes (for water and food) develop on the other. Otherwise, bark or wood tubes would have no importance for a plant whose reproductive mechanism had not developed. There would be no point in roots emerging. Since such a plant could not produce subsequent generations, the subsidiary mechanisms would serve no purpose.

As we have seen, there is a plan in this harmonious design for plant interdependence which definitely could not have come about by chance. Development by stages, as claimed by evolutionist scientists, is completely out of the question.

Let us demonstrate this with a simple experiment that anyone can do. Let us take one seed and together with this something containing a mixture of all the molecules in the seed, of the same size and weight, bury them both at the same depth, and wait for a while. Once a period of time has passed which will differ according to the species, we shall see that the seed we planted has split the soil and has come to the surface. But no matter how long we wait, the other substance will never come to the surface. The result will be the same no matter if we wait a hundred or a thousand years. The reason for the difference is obviously the special design in the seed. Plant genes are encoded with the necessary information for this process. All the systems in plants reveal the existence of conscious choice. All the details show that plants cannot have come about by random events, on the contrary, they show that there was a conscious intervention in the emergence of plants.

Of course this perfect design is proof of the existence of a Creator who knows and brings about everything, down to the finest detail. Just the first stage of the life of plants, the emergence of the seed, clearly reveals to us the unique nature of the creation of God, the Possessor of superior power. God draws our attention to this truth in the Qur'an:

Have you thought about what you cultivate? Is it you who make it germinate or are We the Germinator? If We wished We could have made it broken stubble. You would then be left devoid of crops, distraught. (Surat al-Waqi'a: 63-65)

ROOTS: NATURE’S DRILLERS

In order to survive, plants need to carry out photosynthesis, and for that they need the water and minerals they take from the soil. To meet these needs, they require the roots which drill under the ground. The job of the roots is to spread rapidly underground like a net and draw up water and minerals. As well as this, plant roots, despite their delicate structure, enable plants which can weigh up to tons to hold on to and fix themselves in the soil. The soil-gripping nature of roots is most important, because it prevents landslides and the fertile upper layers of soil being washed away by the rain, and other unwanted occurrences that can adversely affect human life.

Roots need no equipment for all this. They have no engine to provide the power to start the process of water-drawing. Neither is there any equipment to pump the water and minerals to the stem, metres away. But roots can spread over a wide area and draw water. So, how do they do it?

How Does This System Work?

A typical red maple tree growing in a humid climate may lose as much as 200 liters of water per day. This represents a serious loss for the tree. This water needs to be replaced immediately if the plant is to survive. Thanks to the flawless root system plants have, every drop of water which evaporates is replaced.[31]

The roots, which spread down into the depths of the earth, send the water and minerals which the plant needs right up to the leaves, through the stem and branches. The roots' drawing of water from under the ground closely resembles a drilling technique. The ends of the roots keep looking for water in the depths of the soil until they find it. Water enters the root through an external membrane and capillary cells. It then passes through the cells to the stem tissue. From there it is transported to every part of the plant.

This process which the plant carries out so perfectly is, in fact, a very complicated one. So much so that the secret of the system is still not completely known, even in these days of space-age technology. The existence of this sort of "pressure tank" system was discovered in trees some 200 years ago. Yet no law has yet been discovered to definitively explain how this movement of water, against gravity, actually comes about. All that scientists have been able to do on this subject is put forward a number of theories about certain mechanisms. Those which have been demonstrated in experiments are thought of as valid to some extent. The outcome of all these scientists' efforts is the recognition of the perfection of the pressure tank system. Such a technology, packed into a tiny space, is just one of the proofs of the incomparable

intelligence of the designer of the system. The water transport system in trees, and everything else in the universe, were created by God.

The Pressure System in Plant Roots

When the internal pressure in root cells is lower than the outside pressure, plants take in water from outside. Another way of putting it is that they take water from outside only when they need it. The most important factor establishing this is the amount of pressure produced by the water in the roots. This pressure has to be balanced with that outside. For this to happen, the plant needs to take in water from the outside when the amount of internal pressure falls. When the opposite happens, when the inside pressure is higher than the outside, the plant gives off water from inside itself by means of its leaves to re-establish the balance.

If the level of the water in the soil were slightly higher than normal, the plant would continually take in water, because the external pressure was higher, and this would eventually damage it. If it were a little lower, on the other hand, the plant cell could never take in water from the outside because the external pressure would be low. It would even have to give off water to maintain the pressure balance. In either case the plant would dry up and die.

This shows to us that plant roots contain a balance-control mechanism to enable them to regulate the level of pressure needed at a precise moment, neither more nor less.

How Roots Take in Ions from the Soil

The cells in the roots of a plant select particular ions from the soil to use in cell reactions. Plant cells can easily take these ions inside themselves, despite the internal concentration of some ions in the plant being a thousand times greater than that in the soil solution. So, this is a most important process.[32]

Under normal conditions, a transfer of materials will occur from an area with a higher concentration to one with a lower concentration. But as we have seen, just the opposite takes place in the roots' absorbing ions from the soil. For this reason the process requires quite substantial amounts of energy.

Two factors influence the passage of the ions through the cell membrane: the membrane's permeability and the concentration of the ions on either side of the membrane.

Let us examine these two factors by asking some questions about them. What does a plant's choosing the required elements from those in the soil actually mean? Let us first take the concept of "requirements." A root cell has to know all the elements in the plant,

one by one, to meet its requirements. It has to establish which of all the elements it knows are lacking in all parts of the plant and identify them as needs. Let us ask another question. How is an element known? If the soil is not in a pure state, in other words if there are other elements mixed up in it, what has to be done to distinguish one element from all the rest?

Will it be possible for someone to tell which is which if elements such as iron, calcium, magnesium, and phosphorus are put in front of him all mixed up? How can he tell them apart? If he has received training in the subject, he may be able to identify some of them. It will be impossible for him to identify the rest, however. So how do plants make the distinction? Or rather, how is it possible for a plant to know elements by itself, and to find those ones most useful for it? Is it possible that such a process should have been carried out in the right way every time for millions of years by chance? In order to think about all of these questions-to which the answer is "Impossible!"-in a more detailed and deeper way, let us examine what kind of selective property roots possess and what happens at the time of selection.

Roots' Selectivity

Let us review our chemical knowledge regarding the elements and minerals which appear in many forms in nature. Where are they found? Which substances go into which groups? What differences are there between them? What experiments or observations are required to understand what each one is? Can the fastest results be arrived at by chemical or physical methods in these experiments? If we just look at things from the physics point of view can we make a proper classification of these substances if they are put on a table in front of us? Can we distinguish minerals by their colour or form?

We could go on. And the answer to all of the above questions is more or less the same. Unless someone is an expert in the field, partial or inadequate knowledge left over from school or university will not lead a person to an accurate solution. In order to classify our knowledge of minerals, let us this time take examples from the human body.

There is a total of three kilograms of minerals in our bodies. Parts of them are essential for our health, and they are all present in the necessary quantities. For example, if we had no calcium in our bodies, our teeth and bones would lose their hardness. If there were no iron, oxygen could not reach our tissues, because we would have no haemoglobin. If we had no potassium and sodium, our cells would lose their electrical charges and we would rapidly age.

Minerals are present in the soil in the same way as in the human body. Their quantities, functions, and the forms in which they are found in the soil are all different, and many living things make use of these minerals. In plants, for instance, systems have been set up so that they can easily take the elements they need from the soil. There being different fields of use for them in their structures, all the elements have to go to different parts of the plant after they are absorbed. They all have different tasks.

In order to live healthily, a plant needs such basic elements as nitrogen, phosphorus, potassium, calcium, magnesium and sulphur. While plants can take most of these substances directly from the soil, the situation is different with nitrogen. Nitrogen makes up almost 80% of the atmosphere by volume, however, it cannot be obtained or "fixed" directly from the atmosphere by green plants. The plants meet their nitrogen need by absorbing from the soil the nitrates processed by the soil bacteria.

Other elements, too, are necessary for healthy development. But these are needed in quite small quantities. This group includes iron, chlorine, copper, manganese, zinc, molybdenum, and boron.

In addition to these 13 minerals, plants also need the three basic building blocks of oxygen, hydrogen, and carbon, and get them from the carbon-dioxide, oxygen, and water in the atmosphere. All plants need this total of 16 elements.

If these elements are taken in in too great or too small quantities, various deficiencies arise in the plant.

For example, too much nitrogen from the soil leads to brittle growth especially under high temperatures and succulent growth, while too little can lead to yellowing, red

and purple patches, reduced lateral bud, and older growth. Phosphorus deficiency causes reduced growth, browning or purpling in foliage in some plants, thin stems, reduced lateral bud breaks, loss of lower leaves and reduced flowering. Phosphorus is a very important element for the growth of young plants and seed production. In short, the existence of these ions and their being taken in from the soil in the required quantities are essential for healthy plant growth.[33]

What would happen if plants did not possess this ion-selection mechanism? What would happen if plants took in all kinds of minerals, not just the ones they need, or took in too many or too few minerals? There is no doubt that in that event there would be serious disruptions to the perfect balance in the world.

LEAVES AND PHOTOSYNTHESIS

17th century Belgian physicist, Jan Baptista van Helmont, observed the growth of a willow tree and took various measurements in one of his scientific experiments. First he weighed the tree, then he weighed it a second time five years later, and saw that it was now 75 kilograms heavier. Yet, the soil in the pot in which the plant was grown lost only a few grams over the same time period. The physicist van Helmont revealed in this experiment that the soil in the pot was not the only reason for the growth of the willow tree. Since the plant had used only a very small part of the soil to grow, then it must have been receiving nutrition from somewhere else.[34]

This occurrence, which van Helmont attempted to discover in the 17th century, was photosynthesis, some stages of which are still not understood in our own time. In other words, plants' producing their own nutrition.

Plants do not just use the soil when producing their own nutrition. Besides the minerals in the soil, they also use water and the CO_2 (carbon dioxide) in the atmosphere. They take these basic materials and process them in microscopic factories in their leaves, thereby carrying out photosynthesis. Before examining the various stages of photosynthesis, it will be useful to take a look at leaves, which play an important role in this process.

The General Structure of Leaves

When studied from either the point of view of general structure or of microbiology, it will be seen that leaves possess planned, very complex, and detailed systems to produce as much energy as possible. In order for leaves to produce energy they need to take heat and carbon-dioxide from outside. All the systems in leaves have been designed to take in these two things as easily as possible.

Let us first look at leaves' external structures.

The external surfaces of leaves are wide. This enables the exchange of gases (such processes as the absorption of carbon-dioxide and the release of oxygen, for instance) necessary for photosynthesis.

The leaves' flat and wide shape enables all the cells to be near to the surface. Thanks to this, the exchange of gases is made easier, and sunlight can reach all the cells which carry out photosynthesis. Let us imagine what would happen otherwise. If leaves were not flat, wide, and thin, but had any geometrical shape or any random and meaningless one, they would be able to carry out photosynthesis with only those regions directly in contact with the sun. This would mean that plants would not be able to produce enough energy and oxygen. The most important result of this for living things would certainly be the emergence of an energy shortage in the world.

And the specially "planned" systems in leaves do not end there. The tissue of the leaf has another important property. Thanks to this, phototropism, or turning towards the light, takes place. This is the reason for plants' turning their leaves to the direction of the Sun, which can be easily observed in pot plants. In order to understand how these processes which are of vital importance, take place, we shall have to take a brief look at the physiological structure of the leaves.

If we look at a cross-section of a leaf, we will see a four-layered structure.

The first is the epidermis layer, which does not include chloroplasts. The role of the epidermis, which covers the top and bottom of the leaf, is to protect the leaf from external influences. The outermost part of the epidermis is covered with a protective and waterproof waxy layer, called the cuticle. When we look at the internal layers of the leaf, we see that it is generally made up of two layers of cells. Of these, cells rich in chloroplast stand in rows, with no gaps between them, making up the palisade layer, which forms the internal tissue. This is the layer which carries out photosynthesis. The spongy layer below this is the layer which enables respiration. There are air pockets between the layers of cells in this tissue. As we have seen, all these layers have very important tasks in the construction of the leaf. This kind of organization is of enormous importance from the point of view of photosynthesis, as it enables the leaf to spread and distribute light better. As well as this, the leaf's ability to carry out processes (such as respiration and photosynthesis) increases with the size of the leaf surface. For example, in dense tropical rainforests there is the tendency for large-leaved plants to grow. There are very important reasons for this. It is rather difficult for sunlight to reach all parts of plants equally in tropical rainforests, where the trees which make them up are all densely packed together and where it rains hard and often. This is what makes it necessary to increase the surface area of the leaf in order to catch the light. In those areas where the sunlight enters with difficulty, it is of vital importance for leaf surfaces to be large in order for plants to produce nutriment. Thanks to this feature, tropical plants are exposed to the sunlight in the most advantageous manner.

Small leaves, on the other hand, are found in dry, harsh climates, because under these climatic conditions the basic point of disadvantage is heat loss. And as the leaf surface becomes greater, water evaporation, and thus heat loss, increases. For this reason, the leaf surface, which catches the light, has been planned in the most economic way for the plant to conserve water. In desert environments the shrinking of leaves reaches exaggerated proportions. Cactus plants have thorns instead of leaves, for instance. In these plants photosynthesis is carried out by the fleshy stems themselves. The stem moreover, is where water is stored.

But that is not enough to control water loss on its own. Because no matter how small the leaf is, the presence of the minute pores in the epidermis called the stomata means that water loss continues. For this reason the existence of a mechanism to compensate for evaporation is essential. And plants do have a way of regulating too

much evaporation. This is done by controlling the degree of openness of the stomata, either widening or constricting them as required.

Trying to capture light to carry out photosynthesis is not the leaves' only task. It is also important for them to take carbon-dioxide from the air and direct it to the areas where photosynthesis is carried out. Plants do this by means of the pores on their leaves.

The Stoma: A Flawless Design

These microscopic pores on the surface of leaves have the role of enabling the transfer of light and water and of taking the CO_2 necessary for photosynthesis from the atmosphere. The stomata possess a structure which allows them to open or close as necessary. When they open, the oxygen and water vapour between the cells of the leaf are exchanged for the carbon-dioxide required for photosynthesis. In this way, surplus production is given off, and the required substances are absorbed to be made use of.

One of the interesting aspects of the stomata is that they are generally found on the underside of leaves. In this way the harmful effects of sunlight are reduced to a minimum. If the stomata, which give off the water in the plant, were on the tops of the leaves in great numbers, they would be exposed to sunlight for long periods. In such a situation, the stomata would continually be giving off the water in them because of continuous exposure to heat, in which case the plant would die of excessive water loss. Thanks to this special feature, the plant is prevented from being harmed by water loss.

The stomata are formed by sausage-shaped guard cells. Their concave structures permit the opening of the pores, which in turn allow the exchange of gases between the leaf and the atmosphere. The opening of the pores depends upon external conditions (light, heat, moisture, and carbon-dioxide levels) and the internal state of the plant, particularly its water levels. The pore's opening or closing regulates the exchange of gases and water.

There are very fine details in the structure of the pores, which have been designed with all external factors in mind. As we know, moisture levels, the degree of heat, gas levels, air pollution always change. Leaf pores possess structures which can adapt to all these changing conditions.

We can explain all of this with an example. In plants such as sugar cane and cornplant, which are exposed to heat and dry air for a long time, the pores stay completely or partially closed all day in order to conserve water. These plants need to absorb carbon-dioxide in the daytime for photosynthesis. Under normal conditions, the pores would have to remain as open as possible. But this is impossible. Because in that case the plant would continuously lose moisture from its pores and shortly die. For this reason, the pores need to remain closed.

But this problem, too, has been solved. Some plants, which live in hot climates, have a carbon dioxide pump which sucks the gas more efficiently out of the air into the

leaf. These plants thus use chemical pumps to absorb carbon dioxide in their leaves, even if their pores are closed.[35] If these pumps were absent for a time, the plant would be unable to produce any nutrients, because it could not take in any carbon-dioxide, and would therefore die. This is a sign that these complex chemical pumps could not have come about as the result of a series of coincidences over time. This system in plants can perform effectively only when all its components are together at once. For which reason there is no chance that the stomata could have evolved and emerged as the result of coincidences. The stomata, with their exceedingly special construction, have been planned, in other words created, to perform their tasks in the most sensitive manner possible.

The Evolutionist View of Leaf Development

As we have seen, there are highly complex systems squeezed into a tiny green body. These complex systems in leaves have been functioning perfectly for millions of years. So how did it happen that these systems came to fit into such a tiny area? How did the complex design in leaves come about? Is it possible that such a unique and perfect design came about by itself?

If we ask the defenders of the theory of evolution, their answer will be the same as always. They will put forward explanations and assumptions that have no logic and which are mutually contradictory. They will try to answer the question of how innumerable varieties of plants, trees, flowers, sea plants, grasses, and fungi "came about"-but without success.

When the theories put forward by evolutionists regarding the development of leaves are examined, they will be seen to be full of meaningless, even ridiculous, claims. One of them, the telome theory suggests that the leaf arose through repeated complex branchings and fusions of stem systems.[36] Let us now consider the questions which arise from this baseless claim:

- How did these branchings and fusions come about?

- As the result of what coincidences did they turn into leaves, with their totally different construction and planning?

- How did it happen that the thousands, nay, the millions of varieties of plants, flowers, trees, and grasses emerged from these primitive plants?

Evolutionists have no logical and scientific answers to any of these questions. As on every subject, evolutionists can produce no other explanation regarding the coming into being of plants than imaginary scenarios based entirely on imagination.

According to another theory on the subject (the enation theory), the leaf evolved through simple stem outgrowths (enations).[37]

Let us once more examine the questions which arise from this.

How did it happen that enations, or flaps of tissue, emerged in certain places in the body to turn into leaves?

And later, how did they turn into leaves? And, not just any leaves, but leaves with flawless constructions in countless varieties?

Let us go back a little. How did the stems, which these enations emerge from, come into existence?

There is no scientific answer from evolutionists to questions of this sort.

What evolutionist theories actually want to explain is, in essence, as follows: Plants emerged as the result of events which came about by coincidence. Stems and branches came about by coincidence, chlorophyll came to be in chloroplasts by another coincidence, the different layers in leaves are another coincidence, once coincidence followed on the heels of another, and eventually, leaves emerged, with their flawless and particular construction.

At this point, the fact that all these structures in leaves, which are claimed to have come about by coincidence, must have come about at the same time is a truth which cannot and must not be ignored. According to evolutionists, all the mechanisms in the leaf arose from coincidences gradually over time. And the same evolutionist logic predicts that organs or systems which are not used will eventually disappear. Since all the mechanisms in leaves are interlinked, it makes no sense to say that one of them came about by coincidence. Because according to the second stage of evolutionist logic, this mechanism would have already disappeared, because it served no purpose. For this reason, in order for the plant to stay alive, all the complex systems in its roots, stems, and leaves have to exist at one and the same time.

As with every living creature in the world, plants were brought into being with flawless systems, and, from the moment they were created, have come down to today, with no changes in their features. From the falling of the leaves, to their turning themselves towards the sun, from their green colour to the woody nature of their bodies, from the existence of their roots, to the emergence of their fruits – all their structures are flawless. Even with today's technology it would be impossible to imitate or reproduce even similar systems (the process of photosynthesis, for instance).

This complexity is one of the proofs that leaves could not have emerged by chance. Leaves possess specially planned structures, to meet plants' needs to produce food and to do respiration. The existence of special planning proves the existence of a planner. The details and perfection of the planning introduce to us the planner's knowledge, intelligence, and art. There is no doubt that it is God, the Lord of all the Worlds, who created leaves with their perfect design.

The Miracle of Photosynthesis

The Earth is a planet specially designed to support life. The Earth provides an environment that can sustain life, thanks to the many very sensitive balances set up on it, from the gas levels in the atmosphere to its distance from the sun, from the existence of mountains to the presence of drinking water, from the wide variety of plants to the temperature of the Earth.

If the components which make up life are to survive, both the physical and the biological balances have to be maintained. For example, in the same way as gravity is indispensable for living things to live on the ground, so the substances plants produce are just as necessary for the survival of life.

As we indicated earlier, the process which plants carry out to produce these organic substances is called photosynthesis. The process of photosynthesis, which can be summarised as plants' producing their own food, is what makes them different from other living things. What makes this difference is the existence of structures in plant cells (unlike human or animal cells), which can make direct use of sunlight. With the help of these structures, plant cells turn the energy from the sun, which human beings and animals absorb by means of food, into energy and store it, again by special means. In this way, the process of photosynthesis is completed.

Of course, it is not the plant itself which carries out this process, nor the leaves, nor even the totality of the plant cells. It is a small organ found in plant cells called the "chloroplast," which gives plants their green colour and carries out these processes. Chloroplasts are one thousandth of a millimetre in size, for which reason they can be seen only through a microscope. The wall of the chloroplast, which plays such an important role in photosynthesis, is just one hundred millionth of a metre in size. As we can see, these figures are extremely small, and all the processes take place in this microscopic environment. This is one of the astounding features of photosynthesis.

The Chloroplast: A Factory Full of Secrets

In a chloroplast there are various formations such as thylakoids, internal and external membranes, stromata, enzymes, ribosomes, RNA, and DNA to bring about photosynthesis. These formations are all interlinked, both structurally and in terms of their functions, and each one has very important functions which it carries out within its own body. For example, the chloroplast's outer membrane regulates the flow of materials into and out of each chloroplast. The internal membrane system consists of flattened sacs, or thylacoids which resemble discs. Pigment molecules (chlorophylls) and enzymes essential for photosynthesis are embedded in the thylakoids. Many of the thylakoids are stacked, forming structures called "grana," which allow maximum absorption of sunlight. This means the plant absorbing more light and being able to carry out more photosynthesis.

Surrounding the thylakoids is a lipid solution, the "stroma," which contains other enzymes as well as DNA, RNA, and ribosomes. With the DNA and ribosomes they possess, chloroplasts both reproduce and produce certain proteins. (49)

Another important point in photosynthesis is that all these processes take place in a period of time so short as to be unobservable. The thousands of chlorophylls found in chloroplasts simultaneously produce their reaction to sunlight in the unbelievably short time of a thousandth of a second.

While scientists describe the photosynthesis event in chloroplasts as a long chemical chain reaction, they are unable to explain some parts of what happens in this chain on account of that speed, and simply look on in amazement. But it is clearly understood that photosynthesis involves two stages. These are known as the "light reactions" and the "dark reactions."

The Light Reactions

Radiations from the sun form a continuous series. The range of radiations that organisms detect with their eyes – visible light – is roughly the same range plants use. Shorter wavelengths (blue light) are more energetic than longer wavelengths (red light). Pigments are substances that absorb visible light; different pigments absorb different wavelengths. Chlorophyll, the main pigment of photosynthesis, absorbs light primarily in the blue and red regions of the visible spectrum. Green light is not appreciably absorbed by chlorophyll; instead, it is reflected. Plants usually appear green because their leaves reflect most of the green light that strikes them.[38]

The process of photosynthesis starts with the absorption of sunlight by these pigments, which make plants look green. But how do the chlorophylls begin the process of photosynthesis by absorbing sunlight? In order to answer this question it will be useful to first of all examine the structure of the thylakoid, which is found inside the chloroplasts and contains the chlorophylls within it.

There are two types of chlorophylls, "chlorophyll-*a*" and "chlorophyll-*b*." The light dependent reactions of photosynthesis begin when chlorophyll *a* and accessory pigments absorb light. As we can see in the picture where the detailed structure of the thylakoid is explained, chlorophyll molecules, accessory pigments, and associated electron acceptors are organized into units called photosystems. There are two types of photosystems, Photosystem I and Photosystem II. The light energy is transferred to a special "chlorophyll-*a*" molecule called the reaction center. The energy obtained from the absorption of sunlight gives rise to the loss of energy-rich electrons in the reaction centres. These energy-rich electrons are used in subsequent stages to obtain oxygen from water.

At this stage there is a flow of electrons. The electrons lost by "Photosystem I" are replaced by electrons lost from "Photosystem II." Electrons lost by "Photosystem II" are

replaced by electrons removed from the water. As a result, water is separated into oxygen, protons, and electrons.

At the end of the electron flow, the electrons, along with the protons from water are transported to the inside of the thylakoid and combine with a hydrogen-carrier molecule $NADP^+$ (nicotinamide adenine dinucleotide phosphate). The molecule NADPH results from this.

As electrons flow from carrier to carrier along the electron transport system, a proton gradient is established across the thylakoid membrane; the potential energy of the gradient is used to form ATP (an energy package which the cell will use in its own processes). At the end of all these processes, the energy which plants need to create their own nutrition is ready for use.

These events, which we have tried to summarise as a chain reaction, are only the first half of the photosynthesis process. Energy is necessary for plants to produce nutrition. For this to be obtained, the other processes are fully completed, thanks to a specially planned "special fuel production plan."

The Dark Reactions

These processes, the second stage in photosynthesis, known as the Dark Reactions or Calvin Cycle, take place in the regions of the chloroplast known as "stroma." The energy-charged ATP and NADPH molecules produced by the light reactions are used to reduce carbondioxide to organic carbon. The end-product of the dark reactions is used as a starting material for other organic compounds needed by the cell.

It took scientists hundreds of years to understand the main lines of this chain reaction which we have summarised here. Organic carbons, which cannot be produced in any other manner in the world, have been produced by plants for millions of years. This molecule is the energy source for all living systems.

During the photosynthesis reactions, enzymes and other structures with different features and tasks work in complete cooperation. No matter what highly developed equipment it may have, no laboratory in the world can work with the capacity plants have. Whereas in plants all these processes take place in a tiny organ just one thousandth of a millimetre in size. The diverse formulae have been implemented for millions of years, with no confusion of all the variety of plants, no mistakes in the order of reactions, and no confusion in the quantities of basic materials used in photosynthesis.

The process of photosynthesis also has another aspect. The complicated processes outlined above lead plants at the end of photosynthesis to produce the glucose and oxygen essential to living things. These products made by plants are used by humans and animals as food. By means of these foods, they store energy in their cells and use it. By virtue of this system, all living things make use of the Sun's energy.

Like Everything Necessary for Photosynthesis, Sunlight Has Also Been Specially Arranged

While all this is going on in the chemical factory, the features of the energy which will be used in the processes have been identified. When the photosynthesis process is looked at from this point of view, it will be realised in what fine detail the processes which take place have been planned, so that the features of light energy from the Sun may meet the energy requirement of the chloroplast to produce the correct chemical reactions.

In order to completely understand this fine balance, let us examine the functions and importance of sunlight in photosynthesis.

Was sunlight arranged specially for photosynthesis? Or are plants flexible enough to make use of any light that comes their way and initiate photosynthesis with it?

Plants are able to carry out photosynthesis thanks to the sensitivity of chlorophylls to light energy. The important point here is that chlorophyll substances use light of a particular wavelength. The sun rays have just the right wavelength needed by the chlorophyll. In other words, there is total harmony between sunlight and chlorophyll.

In his book, *The Symbiotic Universe*, the American astronomer George Greenstein has this to say about that flawless harmony:

> Chlorophyll is the molecule that accomplishes photosyhthesis... The mechanism of photosynthesis is initiated by the absorption of sunlight by a chlorophyll molecule. But in order for this to occur, the light must be of the right color. Light of the wrong color won't do the trick.
>
> A good analogy is that of television set. In order for the set to receive a given channel it must be tuned to that channel; tune it differently and the reception will not occur. It is the same with photosynthesis, the Sun functioning as the transmitter in the analogy and the chlorophyll molecule as the receiving TV set. If the molecule and the Sun are not tuned to each other – tuned in the sense of color – photosynthesis will not occur. As it turns out, the Sun's color is just right. [39]

In short, in order for photosynthesis to take place, all of the conditions have to be just right at that moment. It will be useful now to turn to another question that might come to mind. Could there have been any change over time in the order of the processes or the tasks carried out by the molecules?

One of the answers to this question that defenders of the theory of evolution, who claim that the sensitive balances in nature came about as the result of coincidences, is, "If there had been a different environment, plants would have initiated photosynthesis in that environment too, because living things would have adapted to it." But this is

completely faulty logic. Because in order for plants to engage in photosynthesis they have to be in harmony at that moment with the light from the sun. George Greenstein, an astronomer who is also an evolutionist, reveals that this logic is faulty in this way:

> One might think that a certain adaptation has been at work here: the adaptation of plant life to the properties of sunlight. After all, if the Sun were a different temperature could not some other molecule, tuned to absorb light of a different colour, take the place of chlorophyll? Remarkably enough the answer is no, for within broad limits all molecules absorb light of similar colours. The absorption of light is accomplished by the excitation of electrons in molecules to higher energy states, and the general scale of energy required to do this is the same no matter what molecule you are discussing. Furthermore, light is composed of photons, packets of energy, and photons of the wrong energy simply cannot be absorbed... As things stand in reality, there is a good fit between the physics of stars and that of molecules. Failing this fit, however, life would have been impossible. [40]

Photosynthesis Cannot be a Coincidence

Despite all of these obvious truths, let us see that this system could not have come about by chance by asking some questions one more time for those who continue to uphold the validity of the theory of evolution. Who is it who planned this incomparable mechanism, which is set up in a microscopically small area? Can we imagine that plant cells planned such a system, in other words that plants actually thought it up? Of course we cannot. Because it is out of the question for plant cells to plan and think. It is not the plant cell itself which created the flawless system we see when we look inside it. So, in that case, is it a product of a unique human intelligence? No, it is not. It is not human beings who established the most unbelievable factory in the world in a space of just a thousandth of a millimetre. In fact, human beings cannot even see what is going on inside this microscopic factory.

When looked at together with the claims of the evolutionists, it will be seen why the answer to all these questions is "No," and the question of how plants came about will be made more apparent.

The theory of evolution claims that all living things evolved by stages, and that there was a development from the simple to the complex. Let us consider whether this is correct or not by seeing if we can limit the number of parts which exist within the process of photosynthesis. For example, let assume that there are 100 elements necessary for the process of photosynthesis to come about (although in reality there are a great many more). Continuing our assumption, let us imagine that of these 100 elements, one or two came into existence, as the evolutionists claim, by coincidence, and assume that they were self-generated. In that case there would be a waiting period of millions of years for the rest of the elements to come about. Even for those elements which did develop to join together would serve no purpose in the absence of the others. It would be impossible to expect the rest of the elements to form when the system will not function in the absence of even one of its constituent parts. For this reason the claim that such a complicated system as photosynthesis could have come about by the gradual and coincidental development of its constituent parts as they added themselves to one another-as evolutionists propose-is inconsistent with reason and logic, as are similar claims about all systems in living things.

We can see the pointlessness of this claim by having another brief look at some of the stages in photosynthesis. First of all, in order for photosynthesis to take place, all the enzymes and systems have to be present in the plant's cells at the same time. The length of each process and quantity of enzymes have to be arranged absolutely correctly each single time. Because even the smallest hitch in the reactions which take place-the length of the process for instance, or a minute change in the amount of light that enters or of the basic materials-will spoil the product that emerges at the end of the reaction and render it useless. Even if one of the elements we have described is missing, the whole system will be rendered non-functional.

At this point there arises the question of how all these non-functioning elements survived until the complete system was in place. It is also a known truth that as the size of a structure decreases, the intelligence and quality of engineering in its systems increase. When a mechanism reduces in size, it further displays the power of the technology used in it. A comparison between the cameras of our day and those of years ago will make this truth more apparent. This truth increases the importance of the flawless structure in leaves. How is it possible that plants are able to carry out photosynthesis in these microscopic factories, when human beings cannot do so in their huge ones?

Evolutionists are able to offer no credible answers to these and other questions. Instead, they make up various imaginary scenarios. The common tactic resorted to in these scenarios is to swamp the subject in demagoguery and confusing technical terms and explanations. They attempt to conceal the "Truth of Creation," which is clearly to be seen in all living things by using the most complicated terms possible. Instead of answering the questions of why and how, they set out detailed information and technical concepts, and then add that this is a result of evolution at the end.

Nevertheless, most of the time even the most hardened supporters of evolution cannot conceal their amazement in the face of the miraculous systems in plants. We can cite one of Turkey's evolutionist professors, Ali Demirsoy, as an example of this. Professor Demirsoy stresses the miraculous processes in photosynthesis, and makes the following admission in the face of the complexity of the system:

> Photosynthesis is a rather complicated event, and it seems impossible that it should happen in a tiny organelle inside a cell. Because it is impossible for all the levels to come about at once, and meaningless for them to emerge separately. [41]

The flawless mechanisms at work in the process of photosynthesis have been present in every plant cell that has ever existed. This process takes place even in what we see as the most ordinary piece of grass. In a given plant, the same substances in the same amounts always play their part in the reaction, and the same products are produced. The sequence and speed of the reaction is the same. This applies to all plants which carry out photosynthesis, without exception.

It is illogical, of course, to ascribe capabilities such as thought and decision to plants. But, at the same time, to explain this system, which exists in all green plants and functions to perfection, by saying, "It developed from a series of coincidences," defies all logic.

At this point we are faced with an obvious truth. Photosynthesis, an extraordinarily complex system, was consciously designed, in other words, it was created by God. These mechanisms have existed from the moment plants came into being. The introduction of such flawless systems into such a tiny space demonstrates to us the power of the designer.

The Results of Photosynthesis

The results of photosynthesis, which takes place through chloroplasts are very important for all living things in the world.

Living things are the reason for the continuous increase in carbon-dioxide in the air and the rise in air temperatures. As a result of the respiration of human beings, animals, and micro-organisms in the soil, every year some 92 billion tons of carbon-dioxide enter the atmosphere, and some 37 billion more during plant respiration. Furthermore, the amount of carbon-dioxide given off to the atmosphere from the fuel used by heating systems in factories and homes and in transportation is at least another 18 billion tons. This means that, during the circulation of carbon-dioxide on the land, some 147 billion tons are given off. This shows that the carbon-dioxide levels in the world are constantly rising.

Unless this rise is compensated for, the ecological equilibrium will be disturbed. For example, the amount of oxygen in the atmosphere may go down, temperatures may rise, as a result of which the glaciers might start to melt. Some areas would then be covered with water, and others would turn into deserts. All of this would endanger the survival of life on earth. But none of this happens. Because, with the process of photosynthesis, plants continually produce oxygen and maintain the equilibrium.

The temperature of the earth does not keep changing, because plants help maintain a balance. Plants absorb 129 billion tons of carbon-dioxide from the atmosphere for the purposes of cleaning every year, and this is a most important figure. We said that the amount of carbon-dioxide given off to the atmosphere was 147 billion tons. The 18 billion ton deficiency in the carbon-dioxide/oxygen cycle on the land is made good by a different carbon-dioxide/oxygen cycle in the oceans.[42]

It is thanks to the process of photosynthesis that plants absorb carbon-dioxide from the atmosphere (to convert into nutrition) and release oxygen, so that the natural equilibrium-of vital importance to life on earth-is never upset.

There is no other natural source which makes good any deficiency of oxygen in the atmosphere. For this reason plants are indispensable to the maintenance of the systems in all living things.

Nutrients in Plants Emerge as the Result of Photosynthesis

Another essential product of this perfect system is a food source for living things. In that sense, the products of photosynthesis are extremely important for plants themselves and for other living things. Both animals and plants obtain the energy they

need to live by consuming these foods produced by plants. Animal-product foods can exist only by virtue of products obtained from plants.

If we imagined that the events we have been discussing took place not in the leaves but in some other place, what kind of set-up would we imagine? Would it be a multi-functional factory with tools which served to create nutriments from the carbon-dioxide from the air, which also had machines with the capacity to make oxygen and release it, and which contained systems capable of maintaining temperature balances?

One would certainly not imagine something the size of the palm of one's hand. As we have seen, leaves, the possessors of perfect mechanisms, maintain temperature, allow evaporation, and at the same time produce food and prevent water loss. They are a wonder of design. All these processes we have listed take place not in different structures, but in just one leaf (of whatever size), moreover in a single cell of a single leaf, and what is more, all at once.

The foregoing facts all point to the functions of plants, all being blessings that have been created with the aim of serving living things. Most of these blessings have been designed for mankind itself. Let us take a look at our environment and what we eat. Let us look at the bone-dry stem of the grapevine, at its thin roots. Fifty or 60 kilos of grapes come from this structure which can easily break with a single pull. Grapes-whose colour, smell, and taste have been specially designed to appeal to man.

Let us consider the watermelon. This water-filled fruit emerges from the bone-dry ground at just the time when a person needs it, in the summer. Let us consider that wonderful watermelon smell and that famous watermelon taste, which it maintains in an expert manner from the moment it emerges. Then let us think about the processes in a perfume-manufacturing factory, from the creation of the scent to its maintenance. Let us compare the quality of the product from the factory and the scent of the watermelon. While manufacturing scents, people carry out quality controls all the time, but there is no need for any quality controls to conserve the scents in fruits. Melons, watermelons, oranges, lemons, pineapples, coconuts, all possess the same unique scents and flavours, wherever they may be in the world, without exception. A melon never smells like a watermelon, nor a mandarin like a strawberry: although they all emerge from the same ground, their smells never get mixed up. They all always conserve their original fragrances.

Let us examine the structure of this fruit in more detail. The sponge-like cells of the watermelon are able to retain large quantities of water. For this reason a large part of the watermelon consists of water. But this water is not all in one place, it is evenly distributed all over the watermelon. Bearing in mind the force of gravity, this water should mostly be in the bottom part of the fruit, with the top part being dry and fleshy. Whereas no such thing happens in the watermelon. Water is evenly distributed inside it, and the same applies to its sugar, taste, and smell.

And there is never any mistake in the setting out of the rows of seeds. Every seed carries the code of that watermelon which will be carried down to other generations

thousands of years later. Every seed is coated in a special, protective covering. This is a perfect design, prepared with the intention of preventing any damage to the information inside it. The covering is neither hard nor soft, it has just the right amount of hardness and flexibility. Underneath the outer covering is a second layer. The areas where the upper and lower parts join are clear. These places are specially designed so that the seeds can cling on. Thanks to this construction, the seed only opens once it has reached the appropriate moisture and temperature levels. That flat, white part in the seed later germinates, turning into a green leaf.

Let us also consider the structure of the watermelon rind. What creates this smooth rind and the waxy coating on top of it is again the cells. For this waxy coating to form, every one of the cells has to give off the same level of waxy substance in the rind. Furthermore, what makes the rind smooth and round is the perfection in the layout of the watermelon cells. For this to happen, each cell must know its place. Otherwise there could never be this smoothness and perfect roundness of the outside of the watermelon. As we can see, there is a flawless harmony between the cells which go to make up the watermelon.

We can consider all the plants in the world in the same manner. At the end of such an examination we will arrive at the conclusion that plants have been designed for human beings and other living things, or in other words, created.

God, the Lord of all the worlds, made food for all living things, and created every one with different tastes, smells, and uses:

And (He has made subservient to you) also the things of varying colours He has created for you on the earth. There is certainly a Sign in that for people who pay heed. (Surat an-Nahl: 13)

And We sent down blessed water from the sky and made gardens grow by it and grain for harvesting and soaring date-palms laden with clusters of dates, as provision for Our servants; by it We brought a dead land to life. Such shall be the Resurrection. (Surah Qaf: 9-11)

Plants Are Cool, But Why?

A plant and a piece of stone in the same place do not warm up to the same degree, even though they receive the same amount of solar energy. Every living creature will experience negative effects if it stays out in the sun. So what is it that enables plants to be minimally affected by the heat? How do plants manage this? Why does nothing happen to plants even in great heat, even when its leaves burn in the sunshine all through a hot summer? Apart from their own internal warming, plants also take in heat from the outside and maintain the temperature balance in the world. And they

themselves are exposed to this heat while carrying out this heat-retention process. So, instead of being affected by the ever-increasing temperature, how is it that plants can continue to take heat in from outside?

Considering that plants are constantly under the sun, it is natural that they should need more water than other living things. Plants also constantly lose water by the perspiration on their leaves. As we touched on in earlier sections, in order to prevent such water loss, the leaves, the surface of which are always turned towards the sun, are generally covered in a waterproof protective wax known as the cuticle. In this way water loss on the upper surfaces of leaves is prevented.

But what about the under surfaces? Because the plant loses water from there, the pores whose function is to enable the diffusion of gases are generally on the bottom surfaces. The opening and closing of the pores regulates the plant's taking in enough carbon-dioxide and giving off enough oxygen, but not in such a way as to lead to water loss.

In addition to this, plants disperse heat in different ways. There are two important heat dispersal mechanisms in plants. By means of one of these, if the temperature of a leaf is higher than that around it, air circulates from the leaf towards the outside. Air changes stemming from heat distribution lead to the air rising, because hot air is less dense than cold. For this reason the hot air on the surface of the leaf rises, leaving the surface. Because cold air is denser, it descends to the surface of the leaf. In this way heat is reduced and the leaf is cooled down. This process goes on for as long as the temperature on the surface of the leaf is greater than that outside. In very dry environments, such as deserts, this situation never changes.

By means of the other heat dispersal system of plants, leaves can perspire by giving off water vapour. By virtue of this perspiration, the evaporation of water permits the plant to cool down.

These dispersal systems have been designed to suit the conditions where the plant lives. Every plant possesses the systems it needs. Could this exceedingly complicated dispersal system have come about by coincidence? In order to answer this question, let us consider desert plants. The tissues of desert plants are often very thick and fleshy. They are designed to conserve rather than evaporate water. It would be lethal for these plants' heat dispersal systems to work by means of evaporation, because in a desert it is not possible to compensate for water loss. Although these plants can disperse heat by both methods, they only use one, which is also the only way for them to survive. Their design has obviously been carried out with desert conditions in mind. It is not possible to explain this by coincidences.

If plants did not possess these cooling-down systems, being under the sun for even a few hours would be lethal for them. One minute of direct sunlight in the afternoon can heat one centimetre of leaf surface by as much as 37 degrees centigrade. Plant cells start to die when the temperature rises to 50 to 60 degrees, in other words, just three minutes of direct sunlight in the afternoon would be enough for a plant to die.[43] But

plants are protected from lethal temperatures by means of these two mechanisms. The evaporation which plants also use in heat dispersal is also very important from the point of view of regulating the level of water vapour in the air. This evaporation in plants enables high levels of vapour to be released to the atmosphere regularly. This activity of plants could be described as a kind of water engineering. The trees in a thousand square metre area of forest can comfortably put 7.5 tons of water into the atmosphere.[44] Trees are like giant water pumps, passing the water in the soil through their bodies and sending it into the atmosphere. This is a most important task. If they did not possess such a feature, the water cycle on the Earth would not happen as it does today, which would mean the destruction of the balances in the world.

Although their stems are covered with a wooden, dry substance, plants can pass tons of water through their bodies. They take this water from the soil, and after using it in various parts of the high technology factories in their bodies, give it back to nature as purified water. At the same time that they do this, they also separate part of their intake of water with the aim of using the hydrogen in the nutrition production process.[45]

What we have described as the perspiration in leaves or the moisture in the areas where the trees live, actually occur as the result of activities which are essential to the survival of life on the planet.

What we see in these processes of plants is a system of such perfection that it would run down and stop working if even one part of it were taken away. There is no doubt that it was God, the Compassionate and the Merciful, who is aware of all creation, who designed this system and flawlessly installed it in plants.

He is God - the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and earth glorifies Him. He is the Almighty, the All-Wise. (Surat al-Hashr: 24)

The Leaf: the Smallest Cleaning Tool

The services that plants carry out for other living things are not restricted to giving off oxygen and water. Leaves at the same time carry out the most highly developed cleansing and purification functions. The cleaning tools we regularly use in our daily lives, are produced and set in operation as the result of long studies by experts, and after the expenditure of a lot of effort and money. These need considerable technical support and maintenance, both during and after use. And after production these things can develop a number of problems. In addition, problems or defects which can arise on a daily basis, and the necessary staff and the need for other tools, and renewals where necessary, can all mean a great many more processes.

As we have seen, there are hundreds of details to consider, even in a small piece of cleaning equipment, whereas plants do the same job as these tools, in return for just

sunlight and water, and perform the same cleaning service with the guarantee of greater efficiency. And they also give rise to no waste product problem, because the waste product they give off after cleaning the air is oxygen, which all living creatures need!

Tree leaves possess tiny filters, which catch pollutants in the air. There are thousands of tiny hairs and pores, invisible to the naked eye, on the surface of a leaf. The individual pores trap pollutants in the air and send them to other parts of the plant to be absorbed. When it rains, these substances are washed to the ground. These structures on the surfaces of leaves are only of the thickness of a film: but when one considers that there are millions of leaves in the world, it becomes clear that the amount of pollutants trapped by leaves is not to be underestimated. For example, a 100-year-old beech tree has about 500,000 leaves. The amount caught by these leaves is more than one might guess. About a thousand square metres of plane trees can trap 3.5 tons, and pine trees 2.5 tons of pollutants. These materials then fall to the ground with the first rain. The air in a forest two kilometres from a settlement area is some 70 percent cleaner than in the settlement area. Even in winter, when trees lose their leaves, they still filter out 60 percent of the dust in the air.

Trees can trap dust weighing five to 10 times more than their leaves: bacteria levels in an area with trees is considerably less than in one with no trees.[46] These are very important figures.

Each thing that happens in leaves can be described as an individual miracle. These systems in green leaves, in the superb planning as in a microscopic factory, are proof of the creation of God, the Lord of all the worlds, and have come down to our day after hundreds of thousands of years, in the same perfect state, with no changes and no defects.

The Falling Leaves: Something We Have All Seen

Sunlight is very important for plants, and particularly for leaves, where food is produced. With the approach of winter, the air grows colder and the days shorter, and less light reaches the earth from the sun. This reduction causes changes in plants, and the aging process in leaves, or leaf fall, begins.

Before trees lose their leaves, they begin to absorb all the nourishing substances in the leaves. Their aim is to prevent substances such as potassium, phosphate, and nitrate from disappearing with the falling leaves. These substances are directed through the pipelines that run through the layers of bark and the centre of the trunk. The collection of these substances in the xylem makes it easier for them to be digested by the tree.

Trees have to shed their leaves, because in cold weather, the water in the soil increasingly solidifies and becomes harder to absorb. But the perspiration in the leaves continues, despite the cold weather. A leaf which continues to perspire at a time when there is less water starts to become a burden on the plant. In any case the cells in the

leaf would freeze and break up in the cold days of winter. For which reason the tree acts early and frees itself of its leaves before winter arrives, and in this way its limited water reserves will not be wasted.[47]

This leaf fall, which looks like a purely physical process, actually comes about as the result of a sequence of chemical events.

In the cells in the palm of the leaf are pigments, called phytochromes, which are sensitive to light and give colour to plants. It is these molecules which allow the tree to realise that the nights are growing longer and that less light is reaching the leaves. When phytochromes sense this change they cause various changes within the leaf, and begin the leaf's aging programme.

One of the first signs of leaf aging is that the cells in the palm of the leaf begin to produce ethylene. The gas ethylene begins to destroy the chlorophyll which gives the leaf its green colour, in other words the tree withdraws the chlorophyll from the leaves. Ethylene gas also prevents the production of auxine, a growth hormone which delays the falling of the leaf. Together with the loss of chlorophyll, the leaf also starts to receive less energy from the sun, and produces less sugar. Furthermore, carotenoid, which have hitherto been suppressed and which give the leaf its rich colour, reveal themselves and in this way the leaf begins to change colour.[48]

A short while later, ethylene has spread to every part of the leaf, and when it reaches the leaf stalk, small cells there start to swell up and give rise to an increase in tension in the stalk. The number of cells in that part of the stalk which joins onto the trunk increases, and they begin to produce special enzymes. First of all, cellulase enzymes tear apart the membranes formed from cellulose, then pectinase enzymes tear apart the pectin layer which binds the cells to one another. The leaf can no longer bear this rising tension and starts to split, from the outer part of the stalk in.

These processes we have been describing so far may be described as the ceasing of food production and the leaf's starting to split off from the stalk. Rapid changes go on around the developing split, and the cells immediately begin to produce suberin. This substance slowly settles over the cellulose wall and strengthens it. All these cells leave behind them a large gap replacing the fungus layer, and die.[49]

What has been described so far shows that a string of interlinked events is necessary for just one leaf to fall. Phytochromes' determining that there is a reduction in sunlight, all the enzymes necessary to the falling of the leaf moving into action at the appropriate time, the cells beginning to produce suberin just at the place where the stalk will break off: it is clear what an extraordinary chain of events it takes for a leaf to detach itself. "Chance" cannot be offered as the explanation of this series of processes, all planned and following one another in perfect order. The leaf fall plan functions in a perfect manner.

Before the leaf is completely separated from the trunk, it no longer receives any water from the transport tubes, for which reason its grip on the place it is attached to

grows progressively weaker. To break the leaf stalk, it will be enough for a moderate wind to blow.

In the dead leaf which falls to the soil are food substances that fungi and bacteria can make use of. These food substances undergo changes brought about by micro-organisms and become mixed with the soil. Trees can take these substances up again from the soil by their roots as nutriments.

THE PLANT STEM:
A MATCHLESS TRANSPORT SYSTEM

F rom the smallest grass-like plant to the largest tree in the world, every plant has to distribute the water and minerals which it takes up through its roots to all of its parts, including the tips of its leaves. This is a very important function for plants, because water and minerals are what the plant needs most.

In all their activities, photosynthesis included, plants always need water, because many essential processes in plants are ensured just by using water. These include:

- the maintaining of vitality and tension of cells,
- photosynthesis,
- the absorption of food substances which have dissolved in the soil,
- the transport of these foods to different parts within the plant body,
- producing the cooling effect on the surface of leaves in hot climates, thus protecting them from harm.

But how are water and mineral salts taken up by the plants from where they are hidden deep in the soil? Furthermore, how do plants disperse these substances, which they have taken up through their roots, i.e. send them to different regions of their bodies? What methods do they use while carrying out these difficult processes?

When answering these questions, the most important point, and one which must not be forgotten, is that it is quite a difficult job to raise water up to heights of hundreds of metres. In our day these processes are implemented by means of various pressure tank systems. The transport systems in plants also use this kind of system.

The existence of this water tank system in plants was discovered some 200 years ago. But no scientific law has yet been established to definitively explain this system, which permits the drawing up of water in plants against the force of gravity. Scientists just propose a number of theories on the subject and count the most likely and satisfying of these theories as valid.

All plants are provided with a distribution network so that they can draw up the materials they need from the soil. This network sends these substances and water acquired from the soil to where they are needed, in the appropriate quantities, and in the shortest possible time.

According to scientists' discoveries, plants use more than one method to manage this difficult task.

The transport of water and nutriments takes place inside plants thanks to structures with completely different features. These structures are the specially planned transport tubes.

Water Transport

- No matter what the size of the plant in which the transportation process is to take place, the tubes which make up the transportation system are about 0.25 mm (in oak) to 0.006 mm (in linden) wide, some being made up of dead plant cells, others of living plant cells[50], and are woody tissues with no other features than what we have described. These structures have the ideal design necessary to transport the water plants need to a height of hundreds of metres.

This transport system starts to work with the leaves losing water. The transport system in plants is set in motion with processes which take place in the stomata (pores) normally on the undersides of leaves, but in some species, on the top.

If the external humidity level is less than 100%, evaporation occurs in the leaf and water is given off by the stomata. Even if the humidity is 99%, this still means a potential situation for the water in the leaves to be exuded, and the leaves rapidly begin to lose water. In this way, plants need to make good the loss of water that comes about with the evaporation through the leaves of the water taken from the soil.

As we have seen, the mechanisms in leaves are sensitive enough to identify a difference of just 1% in the humidity level. This is a very important property. When the other things going on in leaves are examined, it will be concluded these are processes whose secrets have not been fully mastered, even with the technology of our day. The miraculous processes going on in such a tiny area bring many questions to mind.

How did mechanisms which can initiate the necessary processes by detecting just a 1% drop in humidity come into existence in plants? Who is the author of the design of these mechanisms? How did such a technology, which has been working faultlessly for millions of years right down to the present day, come about?

It was not plants themselves which designed and implemented these mechanisms. Neither is it possible for an intervention by any other living thing to have installed such a structure in the leaf. It is beyond doubt that there is a superior intelligence which gave plants all the properties they possess, and installed these systems in areas just one hundredth, or even a thousandth of a millimetre across. The possessor of this intelligence is God, the Ruler of all the worlds, who keeps everything under control.

How Is Water Transported from the Soil to a Height of Hundreds of Meters?

One of the most widely accepted theories to explain how liquids are sent from the soil to the leaves is the Theory of Cohesion. The force of cohesion is a force produced by the tree's transport tubes, known as xylem. This force increases the attraction between the molecules which make up the water in the xylem. The xylem is made up of two kinds of cells, called the tracheids and vessels, both of which form pipes through which liquid

can be moved. One of the most interesting features of these structures is that once the individual cells have reached their predetermined size and form, they promptly die. There is a very important reason for this. During the transportation of water in the tubes, it has to be able to move freely without meeting any obstacles. In order to enable this to happen, a completely empty tube must be formed. This is the reason for the protoplasm's disappearance to leave the thick cellulose cell wall. The xylem pipework in all living plants thus consists entirely of dead cells.[51] Most of the tracheids in a plant stem are known as "pitted tracheids". They are elongated cells with thick, strong walls. They also have small holes, or pits, where they are joined to their neighbours.

The cell cavity is connected to with the interior cavities of neighbouring cell above, below and at either side. A strand of tracheids thus forms a series of pipes along the stem with constrictions at the holes in the walls where two cells make contact. These constructions increase the resistance of the pipe to the flow of water.

All the features we have counted so far are the first step in the foundation necessary for water to be transported in plants in a secure manner. The pipes formed by these cells must be able to withstand the pressure that is formed when the water is sucked up. As we saw above, this is brought about by means of the holes between the cells. Then it has to be ensured that there is no obstruction when the materials are being transported, because any obstacle in the route they traverse will result in a chain reaction of faults in the whole system. This possibility is prevented by the death of the cells and the formation of the empty tubes.

The cell walls of the xylem tubes are quite thick, because water will travel up these as it is sucked up under a certain pressure. The tubes have to be able to resist this quite strong negative pressure. A kind of water column forms in the tubes. The tensile strength of this column must be strong enough to carry water to the furthest point of the tallest known tree in order for the plant to survive. Thanks to this strength, water can rise up to 120 metres, as in the mammoth tree.[52]

The coming of the water from the soil to the xylem tubes happens by means of the roots. At this point the importance of the root's internal layer emerges. There are protoplasms in the root cells. These protoplasms are structures made up of water for the most part, and for the rest of carbon, hydrogen, oxygen, nitrogen, sulphur, sometimes proteins containing phosphorus, carbohydrates such as starch and sugar, oils, and various salts. And they are surrounded by a semi-permeable membrane. This allows certain ions and compounds to pass through them easily. This special structure of the root allows water to be taken up easily.[53]

Food Transport

The phloem tubes through which nutriments are carried by are made up of two different kinds of cells. These are the sieve cells, through which the nutrients are

transported, and the companion cells. Both these cells are elongated, and completely different in structure to the cells in the xylem tubes. This difference can be clearly appreciated when their structure is examined. Both the cells in the phloem system have extremely thin walls. They are also living cells. Those in the xylem tubes are dead.

Research into the sieve cells which make up the phloem tubes has revealed that they lack a nucleus. This is most interesting; because the cell nucleus is where all the information required to keep the cell functioning is hidden. The sieve cell lack a nucleus, because such a bulky object in each cell would impede the flow of the nutrient solution. This is where the companion cell comes in: the companion cells contain very dense cytoplasms and a prominent nuclei and they are, in fact, sister cells to the sieve cells with which they are associated.

There is a quite detailed planning in plants' transport systems. And the function, and hence structure, of every cell is different. In the face of these details, the question comes to mind of how they could have been placed in such a small area.

It is impossible for such a system to have come about by chance. This system is the result of specially prepared planning. Let us examine how such a complex and unique system could not have come about by chance by asking some questions.

With what timing or method could the development we have been discussing, in other words, the cell's nucleus being absent only in this type of cell have come about? How could coincidences have decided to dispense with the nuclei only of certain cells? Let us assume that they did so decide: in such a situation, could the structure in question have come about by waiting for coincidences over thousands or millions of years? This question must definitely be answered. It is certainly not possible. If we think, we can see this. What would happen if the cells in a plant's phloem tubes did have nuclei? In this case the plant would die the first time an obstruction arose. That would mean the plant's disappearance, and for that reason the disappearance of the whole species shortly there after. If we consider this system, which is present in all the plants in the world, it will be even clearer that the transport mechanisms in plants could not have come about by chance. As we have seen, these tubes have to have possessed all their features in their entirety from the moment they came to be right down to the present. There is no question of plants' developing over time.

Moreover, it will not be sufficient for the equilibrium in such a complex and flawless system to have been brought about once. Because in plants, the xylem tubes and phloem tubes develop afresh every year. The system, all its structures, the features peculiar to it, the particular cell structures, the speed of functioning of the system and other details are renewed every year, with nothing going wrong.

Furthermore, as opposed to the transport of water, the cells used in the transport of nutrients are living. What is the reason for this difference?

This difference between the two systems which are present in the body of the plant is most important, because in order for the minerals to be able to move forward in the food transport system, the cells operate directly, for which reason they have to be living.

But the cells in the xylem system just function as pipes for the transport of water, and what conducts water to the leaves is the internal pressure. This is the reason why a system consisting of living cells was set up for the transport of nutrients.

In the case of plants' transporting nutrients, as in that of their transporting water, only theories apply. Botanists have done a lot of research into how this system works. The most widely accepted of the results is the "Pressure-Flow Hypothesis." According to this hypothesis, water and dissolved sugars flow through the sieve tubes from an area of higher pressure to an area of lower pressure. The cells in the leaf export sugars into the phloem cells by active transport. The resulting high concentration of sugar causes water to diffuse into the phloem cells, increasing the water pressure there. This area of higher pressure forces the sugar-water solution to move into the next phloem cell. In this manner, sugars are moved from cell to cell.[54]

In this paragraph let us consider those sentences in a little more detail. The cells which make up the plant identify those regions where sugar is at low levels, and conduct it where they think necessary. If we think about it, it can clearly be seen that it is an extraordinary situation that cells should do such a thing. How does this come about? Is it possible for the cells to take such a decision on their own and establish the sugar levels? It is not possible, of course. Non-conscious cells cannot establish such a thing. They cannot know what other cells need. These cells in plants have submitted to God, like every other living thing in the universe, and operate in accordance with His inspiration. God reveals this truth in one of His verses:

There is no creature He does not hold by the forelock... (Surah Hud: 56)

The Structure of the Stem

The job of distributing the minerals which the roots take from the soil falls to the stem. The stem distributes the minerals to the regions where they are needed in the most appropriate manner. For example, there has to be more calcium in the leaf stem, because the stem as the transporter of leaves and flowers needs a resistant structure. There is less calcium in the seed.

That faultless transport system in plants, whose plan has not yet been fully discovered, is the product of a totally conscious design. In other words, it is the work of a designer who possesses a most superior intelligence and superior knowledge. The designer is without doubt God, the Lord of all living things in the world, who knows what every one of their needs.

Does He not know what He created? He is the All-Pervading, the All-Aware. (Surat al-Mulk: 14)

Dead Ends for Evolution with Reference to the Food Transport Systems

Evolutionists claim that all these systems in plants reached their perfect state as the result of uncontrolled coincidences over a period of millions of years. And according to evolutionists, for some reason nothing happened to plants while they were waiting for these processes to be completed. While every coincidence was taking place, the plant did not die because it was unable to produce food in the successive stages, it did not dry up from lack of water, but was able to survive all of these things for millions of years.

In this section only the structure of the transport system, of all the complex systems plants possess, was considered in broad outline. This subject is enough on its own to demonstrate the meaninglessness of the theory of evolution. Evolutionists' claims on this subject will be taken up in the section on the microbiological collapse of evolution.

All the features we have counted so far are just the general lines of the infrastructure necessary for the perfect functioning of the water and food transport systems. These complex mechanisms, whose general properties we examined without going into fine detail, are without doubt the work of a superior and matchless intelligence. For the transport of water there are canals made up of specially selected cells, and these have to be able to resist the pressure which results when water is being drawn up. This structure also has to lack protoplasms for the easy transference of the water. Food transport cells, on the other hand, have to be living, and also have to have a cytoplasm to transfer nutrients. So who brought about this water and food transport system, down to the finest detail, in plants? The plants? How can plants, which are made up of water-transport canals, leaves which carry out photosynthesis, branches, and outer coverings, establish the infrastructure for the transport process without knowing the physical properties of water, the pressure systems, and all the other details? Again, how can the food transport tubes find the best system for carrying sugar without knowing that substance's structure?

The number of such questions can be increased, but there is one answer to all of them. It is out of the question for plants to "establish," "design" or "find" such perfect systems. Plants possess no will. It is not plants which form these flawless systems which even scientists are hard pushed to "understand." Neither are they the result of coincidence.

It is God who installs all these systems in the required manner in the plant cells, and who creates the plants, the water, and the nutrients. Our Lord, who creates everything complete, reveals Himself in the most beautiful and the most perfect of creations.

THE INTERESTING FEATURES OF PLANTS

T he ability to measure time is an ability that one does not usually expect to see in other living things other than man. It may be thought that this is limited to man, but both plants and animals possess a time-measuring mechanism, or "biological clock."

The Biological Clock in Plants

In the 1920s, when two scientists in Germany, Erwin Buenning and Kurt Stem, were studying the movement of bean plant leaves, they saw that the plants were moving their leaves towards the sun throughout the day, and that at night they were gathering their leaves vertically upwards and assuming a sleeping position.

Some 200 years before these two scientists published their findings, the French astronomer Jacques d'Ortuous de Marian had also observed that plants possessed such a regular sleep rhythm. Experiments in a dark environment where temperature and moisture were controlled showed that this situation did not change, and that plants possessed systems inside themselves which measure time.

Under natural conditions, plants select certain times for certain activities. They do this in line with certain changes in the sunlight. Because their internal clocks are tuned to sunlight, they complete their rhythmic activities in 24 hours. In other cases, there are some rhythms which are much longer than 24 hours.[55]

No matter how long the rhythmic motions last, there is one point that does not change. These motions happen to ensure the life of the plant and the survival of the generations, and always take place at the most appropriate time. And in order for them to be successful, several complicated processes have to be completed in a flawless manner.

For example, in most plants flowers open at a particular time of year, i.e. at the best possible time. Plants' clocks, which regulate this time, also calculate the duration of sunlight falling on the leaves. Every plant's biological clock calculates this period in accordance with the plant's particular features. No matter what the calculation, the flowers open at the most appropriate time. As a result of research into the regulation of time in the soya bean, it was seen that, at whatever time these plants are sown, they open their flowers at the same time of year.

Plants use this perfect sense of timing in many of their functions, not just opening flowers. For example, it causes the time the poppy flower disperses its pollen to coincide with the days and hours when pollinators are most prevalent. And these days and hours vary from plant to plant. But at the end of the day, with this time regulation, every plant disperses its pollen in a manner guaranteed to give the best results. Poppy flowers disperse their pollen in July and August between 05:30 and 10:00 in the morning. That is the time is that bees and other insects emerge to look for food. At this point the flower has to include in its calculation not just its own characteristics, but also those of other

living things, down to the finest detail. The plant must have accurate knowledge of the time when the creatures which will fertilize it emerge, the length of the journey they will undertake, and the times they feed. In such a situation the following question comes to mind: Where in the plant is this clock, which possesses all this "information," which does all the necessary calculations, analyses the features of other creatures, and works in a way reminiscent of a computer centre? Scientists believe that biological clocks in living things other than plants generally come into existence as an effect of the pituitary gland. But where the perfect time measuring system is in plants is still a mystery to them.

This clearly indicates a superior intelligence and power which establishes and controls the timing of all plants' different activities. God shows us proofs of His creation with His superior power and infinite intelligence everywhere, and expects us to draw conclusions from them.

Defence Strategies in Plants

Plants also have to defend themselves from their enemies in certain ways. This defence varies with the species. For example, some plants give off diverse secretions against parasites and insects and fight their enemies that way. They display a wide variety of strategies in using these poisonous chemical secretions, which is their number one weapon. For example, toadstools and cucumbers have poisonous tips, and these go into operation at the moment of attack. Another example of this fully equipped war is found in plane trees. With the help of a special liquid which it exudes from its leaves, the plane tree systematically poisons the soil under its trunk, so much so that not even the smallest blade of grass can grow in it. Although it contains this poisonous material within its own body, the plane tree itself is not harmed by it.

Plants, which have no legs to carry them away if they are attacked and no organs to fight with, have many defence mechanisms which respond to their enemies other than their secretions. There is even the ability to communicate within these mechanisms. Some plants give off a secretion from the place where they are bitten, harming an insect's digestive system or giving it a false feeling of fullness. At the same time, the leaf gives off a kind of acid, known as jasmonic acid from the damaged part, thus warning other leaves so that they can be on the defensive.

To defend themselves, corn and bean plants use parasitic wasps just like mercenaries. When a caterpillar visits their leaves, these plants draw wasps to the spot by giving off a special secretion. The wasps then leave their larvae on the caterpillars which have attacked the plant. The growing larvae then cause the death of the caterpillar, thus rescueing the plant. Some plants contain allelochemicals, that is, toxis compounds in their structures. These have effects which are sometimes attractive to animals and insects, sometimes frightening, sometimes causing allergic reactions, and sometimes lethal.

For example, butterflies avoid plants of the group cruciferae (the mustards) cannot approach heather plants, because their flowers contain a toxic substance called sinigrin in their defence mechanisms. For this reason, butterflies forage avidly among the umbelliferae, because they know that these do not carry poison. How butterflies could have learned to distinguish between them is also a question awaiting an answer. It is impossible for the butterfly to have learned this from experience. Tasting the plant could mean the butterfly's death. In that case, the butterfly must come by this information in some other way.

Maples', and particularly sugar maples', defence planning for the protection of their leaves and shoots from harmful living creatures is usually much more effective than the insecticides human beings produce. Although the sugar maple has very sugary water in its trunk, it sends a substance called "tannin" to its leaves. This is a substance which makes insects ill. Insects, having eaten the leaves containing tannin, go up to the uppermost leaves, which contain less tannin, to escape. But the uppermost leaves are where birds go most. The insects which flee there are then hunted by birds. Thanks to this strategy, the sugar maple is saved from the depredations of insects with little harm done.[56]

The passion vine of Central and South America, is an ideal kind of food and most attractive to the caterpillars of the black, yellow and red heliconius butterfly. An adult female always lays her eggs on this particular vine, so that as soon as her offspring hatch they can start feeding on this delicious food. But here there is a very important point to be made. These butterflies check the leaves of the plant very carefully before laying their eggs. If she finds eggs like hers already deposited on the vine, then they do not select that place, but go in search of another plant, for there may not be enough food.[57]

Insects' preference lying in that direction is quite a big advantage, because the passion vine takes advantage of the insects' choosy nature to protect itself from attack.

Some types of vine plant form little green nodules on the upper parts of their leaves. Other species develop little marks in colours resembling butterfly eggs on the bottom parts of the leaves, where they meet the branch. Caterpillars and butterflies which see this think that other insects have laid their eggs before them and abandon the plant without laying their eggs on it, and begin looking for new leaves.

The vine plant, which protects its leaves by such an unbelievable method, is a plant which emerges from the soil everyone knows and consists of a dry branch and leaves. The plant possesses no intelligence, memory, or identification skills. It is totally impossible for it to know the features, preferences, and egg shape of an insect, a creature completely different to it. But as we have seen, the hanging plant knows under what circumstances an insect will abandon laying its eggs and head off for another plant; furthermore, it creates patterns which resemble those eggs on its own leaves, and makes a number of changes. Let us think, what a vine plant has to do to imitate the eggs of any insect. Imitation is a skill requiring intelligence. So the plant must have intelligence, it

must see and understand these eggs and store them in its memory. Then it must develop a defence mechanism by combining various artistic abilities with these features, bringing about certain changes in its own body. Not one of these things, of course, can be brought about by the plant itself, nor as the result of various coincidences. The truth is that the hanging plant was "created" in possession of this characteristic. This is a defence system specially given to it by God. God, who plans everything down to the finest detail, has met the needs of all plants in the world wherever they are found. God is the ruler of everything. He knows everything that goes on in the universe. God states this truth in a verse:

He directs the whole affair from heaven to earth. (Surat as-Sajda: 5)

A Few Examples of Interesting Plants

When the arum lily is ready for fertilization, it begins to emit a sharp-smelling ammoniac gas (NH_3). The flower has a most interesting structure. The region where the pollen lies is inside and at the bottom of a white-leafed structure, and is invisible from the outside. For this reason it is not enough just to give off a scent to attract insects' attention. When the pollen is ready for fertilization, as well as giving off a scent, the lily also warms up the outer part of the flower. This scent and warming, which only happen on one day, and in the hours of daylight, are very attractive to insects. Scientists, trying to discover how this warming and scent come about, discovered that an acid emerges as the result of a speeding up of the plant's metabolism. This substance, known as glutanamic acid, creates the warming and scent given off by the plant as the result of its being broken down by chemical processes. Thanks to this, insects come to the flower. But their quest is not over, because the arum lily pollen is at the bottom, in little closed sacks. The flower is prepared for this, too. Because of its oily outer surface, the insects which come slide down inside the flower and cannot climb back up the slippery walls. In the place where they have landed, there is a sugary liquid created by the flower's female organs. Furthermore, the little sacks containing the pollen open up at night and the insects get caught in them, which obliges them to spend the night inside the flower. In the morning, thorns on the surface of the flower bend inwards, to serve as a ladder for the insects to climb up. As soon as the insects climb up the ladder and regain their freedom, they go to another lily, carrying their load of pollen, to fulfil their function as pollinators.[58]

The passion flower, with its interesting beauty, can fight off caterpillars, its enemies, by virtue of tiny needles on the surface of its leaves. These needles enter the body of newly hatched caterpillars at the slightest change in position. In this way the passiflora flower takes precautions against any harm from caterpillars, even before they are born![59]

Some beautiful things in the environment become visible in the most striking way. Snowbells, protected in winter by being frozen under a layer of snow, open their flowers in the spring when the snow melts. This carnival of beauty and colour emerging from the snow is just one example of the perfection and splendour of God's creation.

The living stones you can see in the picture are really the fleshy leaves of a plant, hidden beneath the ground. The stone cactus plant is not a real cactus at all, and when its flowers are not open they are indistinguishable from rocks. [60]

Mimosa pudica (sensitive plant) has a very interesting defence system. When the tip of the leaflets of the plant are gently squeezed, within a few seconds they collapse alongside the leaf stalks, and even the stalks themselves eventually droop into a relaxed position. If whatever is troubling the leafy part of the plant persists, it makes a second movement downwards, which exposes the sharp thorns on the stems. This is enough to see insects off. The mechanism that brings about this reaction in the plant is triggered by minute electric currents, similar to those that pass along the nerves in the human body. The plant's reaction is not as fast as ours. The electric signals, transmitted along the ducts that carry its sap, can travel 30 centimetres in one or two seconds. The warmer the temperature, the quicker the reaction will be. The base of each leaflet, where it joins the stem, is greatly swollen. The cells within are filled tight with liquid. When the signal arrives, those in the lower half of the swelling immediately discharge their water which is equally swiftly taken up by those in the upper half. And the leaf collapses downwards. Thus, as the signal travels along the stem, the leaflets fold up one after the other like a line of falling dominoes. After a defensive move of this kind, the plant pumps up its cells, and it takes 20 minutes for the leaves to open again.[61]

THE IMAGINARY SCENARIO OF PLANT EVOLUTION

W ith regard to the emergence of plants, evolutionists claim that the hundreds of thousands of varieties of plants all emerged from one single plant. There is no doubt that, as with other subjects, evolutionists can offer no scientific evidence to support their claims in this matter. Because the dead-end evolutionists find themselves in with regard to animals and human beings, is the same dead-end they arrive at with their scenarios of the evolution of plants.

The greatest dead end that defenders of the evolution of plants come up against today is, without doubt, their inability to explain how the first plant cell evolved. Actually, the greatest dead-end evolutionists find themselves up against on every subject –, not just that of the evolution of plants, – is definitely the question of how the first cell came about.

It is known that cells are tiny living structures and that possess very complex systems. Yet there are many points that are not fully understood today regarding how these systems function. A cell has complex structures resembling a huge factory. If just one organelle is missing, or is different from what should be, the cell cannot perform its functions. Because every organelle has a particular function, and has very complex links with other organelles. There are very complex structures within the cell, from those which create energy to units where all the information regarding the cell is recorded, from transportation systems which enable substances to reach the parts where they are needed, to parts where incoming substances are broken down and parts which produce enzymes and hormones.

In the face of these structures, the evolutionist scientist W.H. Thorpe reveals his amazement in the following statement:

> The most elementary type of cell constitutes a "mechanism" unimaginably more complex than any machine yet thought up, let alone constructed, by man.[62]

One of the scientists who cannot ignore the extraordinary structure of the cell is the Russian evolutionist Alexander Oparin. Oparin describes the situation in which the theory of evolution finds itself in the face of the complexity of the cell:

> Unfortunately, the origin of the cell remains a question which is actually the darkest point of the complete evolution theory.[63]

It is quite impossible for a living cell to come about by chance. The science of the 20th century having revealed the unbelievable complexity in the cell shows that the emergence of such a structure by coincidence is completely beyond the bounds of

possibility. And furthermore, even at the start of the 21st century, many of the secrets of the cell have still not been uncovered by modern science. Far from the cell's emerging by coincidence, a living cell, even an artificial one, cannot be produced in laboratories equipped with the most highly developed technology, even with massive expenditure of effort by expert scientists with years of experience.

As a result, even one living cell leads us to a definite and unquestionable conclusion: It must have come about as a result of creation by God, who possesses infinite intelligence and might: everything is the work of His matchless artistry and knowledge.

In this section, the subject of how a living cell could not have come about by chance will not be considered in depth. (For detailed information see Harun Yahya, *The Miracle in the Cell*.) The basic subject which will be considered in this book is that perfectly designed plants could not have developed from a single bacteria cell, as the result of coincidences, as the theory of evolution claims.

Evolutionists claim that, at around the time the Earth was first formed, a bacteria cell emerged by chance, and that after a period lasting millions of years, there emerged from this cell all other living creatures, birds, insects, tigers, horses, butterflies, snakes, squirrels, et al. In the same way, evolutionists claim that all the countless varieties of plants also emerged from the same bacteria cell. In this section, the falsity of these claims, and the fact that they are based on imagination and therefore unscientific, will be examined.

In the plant evolution scenario, it is claimed that the first plant cell developed from a "primitive" bacteria cell. In this scenario the "primitive cell" which is suggested as having evolved is a bacteria cell (prokaryotic cell). Before moving on to the invalidity of this claim, let us examine whether a bacteria cell is "primitive," as claimed by evolutionists, or not.

Are Bacteria, Which the Theory of Evolution Sees as Primitive, Really So?

Bacteria are tiny living things, one micrometer (a thousandth of a millimetre) long, and contain no structures but a cell membrane and a DNA strand. It may seem much simpler than other living things when their structures are compared. But this in no way means that bacteria are primitive forms of life. Inside these tiny cells very important bio-chemical events take place which enable life on Earth to continue. Bacteria play very important roles in the functioning of nature's ecological system in the world. For example, some bacteria species dismantle the remains of dead plants and animals, and turn them into basic chemical substances to be used by living organisms. Some increase

the fertility of the soil. They also carry out functions such as turning milk into cheese, producing antibiotics against harmful bacteria, and synthesising vitamins.

These are only a few of the countless tasks carried out by bacteria. Although the cells of the bacteria which carry all this out appear simple, when they are examined it is seen that they are not so at all. A bacterium has about 2,000 genes. Each gene has about 1000 letters (links) in it. So the bacterium's DNA must be at least 2 million letters in length. What does this mean? According to this calculation, the information in the DNA of one bacterium is equivalent to 20 average novels, each of 100,000 words.[64]

Any change in the information in the DNA code of a bacterium would be so deleterious as to ruin the bacterium's entire working system. As we have seen, a fault in the bacteria's genetic code, means that the working system would go wrong. In other words, that the bacteria could not live, and could not survive down the generations. As a result, a very important link in the ecological chain of balances would break and all the balances in the world of living things would be turned upside down. When all these complex features are borne in mind, it is obvious that bacteria are not primitive cells as the theory of evolution claims. Furthermore, the evolution of bacteria into plant and animal cells (eukaryotic cells), as in the evolutionists' claim, is something which breaks every kind of biological, physical, and chemical law. Although they are fully aware of this impossibility, defenders of the theory of evolution will not give up defending this theory, which they invented out of their own hopelessness. Even so, they sometimes cannot resist talking about the theory's invalidity. For example, the famous Turkish evolutionist Professor Ali Demirsoy admits that bacterial cells, which are claimed to be primitive, cannot turn into eukaryotic cells:

> One of the most difficult stages to be explained in evolution is to scientifically explain how organelled and complex cells developed from these primitive creatures. No transitional form has been found between these two forms. One and multi-celled creatures carry all this complicated structure, and no creature or group has yet been found with organelles of a simpler construction in any way, or which are more primitive. In other words, the organelles carried forward are developed by all means. They have no simple and primitive forms.[65]

The question: "What is it that encourages the evolutionary scientist, Professor Ali Demirsoy, to make such an open admission?" may come to mind. The answer to this question can be given quite clearly when the great structural differences between bacteria and plant cells are examined:

1. While the walls of bacterial cells are formed of polysaccharide and protein, the walls of plant cells are formed of cellulose, a totally different structure.

2. While plant cells possess many organelles, covered in membranes and possessing very complex structures, bacterial cells lack typical organelles. In bacteria cells there are just freely moving tiny ribosomes. But the ribosomes in plant cells are

larger and are attached to the cell membrane. Furthermore, protein synthesis takes place by different means in the two types of ribosomes.[66]

3. The DNA structures in plant and bacterial cells are different.

4. The DNA molecule in plant cells is protected by a double-layered membrane, whereas the DNA in bacterial cells stands free within the cell.

5. The DNA molecule in bacterial cells resembles a closed loop; in other words, it is circular. In plants, the DNA molecule is linear.

6. There is relatively little protein in the DNA molecule in bacterial cells. But in plant cells the DNA molecule is linked from one end to the other by proteins.

7. The DNA molecule in bacterial cells carries information belonging to just one cell, but in plant cells the DNA molecule carries information about the whole plant. For example, all the pieces of information about a fruit-bearing tree's roots, stem, leaves, flowers, and fruit are all found separately in the DNA in the nucleus of just one cell.

8. Some species of bacteria are photosynthetic, in other wods, they carry out photosynthesis. But unlike plants, in photosynthetic bacteria (cyanobacteria, for instance), there is no chlorophyll and photosynthetic pigments. Rather, these molecules are buried in various membranes all over the cell.

9. The biochemical structures of mRNAs in bacterial cells and in plant/animal cells are quite different from one another.[67]

The mRNA, or messenger RNA, is perhaps the most important of the three types of RNA. DNA does not directly synthesize protein. It synthesizes the mRNA molecule, which contains the information necessary for the production of polypeptide amino acid chains. When this information contained by mRNA reaches the relevant place, and proteins are produced from the amino-acid building blocks.

Messenger RNA plays a vital role for the cell to live. But although messenger RNA assumes the same vital role in both prokaryotic (bacterial) cells and in eukaryotic (including plant and animal) cells, their biochemical structures are different. An article by J. Darnell published in *Science* says:

The differences in the biochemistry of messenger RNA formation in eukaryotes compared to prokaryotes are so profound as to suggest that sequential prokaryotic to eukaryotic cell evolution seems unlikely.[68]

The structural differences between bacterial and plant cells, of which we have seen a few examples above, lead evolutionist scientists to another dead end. Although plant and bacteria cells have some aspects in common, most of their structures are quite different from one another. In fact, since there are no membrane-surrounded organelles or a cytoskeleton (the internal network of protein filaments and microtubules) in bacterial cells, the presence of several very complex organelles and cell organization in plant cells totally invalidates the claim that the plant cell evolved from the bacterial cell.

Biologist Ali Demirsoy openly admits this, saying "Complex cells never developed from primitive cells by a process of evolution."[69]

The Invalidity of Evolutionists' Claims on This Subject

Although it is definitely impossible for plant cells to have evolved from a bacteria cell, evolutionist scientists have tried to ignore this fact and have put forward a large number of debatable hypotheses. But experiments overturn these hypotheses. The most popular of these is the "endosymbiosis" hypothesis.

This hypothesis was put forward by Lynn Margulis in 1970 in her book *The Origin of Eukaryotic Cells*. In this book, Margulis claimed that as a result of their communal and parasitic lives, bacterial cells turned into plant and animal cells. According to this theory, plant cells emerged when a photosynthetic bacterium was swallowed by another bacterial cell. The photosynthetic bacterium evolved inside the parent cell into a chloroplast. Lastly, organelles with highly complex structures such as the nucleus, the Golgi apparatus, the endoplasmic reticulum, and ribosomes, evolved, in some way or other. Thus, the plant cell was born.

As we have seen, this thesis of the evolutionists is nothing but a work of fantasy. Despite its fairy-tale nature, it was essential, from the evolutionists' point of view, that this scenario be put forward; evolutionists had to be able to explain how the most vital reactions, such as photosynthesis, in the living world came about, in a structure as complicated as the plant cell. This theory of Margulis appeared to be more advantageous than other claims, because it was based on a feature possessed by the cell. For this reason, many evolutionist scientists saw the thesis put forward by Margulis as a means of escape from the dead-end.

Evolutionists defended this theory on the basis of one feature of plant cells. This feature, when considered on its own, without taking the whole of the cell into account, is one which was very useful for deceiving people who do not possess much information on the subject. Unsurprisingly, it was criticized by scientists who carried out very important research on the subject on a number of grounds: We can cite D. Lloyd, M. Gray and W. Doolittle, and R. Raff and H. Mahler as examples of these.[70]

The endosymbiosis hypothesis is based on the fact that the mitochondria of animal cells and the chloroplasts of plant cells contain their own DNA, separate from the DNA in the nucleus of the parent cell. So on this basis, it is suggested that mitochondria and chloroplasts were once independent, free-living cells. However, when chloroplasts are studied in detail, it can be seen that this claim is nothing but a scenario. The points which invalidate Margulis' endosymbiosis hypothesis are as follows:

1. If chloroplasts were engulfed by a large cell when, in the past, they were independent cells, that could only have one outcome: namel, it would have been digested by the parent cell and used as food. This must be so, because even if we assume that the parent cell in question took such a cell into itself from the outside by mistake, instead of intentionally ingesting it as food, nevertheless, the digestive enzymes

in the parent cell would have destroyed it. Of course, some evolutionists have gotten around this obstacle by saying, "The digestive enzymes had disappeared." But this is a clear contradiction, because if the cell's digestive enzymes had disappeared, then the cell would have died from lack of nutrition.

2. Again, let us assume that all the impossible happened and that the cell which is claimed to have been the ancestor of the chloroplast was swallowed up by the parent cell. In this case we are faced with another problem: the blueprints of all the organelles inside the cell are encoded in the DNA. If the parent cell were going to use other cells it swallowed as organelles, then it would be necessary for all of the information about them to be already present and encoded in its DNA. The DNA of the swallowed cells would have to possess information belonging to the parent cell. Not only is such a situation impossible, the complements of DNA belonging to the parent cell and the swallowed cell would also have to become compatible with each other afterwards, which is also clearly impossible.

3. There is great harmony within the cell, which random mutations cannot account for. There are more than just one chloroplast and one mitochondrion in a cell. Their number rises and falls according to the activity level of the cell, just like with other organelles. The existence of DNA in the bodies of these organelles is also of use in reproduction. As the cell divides, all of the numerous chloroplasts divide too, and the cell division happens in a shorter time and in a more swift fashion.

4. Chloroplasts are energy generators of absolutely vital importance to the plant cell. If these organelles did not produce energy, many of the cell's functions would not work, which would mean that the cell could not live. These functions which are so important to the cell take place with the proteins synthesized in the chloroplasts. But the chloroplasts' own DNA is not enough to synthesize these proteins. The greater part of the proteins are synthesized using the parent DNAin the cell nucleus.[71]

While the situation envisioned by the endosymbiosis hypothesis is occurring through a process of trial and error, what effects would this have on the DNA of the parent cell? As we have seen, any change in a DNA definitely does not result in a gain for that organism; on the contrary, any such mutation would certainly be harmful. In his book, *The Roots of Life*, Mahlon B. Hoagland explains the situation:

You'll recall we learned that almost always a change in an organism's DNA is detrimental to it; that is, it leads to a reduced capacity to survive. By way of analogy, random additions of sentences to the plays of Shakespeare are not likely to improve them!... The principle that DNA changes are harmful by virtue of reducing survival chances applies whether a change in DNA is caused by a mutation or by some foreign genes we deliberately add to it.[72]

The claims put forward by evolutionists are not based on scientific experiments, because no such thing as one bacterium swallowing another one has ever been observed. Evolutionist scientist P. Whitfield describes the situation in this way:

> Prokaryotic endocytosis is the cellular mechanism on which the whole of S.E.T. (Serial Endosymbiotic Theory) presumably rests. If one prokaryote could not engulf another it is difficult to imagine how endosymbioses could be set up. Unfortunately for Margulis and S.E.T., no modern examples of prokaryotic endocytosis or endosymbiosis exist... [73]

The Origin of Photosynthesis

In fact, all the impossibilities we have examined so far are enough to prove the invalidity of the evolution of plants scenario. But one single question will bring all the evolutionists' claims tumbling down without the need for all these explanations:

How did the process of photosynthesis, which has nothing resembling it in the whole world, come about?

According to the theory of evolution, in order to carry out photosynthesis, plant cells swallowed bacterial cells which could photosynthesize and turned them into chloroplasts. So, how did bacteria learn to carry out such a complicated process as photosynthesis? And why had they never done so before that point? As with other questions, evolutionary theory has no scientific answer to give. Have a look at how an evolutionist publication answers the question:

> The heterotroph hypothesis suggests that the earliest organisms were heterotrophs that fed on a soup of organic molecules in the primitive ocean. As these first heterotrophs consumed the available amino acids, proteins, fats, and sugars, the nutrient soup became depleted and could no longer support a growing population of heterotrophs. ...Organisms that could use an alternate source of energy would have had a great advantage. Consider that Earth was (and continues to be) flooded with solar energy that actually consists of different forms of radiation. Ultraviolet radiation is destructive, but visible light is energy-rich and undestructive. Thus, as organic compounds became increasingly rare, an already-present ability to use visible light as an alternate source of energy might have enabled such organisms and their descendents to survive. [74]

The book, *Life on Earth*, another evolutionist source, tries to explain the emergence of photosynthesis in this way:

> The bacteria fed initially on the various carbon compounds that had taken so many millions of years to accumulate in the primordial seas. But as they flourished, so this food must have become scarcer. Any bacterium that could tap a different source of food would obviously be very successful and eventually some did. Instead of taking

> ready-made food from their surroundings, they began to manufacture their own within their cell walls, drawing the necessary energy from the sun.[75]

These imaginary fantasies, no different from fairy tales, go completely beyond the bounds of intelligence and science. The actual meaning of these few explanatory sentences emerges when considered for a few seconds in the light of intelligence and science.

First of all, the inevitable end of any living thing which cannot find food is death. The only thing that varies is how long each living thing can survive starvation. After remaining hungry for a length of time, all the functions of every living thing start to cease because they cannot obtain energy by burning food. There is no need to be a scientist to see the truth of this. Anyone can understand this through simple observation. But evolutionist scientists expect that a living thing, whose every function has ceased, can develop a new method of feeding over time and then implement it. They furthermore believe that it can "decide" to develop such a new system and then "begin to produce it" in its own body. If evolutionist scientists carry out an experiment and wait to see whether such a thing happens, the outcome is very clear: The bacteria will soon die.

Another problem facing evolutionist scientists who expect bacteria to produce their own food is the difficulty of the endeavour. In the preceding sections we stressed that photosynthesis depends upon very complex systems. And of all the processes known in the world, this is really the most complicated, its general outlines having been only partly uncovered in our day; many of its stages are still a mystery to man.

This is what evolutionist scientists expect of a dying bacteria: that it should by itself develop this process - a process which has not been artificially reproduced even in reactors with the most highly developed technology.

One of the most striking admissions that such a complicated event as photosynthesis could not have evolved over time is again made by Professor Ali Demirsoy:

> Photosynthesis is a rather complicated event, and it seems impossible for it to emerge in an organelle inside a cell, because it is impossible for all the stages to have come about at once, and it is meaningless for them to have emerged separately.[76]

Another confession on this subject comes from the evolutionist Hoimar von Ditfurth. In his book, *Im Anfang War Der Wasserstoff* (In the Beginning was Hydrogen) von Ditfurth says that photosynthesis is a process that cannot possibly be learned:

> No cell possesses the capacity to 'learn' a process in the true sense of the world. It is impossible for any cell to come by the ability to carry out such functions as

respiration or photosynthesis, neither when it first comes into being, nor later in life.[77]

Land Plants' Alleged Ancestors: Algae

According to the imaginary scenario of evolution, algae, or sea moss, are the ancestors of land plants, and it is suggested that these first evolved some 450 million years ago in the Paleozoic Age. But the fossils which have been discovered in recent years have ruined all the evolutionists' scenarios and their evolutionary family tree.

In Western Australia in 1980, 3.1 to 3.4 billion-year-old fossil reefs were found.[78] These consisted of blue-green algae and organisms reminiscent of bacteria. This discovery created the worst kind of chaos for the evolutionists, because it toppled their imaginary evolution tree. According to this tree, algae should have emerged 410 million years ago in the Paleozoic Age. Another interesting point is that the oldest discovered algae had exactly the same complex structures as today's. A scientists investigating the matter said:

> The oldest fossils so far discovered are objects fossilized in minerals which belong to blue green algae, more than 3 billion years old. No matter how primitive they are, they still represent rather complicated and expertly organised forms of life.[79]

And at this point it occurs to one to put this question to the evolutionists:

> "How can the theory of evolution, which claims that countless forms of land plants evolved from algae in a period of 100 to 150 million years, explain that algae dated nearly a billion years have exactly the same structure as today's algae?"

Defenders of the theory of evolution ignore this question and others like it, and try to avoid the truth.

Another dead-end for the story of evolution from algae or water moss, is whether prokaryotic algae evolved from eukaryotic algae, or vice versa? Evolutionists disagree among themselves on this matter. They cannot decide on the type of algae. At this point it will be useful to examine cell types in a general way.

Prokaryotic cells resemble bacteria, with no organelles inside them. Whereas eukaryotic cells are animal and plant cells, and have more complex structures than prokaryotic cells. The theory of evolution first claimed that the eukaryotic cell evolved

from the prokaryotic. But when evolutionists realised that this was impossible, they changed their minds and began to maintain the opposite. But these claims went no further than being speculation. The quandary that evolutionists found themselves in on the matter is admitted by Robert Shapiro, himself an evolutionist. W.R. Bird writes:

> A postulated transition from prokaryotic algae to eukaryotic algae was questioned because the transition was "so fraught with confusion and contradiction that most modern biologists have ignored it." And subsequently was abandoned. The confusion is so great generally that some researchers have proposed that eukaryotes evolved into prokaryotes, rather than the reverse. The fossil evidence is not much more clear. It is clear that prokaryote fossils exist in Precambrian rocks, "but we do not know the time or the circumstances of their origin", Shapiro notes.[80]

The Claim that Algae Moved on to the Land and Turned into Today's Land Plants

According to the following sections of the scenario, as a result of the currents in the sea, algae clung to the shores, and began to move inland by turning into land plants shortly thereafter. How close is this assumption of the evolutionists to the truth? Let us have a look.

There are a number of influences that would make it impossible for algae to live after moving on shore. Let us take a brief look at the most important of them.

1. The danger of drying out: For a plant which lives in water to be able to live on land, its surface has first of all to be protected from water loss. Otherwise the plant will dry out. Land plants are provided with special systems to prevent this from happening. There are very important details in these systems. For example, this protection must be such that important gases such as oxygen and carbon-dioxide should be able to leave and enter the plant freely. At the same time, it is important that evaporation be permitted. For such a sensitive system to come about by chance is beyond the realm of possibility: it is impossible. If a plant does not have such a system, it cannot wait millions of years to develop one. In such a situation, the plant will soon dry up and die. The very complexity of these special systems demonstrate the impossibility of their having come about by coincidences over millions, or even billions of years.

2. Feeding: Marine plants take the water and minerals they need directly from the water. For this reason, any algae which tried to live on land would have a food problem. They could not live without resolving it.

3. Reproduction: Algae, with their short life span, have no chance of reproducing on land, because, as in all their functions, algae also use water in dispersing their reproductive cells. Then to be able to reproduce on land, they would need to possess multi-cellular reproductive cells, like those of land plants, which are covered by a protective layer of cells. Lacking these, any algae which found themselves on land would be unable to protect their reproductive cells from danger.

4. Protection from oxygen: Any algae, which arrived on land, would have taken in oxygen in a decomposed form up until that point. According to the evolutionists' scenario, now they would have to take in oxygen in a form they had never encountered before, in other words, directly from the atmosphere. As we know, under normal conditions the oxygen in the atmosphere has a poisoning effect on organic substances. Living things which live on land possess systems which stop them being harmed by it. But algae are marine plants, which means they do not possess the enzymes to protect them from the harmful effects of oxygen. So on reaching land, it would be impossible for them to avoid these effects. Neither is there any question of their waiting for such a system to develop, because they could not survive on land long enough for that to happen.

When these claims of the theory of evolution are looked at from a different point of view, they can be seen to be defective in logic. For example, let us consider the environment algae live in. The water which evolutionists claim they left offers countless possibilities for them to survive. For example, the water protects and insulates them from excessive heat and provides the minerals they need. At the same time it allows them to make their own carbohydrates (sugar and starch) from carbon-dioxide by absorbing sunlight in photosynthesis. In short, water is an ideal environment for algae, both for their physical characteristics and for the systems which carry out their functions. In other words there is no need for algae to leave the water, where they can survive quite comfortably, to live on the land, nor are their general structures suited to such a life.

We can liken this situation to a human being leaving the Earth and going and trying to live on another planet, while he has a perfect environment to live in on Earth (an atmosphere, food, gravity, and many other conditions). Ideally suited as he is to the conditions of this world today, from the moment he leaves the Earth to go to another planet, he will be unable to survive. It is just as impossible for him to go elsewhere as it is for algae to leave the water and start to live on land.

In the face of these truths, evolutionists' traditional gambit is to suggest the fanciful notion that algae adapted themselves to life on land. Whereas it is quite clear to anyone with normal intelligence that algae's doing such a thing as deciding to live on land, bringing about the necessary physical changes to be able to do this within their own structures, and then moving on to the land, is quite out of the question and just an unreasonable fantasy. It is impossible even for man, the most superior of living things,

who possesses intelligence, consciousness and will, to bring about any mutations in his body to enable him to live in a different environment. For example, if a man wants to fly, it is inconceivable that he should develop wings, or turn his lungs into gills if he wants to live in the water.

What we are discussing here is algae, which do not have the intelligence, will, power of decision, judgement, or power of evaluation to bring about changes in their own organisms or direct any intervention in them. But how interesting it is that evolutionists fall into the illogicality of ascribing all of these properties to algae, all for the sake of remaining loyal to their theory, and at the price of looking ridiculous.

As we have seen, algae have no chance of going on to land and living there. From the first moment they go on to land they need to have many flawlessly functioning mechanisms to allow them to live there, as land plants do. For these mechanisms to come into existence, they need to have information on them recorded in their own DNA, right from the start. In the experiments he carried out using plants towards the end of the 1800s, the famous biologist Gregor Mendel revealed the genetic laws in living things, and discovered that the features of plants and other living things are carried down to later generations by chromosomes. In other words, every species of living thing maintains its own characteristics in its DNA, from generation to generation.

Finally, the truth which emerges is this: No matter how much time passes, no matter what the conditions, it is impossible for algae to turn into land plants.

The Imaginary Evolutionary Tree

As we come to the last act in the evolution scenario, we meet the imaginary evolutionary tree which lies behind all the impossibilities and illogicalities we have seen so far. Plants are divided by evolutionists into 29 classes, and into groups, and into ancestor-descendant relationships. It is claimed that every group evolved from another one, and that bacteria are the common ancestors of all. Flowers, trees and fruits, in their many colours, are the final branches of this tree.

There is one very interesting side to all this. There is not one series of fossils to prove the authenticity of even one branch of this evolutionary tree that you will see in almost any biology book. There are perfect fossil records of many living things in the world, but none of them possess the feature of being an intermediate form between one species and another. They are all completely different species, specially and originally created within themselves, and have no evolutionary link between them. About the problems besetting this issue, evolutionists express their views as follows:

Daniel Axelrod says, in his book *Evolution of the Psilophyte Paleoflora*:
It seems clear that our phyletic charts need extensive revision.[81]

Chester A. Arnold was a professor at Michigan University who carried out research on fossil plants. On page 334 of his book, *Introduction to Paleobotany*, he says,

Not only are plant evolutionists at a loss to explain the seemingly abrupt rise of the flowering plants to a place of dominance, but their origin is likewise a mystery.[82]

Ranganathan, another evolutionist, says in his book, *B.G. Origins?*:

There is simply no evidence of partially evolved animals or plants in the fossil record to indicate that evolution has occurred in the past, and certainly no evidence of partially evolved animals and plants existing today to indicate that evolution is occurring at the present.[83]

Chester A. Arnold states the following in his book mentioned above,

As yet we have not been able to trace the phylogenetic history of a single group of modern plants from its beginning to the present.[84]

In his book, *The Evolution of Flowering Plants, in the Evolution Life*, Daniel Axelrod says,

> The ancestral group that gave rise to angiosperms has not yet been identified in the fossil record, and no living angiosperm points to such an ancestral alliance.[85]

An article titled "Ancient Alga Fossil Most Complex Yet" in the magazine, *Science News*, revealed that there was almost no difference between examples of what evolutionists call modern algae in our day, and algae which lived billions of years ago in this way.

Both blue-green algae and bacteria fossils dating back 3.4 billion years have been found in rocks from S. Africa. Even more intriguing, the pleurocapsalean algae turned out to be almost identical to modern pleurocapsalean algae at the family and possibly at the generic level.[86]

All the above statements come from the mouths of experts and all bear the same message: There is not one fossil of a plant with half-formed organs or systems: There is absolutely no evidence that one plant was the ancestor of another. For this reason, the evolutionary family trees are totally works of imagination and have no scientific foundation whatsoever. If the fossils which we possess are judged without prejudice, the Truth of Creation can be clearly seen. The evolutionist Prof. Dr. Eldred Corner of Cambridge University admits this situation in these words:

> I still think that, to the unprejudiced, the fossil record of plants is in favour of special creation. If, however, another explanation could be found for this hierarchy of classification, it would be the knell of the theory of evolution. Can you imagine how an orchid, a duckweed, and a palm have come from the same ancestry, and have we any evidence for this assumption? The evolutionist must be prepared with an answer, but I think that most would break down before an inquisition.[87]

It is actually quite clear that, although he is an evolutionist, Edred Corner cannot refrain from making this admission. Of course, it impossible for countless varieties of plant to emerge from just one plant. All plants possess features particular to their own species. Their colours, tastes, shapes, and methods of reproduction are all different to one another. As well as these differences, plants of the same species possess the same features wherever one goes in the world. Watermelons are watermelons everywhere, their colour, taste, and smell are always the same. Roses, strawberries, carnations, plane trees, lime trees, bananas, pineapples, orchids, in short all plants of the same species possess the same features anywhere in the world. Everywhere in the world, leaves possess the mechanisms to carry out photosynthesis. It is impossible for these mechanisms to have come about by coincidence, as evolutionists claim. Bearing this is mind, to say that the same coincidences affected all parts of the world, as evolutionists do, is neither intelligent nor scientific.

All of these lead us to just one conclusion. Plants were created, just like all living things. They have possessed the same complete mechanisms since they first came to be. Terms such as, "Development over time, changes linked to coincidence, and adaptations coming about from needs," which evolutionists employ in their claims, just serve to underline their defeat. They have no scientific meaning whatsoever.

Fossils Which Prove the Truth of Creation
Devonian Age Fossils (408-306 million years)

When we look at fossils from this period, we see that they possess many features possessed by plants of our own time. For example, stomata, cuticle, rhizome, and sporangia are just some of the structures found in these leaves.[88] A land plant must be fully protected from the danger of drying up if it is to live on the land. The cuticle is a waxy structure which coats the stems, branches and leaves to protect plants against drying up. If a plant does not have cuticle to prevent drying up, then it has no time to wait for cuticle to develop, as evolutionists claim. If a plant has cuticle layer it lives, if not, it dries up and dies. The difference is that sharp. All the structures plants possess are of vital importance, just like the cuticle. For a plant to live and reproduce, it had to possess perfectly functioning systems, just like today. From this point of view, all the fossil plants that have been found and all those in the world today confirm that they have possessed the same flawlessly functioning structures from the moment they came to be right up to the present day.

Carboniferous Age Fossils (360-286 Million Years)

The most important feature of the Carboniferous Age is that many more fossils have been found dating back to it. There is no difference between species of plants from this period and plants living today. The diversity suddenly revealed in the fossil record put evolutionists into another difficulty. Because, all of a sudden, species of plants emerged, all of which possessed perfect systems.

Evolutionists found a way out of this dilemma by inventing a name which went along with evolution, and called this the "Evolutionary Explosion." Of course, calling this phenomenon the "Evolutionary Explosion" solves none of the evolutionists' problems. The problem even left the founder of the theory, Charles Darwin, stunned, and he admitted as much as follows:

> Nothing is more extraordinary in the history of the Vegetable Kingdom, as it seems to me, than the apparently very sudden or abrupt development of the higher plants.[89]

As we have seen in all these fossil plants, there is no difference in shape or structure between plants of our day and those which lived hundreds of millions of years ago.

Plants used to carry out photosynthesis billions of years ago, just as they do today. They possessed hydraulic systems strong enough to crack concrete, pumps able to transport the water absorbed from the ground meters high into the air, and chemical factories producing food for living creatures. God, the Lord of all the worlds, who created them, is still creating them today. Even using the most highly developed means offered by modern technology, it is not possible for man, who is trying to understand these miracles of creation in plants, to create even one species of plant out of nothing.

God draws attention to this truth in Surat an-Naml:

He created the heavens and the earth and sends down water from the sky by which We make luxuriant gardens grow. Try as you may, you could never make such trees grow. Is there another deity besides God? No indeed, but they are people who equate others with Him! (Surat an-Naml: 60)

CONCLUSION

In this book which explains the miracles of creation in plants, an important result and the evidence which proves it is demonstrated. The theory of evolution is one which conflicts with scientific truths and tries to find support for its claims by building various fantasies. This is a reality that evolutionists from time to time admit.

The famous, Nobel prize-winning evolutionist Dr. Robert Milikan admits the evolutionists' predicament:

The pathetic thing is that we have scientists who are trying to prove evolution, which no scientist can ever prove.[102]

There is no doubt that what pushes evolutionists to make these admissions is the truths that are being made apparent as science develops. All scientific research, whether on living things or the balances in the universe prove that the universe, came into being as the result of a special design.

The aim in the preparation of this book is, by setting out another of the proofs of creation, to remind readers of subjects that they come across all the time in the flow of daily life, but to which they pay no attention and never think of as "the miracle of creation." It will open up a new horizon for people who have been interested only in certain subjects all their lives, who think only of meeting their own needs, and who for that reason do not see the evidence of the existence of God. This will open up an important road that will guide man to his Lord, who created him.

This is the most important matter a person can face in his life. As God reveals in His verses, only people who use their intelligence can think, consider, and find a way to God:

It is He Who sends down water from the sky. From it you drink and from it come the shrubs among which you graze your herds. And by it He makes crops grow for you and olives and dates and grapes and fruit of every kind. There is certainly a sign in that for people who reflect. (Surat an-Nahl: 10-11)

THE EVOLUTION MISCONCEPTION

In this book, we have examined nature, plants and the miracle of creation in plants. All these have led us to the conclusion that plants could not have come into being by chance. On the contrary, every detail we have studied in this book points to a superior creation. By contrast, materialism, which seeks to deny the fact of creation in the universe, is nothing but an unscientific fallacy.

Once materialism is invalidated, all other theories based on this philosophy are rendered baseless. Foremost of them is Darwinism, that is, the theory of evolution. This theory, which argues that life originated from inanimate matter through coincidences, has been demolished with the recognition that the universe was created by God. American astrophysicist Hugh Ross explains this as follows:

> Atheism, Darwinism, and virtually all the "isms" emanating from the eighteenth to the twentieth century philosophies are built upon the assumption, the incorrect assumption, that the universe is infinite. The singularity has brought us face to face with the cause – or causer – beyond/behind/before the universe and all that it contains, including life itself.[103]

It is God Who created the universe and Who designed it down to its smallest detail. Therefore, it is impossible for the theory of evolution, which holds that living beings are not created by God, but are products of coincidences, to be true.

Unsurprisingly, when we look at the theory of evolution, we see that this theory is denounced by scientific findings. The design in life is extremely complex and striking. In the inanimate world, for instance, we can explore how sensitive are the balances which atoms rest upon, and further, in the animate world, we can observe in what complex designs these atoms were brought together, and how extraordinary are the mechanisms and structures such as proteins, enzymes, and cells, which are manufactured with them.

This extraordinary design in life invalidated Darwinism at the end of the 20th century.

We have dealt with this subject in great detail in some of our other studies, and shall continue to do so. However, we think that, considering its importance, it will be helpful to make a short summary here as well.

The Scientific Collapse of Darwinism

Although a doctrine going back as far as ancient Greece, the theory of evolution was advanced extensively in the 19th century. The most important development that made the theory the top topic of the world of science was the book by Charles Darwin

titled "*The Origin of Species*" published in 1859. In this book, Darwin denied that different living species on the earth were created separately by God. According to Darwin, all living beings had a common ancestor and they diversified over time through small changes.

Darwin's theory was not based on any concrete scientific finding; as he also accepted, it was just an "assumption." Moreover, as Darwin confessed in the long chapter of his book titled "Difficulties of the Theory," the theory was failing in the face of many critical questions.

Darwin invested all his hopes in new scientific discoveries, which he expected to solve the "Difficulties of the Theory." However, contrary to his expectations, scientific findings expanded the dimensions of these difficulties.

The defeat of Darwinism against science can be reviewed under three basic topics:

1) The theory can by no means explain how life originated on the earth.

2) There is no scientific finding showing that the "evolutionary mechanisms" proposed by the theory have any power to evolve at all.

3) The fossil record proves completely the contrary of the suggestions of the theory of evolution.

In this section, we will examine these three basic points in general outlines:

The First Insurmountable Step: The Origin of Life

The theory of evolution posits that all living species evolved from a single living cell that emerged on the primitive earth 3.8 billion years ago. How a single cell could generate millions of complex living species and, if such an evolution really occurred, why traces of it cannot be observed in the fossil record are some of the questions the theory cannot answer. However, first and foremost, of the first step of the alleged evolutionary process it has to be inquired: How did this "first cell" originate?

Since the theory of evolution denies creation and does not accept any kind of supernatural intervention, it maintains that the "first cell" originated coincidentally within the laws of nature, without any design, plan, or arrangement. According to the theory, inanimate matter must have produced a living cell as a result of coincidences. This, however, is a claim inconsistent with even the most unassailable rules of biology.

"Life Comes from Life"

In his book, Darwin never referred to the origin of life. The primitive understanding of science in his time rested on the assumption that living beings had a very simple structure. Since medieval times, spontaneous generation, the theory asserting that non-

living materials came together to form living organisms, had been widely accepted. It was commonly believed that insects came into being from food leftovers, and mice from wheat. Interesting experiments were conducted to prove this theory. Some wheat was placed on a dirty piece of cloth, and it was believed that mice would originate from it after a while.

Similarly, worms developing in meat was assumed to be evidence of spontaneous generation. However, only some time later was it understood that worms did not appear on meat spontaneously, but were carried there by flies in the form of larvae, invisible to the naked eye.

Even in the period when Darwin wrote *The Origin of Species*, the belief that bacteria could come into existence from non-living matter was widely accepted in the world of science.

However, five years after Darwin's book was published, the discovery of Louis Pasteur disproved this belief, which constituted the groundwork of evolution. Pasteur summarized the conclusion he reached after time-consuming studies and experiments: "*The claim that inanimate matter can originate life is buried in history for good.*"[104]

Advocates of the theory of evolution resisted the findings of Pasteur for a long time. However, as the development of science unraveled the complex structure of the cell of a living being, the idea that life could come into being coincidentally faced an even greater impasse.

Inconclusive Efforts in the 20th Century

The first evolutionist who took up the subject of the origin of life in the 20th century was the renowned Russian biologist Alexander Oparin. With various theses he advanced in the 1930's, he tried to prove that the cell of a living being could originate by coincidence. These studies, however, were doomed to failure, and Oparin had to make the following confession: "Unfortunately, the origin of the cell remains a question which is actually the darkest point of the entire evolution theory."[105]

Evolutionist followers of Oparin tried to carry out experiments to solve the problem of the origin of life. The best known of these experiments was carried out by American chemist Stanley Miller in 1953. Combining the gases he alleged to have existed in the primordial earth's atmosphere in an experiment set-up, and adding energy to the mixture, Miller synthesized several organic molecules (amino acids) present in the structure of proteins.

Barely a few years had passed before it was revealed that this experiment, which was then presented as an important step in the name of evolution, was invalid, the atmosphere used in the experiment having been very different from real earth conditions.[106]

After a long silence, Miller confessed that the atmosphere medium he used was unrealistic.[107]

All the evolutionist efforts put forth throughout the 20th century to explain the origin of life ended with failure. The geochemist Jeffrey Bada from San Diego Scripps Institute accepts this fact in an article published in *Earth* Magazine in 1998:

> Today as we leave the twentieth century, we still face the biggest unsolved problem that we had when we entered the twentieth century: How did life originate on Earth?[108]

The Complex Structure of Life

The primary reason why the theory of evolution ended up in such a big impasse about the origin of life is that even the living organisms deemed the simplest have incredibly complex structures. The cell of a living being is more complex than all of the technological products produced by man. Today, even in the most developed laboratories of the world, a living cell cannot be produced by bringing inorganic materials together.

The conditions required for the formation of a cell are too great in quantity to be explained away by coincidences. The probability of proteins, the building blocks of cell, being synthesized coincidentally, is 1 in 10^{950} for an average protein made up of 500 amino acids. In mathematics, a probability smaller than 1 over 10^{50} is practically considered to be impossible.

The DNA molecule, which is located in the nucleus of the cell and which stores genetic information, is an incredible databank. It is calculated that if the information coded in DNA were written down, this would make a giant library consisting of 900 volumes of encyclopaedias of 500 pages each.

A very interesting dilemma emerges at this point: the DNA can only replicate with the help of some specialized proteins (enzymes). However, the synthesis of these enzymes can only be realized by the information coded in DNA. As they both depend on each other, they have to exist at the same time for replication. This brings the scenario that life originated by itself to a deadlock. Prof. Leslie Orgel, an evolutionist of repute from the University of San Diego, California, confesses this fact in the September 1994 issue of the *Scientific American* magazine:

It is extremely improbable that proteins and nucleic acids, both of which are structurally complex, arose spontaneously in the same place at the same time. Yet it also seems impossible to have one without the other. And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means. [109]

No doubt, if it is impossible for life to have originated from natural causes, then it has to be accepted that life was "created" in a supernatural way. This fact explicitly invalidates the theory of evolution, whose main purpose is to deny creation.

Imaginary Mechanisms of Evolution

The second important point that negates Darwin's theory is that both concepts put forward by the theory as "evolutionary mechanisms" were understood to have, in reality, no evolutionary power.

Darwin based his evolution allegation entirely on the mechanism of "natural selection". The importance he placed on this mechanism was evident in the name of his book: *The Origin of Species, By Means Of Natural Selection...*

Natural selection holds that those living things that are stronger and more suited to the natural conditions of their habitats will survive in the struggle for life. For example, in a deer herd under the threat of attack by wild animals, those that can run faster will survive. Therefore, the deer herd will be comprised of faster and stronger individuals. However, unquestionably, this mechanism will not cause deer to evolve and transform themselves into another living species, for instance, horses.

Therefore, the mechanism of natural selection has no evolutionary power. Darwin was also aware of this fact and had to state this in his book *The Origin of Species:*

Natural selection can do nothing until favourable variations chance to occur.[110]

Lamarck's Impact

So, how could these "favourable variations" occur? Darwin tried to answer this question from the standpoint of the primitive understanding of science in his age. According to the French biologist Lamarck, who lived before Darwin, living creatures passed on the traits they acquired during their lifetime to the next generation and these traits, accumulating from one generation to another, caused new species to be formed. For instance, according to Lamarck, giraffes evolved from antelopes; as they struggled to eat the leaves of high trees, their necks were extended from generation to generation.

Darwin also gave similar examples, and in his book *The Origin of Species,* for instance, said that some bears going into water to find food transformed themselves into whales over time.[111]

However, the laws of inheritance discovered by Mendel and verified by the science of genetics that flourished in the 20th century, utterly demolished the legend that acquired traits were passed on to subsequent generations. Thus, natural selection fell out of favour as an evolutionary mechanism.

Neo-Darwinism and Mutations

In order to find a solution, Darwinists advanced the "Modern Synthetic Theory", or as it is more commonly known, Neo-Darwinism, at the end of the 1930's. Neo-Darwinism added mutations, which are distortions formed in the genes of living beings because of external factors such as radiation or replication errors, as the "cause of favourable variations" in addition to natural mutation.

Today, the model that stands for evolution in the world is Neo-Darwinism. The theory maintains that millions of living beings present on the earth formed as a result of a process whereby numerous complex organs of these organisms such as the ears, eyes, lungs, and wings, underwent "mutations," that is, genetic disorders. Yet, there is an outright scientific fact that totally undermines this theory: Mutations do not cause living beings to develop; on the contrary, they always cause harm to them.

The reason for this is very simple: the DNA has a very complex structure and random effects can only cause harm to it. American geneticist B.G. Ranganathan explains this as follows:

Mutations are small, random, and harmful. They rarely occur and the best possibility is that they will be ineffectual. These four characteristics of mutations imply that mutations cannot lead to an evolutionary development. A random change in a highly specialised organism is either ineffectual or harmful. A random change in a watch cannot improve the watch. It will most probably harm it or at best be ineffectual. An earthquake does not improve the city, it brings destruction.[112]

Not surprisingly, no mutation example, which is useful, that is, which is observed to develop the genetic code, has been observed so far. All mutations have proved to be harmful. It was understood that mutation, which is presented as an "evolutionary mechanism," is actually a genetic occurrence that harms living beings, and leaves them disabled. (The most common effect of mutation on human beings is cancer). No doubt, a destructive mechanism cannot be an "evolutionary mechanism." Natural selection, on the other hand, "can do nothing by itself" as Darwin also accepted. This fact shows us that there is no "evolutionary mechanism" in nature. Since no evolutionary mechanism exists, neither could any imaginary process called evolution have taken place.

The Fossil Record: No Sign of Intermediate Forms

The clearest evidence that the scenario suggested by the theory of evolution did not take place is the fossil record.

According to the theory of evolution, every living species has sprung from a predecessor. A previously existing species turned into something else in time and all

species have come into being in this way. According to the theory, this transformation proceeds gradually over millions of years.

Had this been the case, then numerous intermediary species should have existed and lived within this long transformation period.

For instance, some half-fish/half-reptiles should have lived in the past which had acquired some reptilian traits in addition to the fish traits they already had. Or there should have existed some reptile-birds, which acquired some bird traits in addition to the reptilian traits they already had. Since these would be in a transitional phase, they should be disabled, defective, crippled living beings. Evolutionists refer to these imaginary creatures, which they believe to have lived in the past, as "transitional forms."

If such animals had really existed, there should be millions and even billions of them in number and variety. More importantly, the remains of these strange creatures should be present in the fossil record. In *The Origin of Species,* Darwin explained:

If my theory be true, numberless intermediate varieties, linking most closely all of the species of the same group together must assuredly have existed... Consequently, evidence of their former existence could be found only amongst fossil remains.[113]

Darwin's Hopes Shattered

However, although evolutionists have been making strenuous efforts to find fossils since the middle of the 19th century all over the world, no transitional forms have yet been uncovered. All the fossils unearthed in excavations showed that, contrary to the expectations of evolutionists, life appeared on earth all of a sudden and fully-formed.

A famous British paleontologist, Derek V. Ager, admits this fact, even though he is an evolutionist:

The point emerges that if we examine the fossil rec,ord in detail, whether at the level of orders or of species, we find - over and over again - not gradual evolution, but the sudden explosion of one group at the expense of another.[114]

This means that in the fossil record, all living species suddenly emerge as fully formed, without any intermediate forms in between. This is just the opposite of Darwin's assumptions. Also, it is very strong evidence that living beings are created. The only explanation of a living species emerging suddenly and complete in every detail without any evolutionary ancestor can be that this species was created. This fact is admitted also by the widely known evolutionist biologist Douglas Futuyma:

Creation and evolution, between them, exhaust the possible explanations for the origin of living things. Organisms either appeared on the earth fully developed or they did not. If they did not, they must have developed from pre-existing species by some process of modification. If they did appear in a fully developed state, they must indeed have been created by some omnipotent intelligence. [115]

Fossils show that living beings emerged fully developed and in a perfect state on the earth. That means that "the origin of species" is, contrary to Darwin's supposition, not evolution but creation.

The Tale of Human Evolution

The subject most often brought up by the advocates of the theory of evolution is the subject of the origin of man. The Darwinist claim holds that the modern men of today evolved from some kind of ape-like creatures. During this alleged evolutionary process, which is supposed to have started 4-5 million years ago, it is claimed that there existed some "transitional forms" between modern man and his ancestors. According to this completely imaginary scenario, four basic "categories" are listed:

1. *Australopithecus*
2. *Homo habilis*
3. *Homo erectus*
4. *Homo sapiens*

Evolutionists call the so-called first ape-like ancestors of men "Australopithecus" which means "South African ape." These living beings are actually nothing but an old ape species that has become extinct. Extensive research done on various *Australopithecus* specimens by two world famous anatomists from England and the USA, namely, Lord Solly Zuckerman and Prof. Charles Oxnard, has shown that these belonged to an ordinary ape species that became extinct and bore no resemblance to humans.[116]

Evolutionists classify the next stage of human evolution as "homo," that is "man." According to the evolutionist claim, the living beings in the Homo series are more developed than Australopithecus. Evolutionists devise a fanciful evolution scheme by arranging different fossils of these creatures in a particular order. This scheme is imaginary because it has never been proved that there is an evolutionary relation between these different classes. Ernst Mayr, one of the foremost defenders of the theory of evolution in the 20th century, admits this fact by saying that "the chain reaching as far as *Homo sapiens* is actually lost." [117]

By outlining the link chain as "*Australopithecus* > *Homo habilis* > *Homo erectus* > *Homo sapiens*," evolutionists imply that each of these species is one another's ancestor. However, recent findings of paleoanthropologists have revealed that Australopithecus, *Homo habilis* and *Homo erectus* lived at different parts of the world at the same time.[118]

Moreover, a certain segment of humans classified as *Homo erectus* have lived up until very modern times. *Homo sapiens* neandarthalensis and *Homo sapiens* sapiens (modern man) co-existed in the same region.[119]

This situation apparently indicates the invalidity of the claim that they are ancestors of one another. A paleontologist from Harvard University, Stephen Jay Gould, explains this deadlock of the theory of evolution although he is an evolutionist himself:

What has become of our ladder if there are three coexisting lineages of hominids (*A. africanus*, the *robust australopithecines*, and *H. habilis*), none clearly derived from

another? Moreover, none of the three display any evolutionary trends during their tenure on earth.[120]

Put briefly, the scenario of human evolution, which is sought to be upheld with the help of various drawings of some "half ape, half human" creatures appearing in the media and course books, that is, frankly, by means of propaganda, is nothing but a tale with no scientific ground.

Lord Solly Zuckerman, one of the most famous and respected scientists in the U.K., who carried out research on this subject for years, and particularly studied *Australopithecus* fossils for 15 years, finally concluded, despite being an evolutionist himself, that there is, in fact, no such family tree branching out from ape-like creatures to man.

Zuckerman also made an interesting "spectrum of science." He formed a spectrum of sciences ranging from those he considered scientific to those he considered unscientific. According to Zuckerman's spectrum, the most "scientific"–that is, depending on concrete data–fields of science are chemistry and physics. After them come the biological sciences and then the social sciences. At the far end of the spectrum, which is the part considered to be most "unscientific," are "extra-sensory perception"–concepts such as telepathy and sixth sense–and finally "human evolution." Zuckerman explains his reasoning:

> We then move right off the register of objective truth into those fields of presumed biological science, like extrasensory perception or the interpretation of man's fossil history, where to the faithful (evolutionist) anything is possible - and where the ardent believer (in evolution) is sometimes able to believe several contradictory things at the same time.[121]

The tale of human evolution boils down to nothing but the prejudiced interpretations of some fossils unearthed by certain people, who blindly adhere to their theory.

Technology In The Eye and The Ear

Another subject that remains unanswered by evolutionary theory is the excellent quality of perception in the eye and the ear.

Before passing on to the subject of the eye, let us briefly answer the question of "how we see". Light rays coming from an object fall oppositely on the retina of the eye. Here, these light rays are transmitted into electric signals by cells and they reach a tiny spot at the back of the brain called the centre of vision. These electric signals are perceived in this centre of the brain as an image after a series of processes. With this technical background, let us do some thinking.

The brain is insulated from light. That means that the inside of the brain is solid dark, and light does not reach the location where the brain is situated. The place called the centre of vision is a solid dark place where no light ever reaches; it may even be the darkest place you have ever known. However, you observe a luminous, bright world in this pitch darkness.

The image formed in the eye is so sharp and distinct that even the technology of the 20th century has not been able to attain it. For instance, look at the book you read, your hands with which you hold it, then lift your head and look around you. Have you ever seen such a sharp and distinct image as this one at any other place? Even the most developed television screen produced by the greatest television producer in the world cannot provide such a sharp image for you. This is a three-dimensional, coloured, and extremely sharp image. For more than 100 years, thousands of engineers have been trying to achieve this sharpness. Factories, huge premises were established, much research has been done, plans and designs have been made for this purpose. Again, look at a TV screen and the book you hold in your hands. You will see that there is a big difference in sharpness and distinction. Moreover, the TV screen shows you a two-dimensional image, whereas with your eyes, you watch a three-dimensional perspective having depth.

For many years, ten of thousands of engineers have tried to make a three-dimensional TV, and reach the vision quality of the eye. Yes, they have made a three-dimensional television system but it is not possible to watch it without putting on glasses; moreover, it is only an artificial three-dimension. The background is more blurred, the foreground appears like a paper setting. Never has it been possible to produce a sharp and distinct vision like that of the eye. In both the camera and the television, there is a loss of image quality.

Evolutionists claim that the mechanism producing this sharp and distinct image has been formed by chance. Now, if somebody told you that the television in your room was formed as a result of chance, that all its atoms just happened to come together and make up this device that produces an image, what would you think? How can atoms do what thousands of people cannot?

If a device producing a more primitive image than the eye could not have been formed by chance, then it is very evident that the eye and the image seen by the eye could not have been formed by chance. The same situation applies to the ear. The outer ear picks up the available sounds by the auricle and directs them to the middle ear; the middle ear transmits the sound vibrations by intensifying them; the inner ear sends these vibrations to the brain by translating them into electric signals. Just as with the eye, the act of hearing finalises in the centre of hearing in the brain.

The situation in the eye is also true for the ear. That is, the brain is insulated from sound just like it is from light: it does not let any sound in. Therefore, no matter how noisy is the outside, the inside of the brain is completely silent. Nevertheless, the sharpest sounds are perceived in the brain. In your brain, which is insulated from sound,

you listen to the symphonies of an orchestra, and hear all the noises in a crowded place. However, if the sound level in your brain was measured by a precise device at that moment, it would be seen that a complete silence is prevailing there.

As is the case with imagery, decades of effort have been spent in trying to generate and reproduce sound that is faithful to the original. The results of these efforts are sound recorders, high-fidelity systems, and systems for sensing sound. Despite all this technology and the thousands of engineers and experts who have been working on this endeavour, no sound has yet been obtained that has the same sharpness and clarity as the sound perceived by the ear. Think of the highest-quality HI-FI systems produced by the biggest company in the music industry. Even in these devices, when sound is recorded some of it is lost; or when you turn on a HI-FI you always hear a hissing sound before the music starts. However, the sounds that are the products of the technology of the human body are extremely sharp and clear. A human ear never perceives a sound accompanied by a hissing sound or with atmospherics as does HI-FI; it perceives sound exactly as it is, sharp and clear. This is the way it has been since the creation of man.

So far, no visual or recording apparatus produced by man has been as sensitive and successful in perceiving sensory data as are the eye and the ear.

However, as far as seeing and hearing are concerned, a far greater fact lies beyond all this.

To Whom Does the Consciousness that Sees and
Hears Within the Brain Belong?

Who is it that watches an alluring world in its brain, listens to symphonies and the twittering of birds, and smells the rose?

The stimulations coming from the eyes, ears, and nose of a human being travel to the brain as electro-chemical nervous impulses. In biology, physiology, and biochemistry books, you can find many details about how this image forms in the brain. However, you will never come across the most important fact about this subject: Who is it that perceives these electro-chemical nervous impulses as images, sounds, odours and sensory events in the brain? There is a consciousness in the brain that perceives all this without feeling any need for eye, ear, and nose. To whom does this consciousness belong? There is no doubt that this consciousness does not belong to the nerves, the fat layer and neurons comprising the brain. This is why Darwinist-materialists, who believe that everything is comprised of matter, cannot give any answer to these questions.

For this consciousness is the spirit created by God. The spirit needs neither the eye to watch the images, nor the ear to hear the sounds. Furthermore, nor does it need the brain to think.

Everyone who reads this explicit and scientific fact should ponder on Almighty God, should fear Him and seek refuge in Him, He Who squeezes the entire universe in a pitch-dark place of a few cubic centimeters in a three-dimensional, coloured, shadowy, and luminous form.

A Materialist Faith

The information we have presented so far shows us that the theory of evolution is a claim evidently at variance with scientific findings. The theory's claim on the origin of life is inconsistent with science, the evolutionary mechanisms it proposes have no evolutionary power, and fossils demonstrate that the intermediate forms required by the theory never existed. So, it certainly follows that the theory of evolution should be pushed aside as an unscientific idea. This is how many ideas such as the earth-centered universe model have been taken out of the agenda of science throughout history.

However, the theory of evolution is pressingly kept on the agenda of science. Some people even try to represent criticisms directed against the theory as an "attack on science." Why?

The reason is that the theory of evolution is an indispensable dogmatic belief for some circles. These circles are blindly devoted to materialist philosophy and adopt Darwinism because it is the only materialist explanation that can be put forward for the workings of nature.

Interestingly enough, they also confess this fact from time to time. A well known geneticist and an outspoken evolutionist, Richard C. Lewontin from Harvard University, confesses that he is "first and foremost a materialist and then a scientist":

> It is not that the methods and institutions of science somehow compel us accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, so we cannot allow a Divine Foot in the door. [122]

These are explicit statements that Darwinism is a dogma kept alive just for the sake of adherence to the materialist philosophy. This dogma maintains that there is no being save matter. Therefore, it argues that inanimate, unconscious matter created life. It insists that millions of different living species; for instance, birds, fish, giraffes, tigers, insects, trees, flowers, whales and human beings originated as a result of the interactions between matter such as the pouring rain, the lightning flash, etc., out of inanimate matter. This is a precept contrary both to reason and science. Yet Darwinists continue to defend it just so as "not to allow a Divine Foot in the door."

Anyone who does not look at the origin of living beings with a materialist prejudice will see this evident truth: All living beings are works of a Creator, Who is All-Powerful, All-Wise and All-Knowing. This Creator is God, Who created the whole universe from non-existence, designed it in the most perfect form, and fashioned all living beings.

They said,
Glory be to You!
We have no knowledge
except what You have taught us.
You are the All-Knowing,
the All-Wise

(Surah Al-Baqarah: 32)

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