TAMIL NADU ASSOCIATION OF SENIOR PROFESSIONALS OF ENVIRONMENT AND FORESTS (TASPEF)

"கானின்றி அமையாது நீரும்
நீரின்றி அமையாது உலகும்"

நமது வனம்

Namathu Vanam

(A Quarterly e-magazine of TASPEF)

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BIRTHDAY WISHES

The Editorial team wishes all the members who have celebrated their birthday and the anniversary day in the months of April, May and June 2018.

'A VERY HAPPY BIRTH DAY'

From the Chief Editor's desk

The first issue of the e-magazine 'Namathu Vanam' from the Tamil Nadu Association of Senior Professionals of Environment and Forest (TASPEF) was launched in a formal function by the then Principal Chief Conservator of Forests and Head of the Tamil Nadu Forest department, Chennai in January 2018. The initiative by TASPEF has received quite a few positive feed-backs from the readers. We are happy to share the information with the readers that the Association has been entrusted with the preparation of revisited Micro plan for the Tamil Nadu Afforestation Project villages of Salem and Dharmapuri circles, based on a proposal sent by TASPEF to the concerned Circles. The Association wishes to thank the Chief Project Director (TBGP) and the Chief Conservator of Forests (in-charge) of Salem and Dharmapuri circles for assigning this work to the Association. Many members of the TASPEF volunteered to take up this assignment and have spent time in collating required information from the TAP project villages and are in the process of finalizing the micro plans. As it is commonly said that 'the proof of pudding is in the eating', it is desired that the process is taken to its logical end within a time frame and the revisited micro plan, given to the concerned divisions.

Despite our earnest efforts, response of TASPEF members in contributing articles, papers and anecdotes for the second issue of the e-magazine was rather slow. As a result, the release of the second issue of the magazine has gone behind schedule. The editorial team wishes to make good the delay and appeals to the members to write interesting papers for the next issue of the e-magazine and send the same to the editor immediately.

CREATIONS OF MEMBERS OF TASPEF

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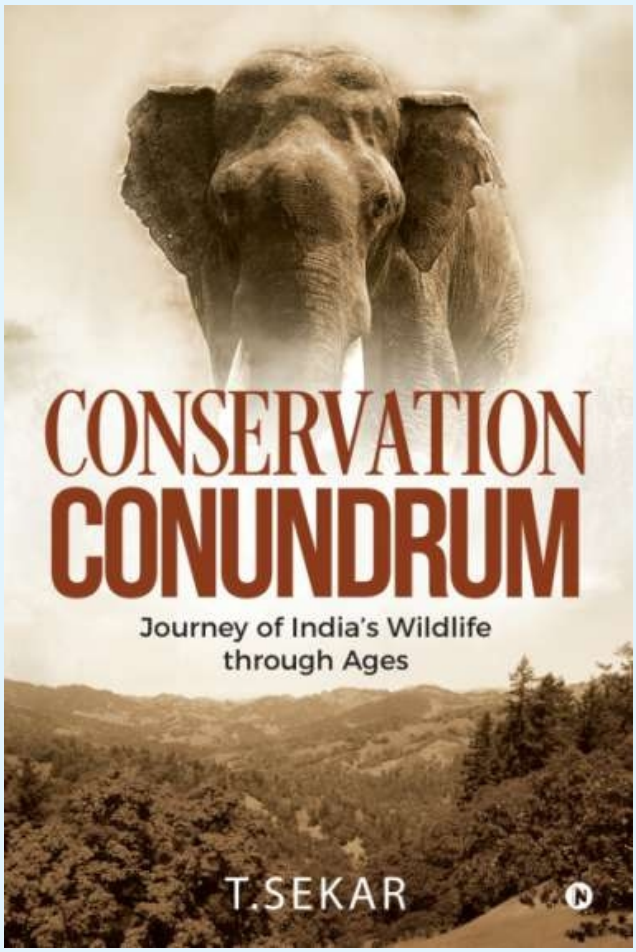
In the recent period, few members of TASPEF have penned down their experience in the Forest service in various areas of forest and wildlife management and published them as books, which are available in the publisher dashboard and in different online stores. It has been considered necessary to provide an abstract of the recent publications by the members so that the other members will get an idea of such creations. With this idea, a synopsis of the different books published recently are presented in this issue of Namadhu Vanam.

CONSERVATION CONUNDRUM - JOURNEY OF INDIA'S WILDLIFE THROUGH AGES

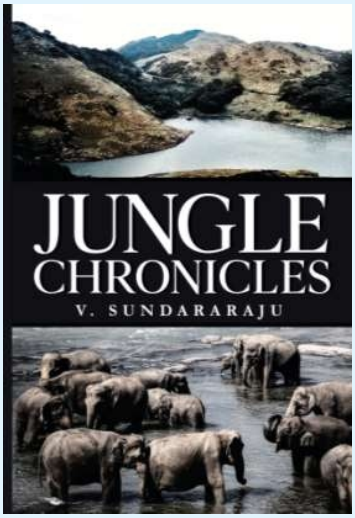
The book titled 'Conservation Conundrum- Journey of India's Wildlife through Ages' and authored by Dr.T.Sekar., IFS (Retd), former Principal Chief Conservator of Forests was published by the Notion Press, Chennai during 2017. The book presents a detailed account of management of India's wildlife during different periods in the historical timeframe. The book throws many questions to the readers: Whether you like to walk through one of the hathivanas maintained by Mauryan king Chandragupta?; Wish to be part of the royal dinner of a Mughal Emperor, with the palate containing a variety of forty meat dishes including venison, quail and partridge?; desirous of having a glimpse of the head on shield and full-mount trophies of tigers and lions, decorating the halls and walls of the military lounges, lavish palaces and royal houses of the British Raj? These were symbols of the diverse treatment- mythological, ethical, and diabolical- meted out to India's wildlife through its journey in the historical past. 'Conservation Conundrum - Journey of India's wildlife through



times' is a pen-picture of the glory and good times, the trials and tribulations, persecution and perturbation of the country's wild animals in its recorded history. The author has captured the theme through a historian's kaleidoscope, where from a period of plenty in the ancient India, animal numbers plummeted to its lowest when the country was into its first two decades of independence. From a situation of no-hope, how most of the iconic wildlife species registered a turnaround and smart recovery in a span of half a century, despite the odds working against them forms the central thread of the treatise. The author takes the reader through the pages in finding an answer to the usual dilemma, as to whether it is human need and interest or the future of the wild denizens that is important to a developing nation like India.

JUNGLE CHRONICLES

"Jungle Chronicles", authored by V.Sundararaju, IFS Retd., narrates his adventurous experiences while he served in the Tamil Nadu Forest Department, over a period of 36 years. Interesting encounters with denizens of the deep forests certainly pique curiosity- the author's first hand experiences are shared in this book and give rise to intriguing questions. What happens to the mammoth marine animals that are caught or stranded? How does the Forest Department tackle a raging forest fire? When an elephant ran amok, how was the pachyderm brought under control? The painstaking efforts by the author to protect the aromatic wood in the Eastern Ghats provide a picturesque view of the events. The book is dedicated to the "Warriors" of the Tamil Nadu Forest Department, who have sacrificed their precious lives to protect the wild, and show the high respect and regard they had for Nature. A deep study of the book will give the feel of having an enjoyable ride along the jungle to the reader. The book may be more useful not only to the forest personnel, but also to the people from different walks of life as the knowledge shared is more suitable for preserving the biodiversity. May the sweet memories what you gain while reading the "Jungle Chronicles" be ever- lingering in your mind. The book has been published by the Notion Press, Chennai.



'உயிர்த்திடும் உலகம்'

மேற்குத்தொடர் மலைக் காடுகள் எவ்வாறு வாழ்வாதாரமாய் விளங்குகின்றன? நீலகிரியின் நீர்த் தேவையை எப்படி சோலைக்காடுகள் நிறைவேற்றுகின்றன? சுனாமி போன்ற இயற்கைப் பேரிடரிலிருந்து எங்கனம் அலையாத்திக்காடுகள் கடற்கரையோரக் கிராமங்களைக் காப்பாற்றுகின்றன? ஈரப்புலங்களை ஏன் பாதுகாக்க வேண்டும்? யானையையே மறைக்கும் மரம்; உலகின் தொன்மையான தேக்கு மரம்; தனது மறைவிற்குப் பின்னும் தான் வளர்த்த மரங்களோடு உறங்கி மகிழும் மாமனிதர்; மரங்களைக் காக்க உயிர்த் தியாகம் செய்த மங்கையர் திலகம்; புலிவாழும் வனங்கள் புரிந்திடும் தூயியல் சேவைகள்; ரயிலில் அடிபட்டு இறக்கும் யானைகளைக் காப்பது எப்படி? வனங்களினூடே வனஉயிர்களுடனான நேர்காணல்; ஊருக்குள் புகுந்த கொம்பன் யானையைக் கட்டுக்குள் கொண்டு வருவது எவ்விதம்? யானைகளுக்கான பயிற்சிப்பள்ளி; வசீகரிக்கும் வண்ணத்துப் பூச்சிகள்; பவளப் பாறைகள் பயக்கும் பயன்கள்; வீட்டையும், சூழலையும் அழகுபடுத்தும் பூ மரங்கள் என்று விலைமதிப்பற்ற களத் தகவல்களை ஓய்வு பெற்ற இந்திய வனப் பணி அலுவலர் வி.சுந்தரராஜு 2017 ஆம் ஆண்டு எழுதிய இந்நூல் தன்வசம் கொண்டுள்ளது. யாரேனும் வனங்களைப் பற்றியும், அதன் மேலாண்மை பற்றியும் தெரிந்து கொள்ள விரும்பினால், வன மேலாண்மை சம்பந்தமான எளிய, சுவாரஸ்யமான, இந்நூல் மிகவும் பயனுள்ளதாக இருக்கும். இந்நூல் படிப்பவரின் உள்ளத்தைத் தூண்டும் விதமாக அமைந்து, எண்ணற்ற இளைஞர்களை அளவற்ற சவால்கள் நிறைந்த வனத்துறையில் சேர்ந்து பணியாற்ற ஊக்குவிப்பதோடு, அவர்களுக்கு ஒரு வழிகாட்டியாகவும் விளங்குகிறது. இயற்கையைப் பாதுகாப்பதில் ஆர்வமுடன் ஈடுபடும் யாவருக்கும் ஓர் உற்ற துணைவனாய் 'உயிர்த்திடும் உலகம்' என்ற இந்நூல் அமைந்துள்ளது. இந்நூல் சென்னை நோஷன் பிரஸ் எனும் பதிப்பகத்தாரால் பிரசுரிக்கப்பட்டுள்ளது.

RANDOM THOUGHTS ON FOREST AND WILDLIFE MANAGEMENT IN SEARCH OF SOLUTION FOR HUMAN - WILDLIFE CONFLICT - A LONG WAY TO GO! - Part 2

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During my Bolampatty forest range training tenure in the beginning of my career in Tamil Nadu Forest department, I found the elephants in that range very calm, not aggressive, even though I had just driven my Bullet motor cycle right in the middle of a herd inadvertently, or when we were on night raids after sandalwood smugglers and resting in the forest in the middle of the night, they had silently bypassed our night raiding party sleeping on the rocky ledges without troubling us. Attacks by elephants on humans were very rare.

What went wrong?

What made these gentle giants Villains of today?

Dear colleagues, yes, we all know the reasons. Shrinking habitats, commercial cultivation of edible horticulture and agricultural crops, poor fodder and water supply in the forests, increased human movement in the habitats for NTFP collection and grazing, blocking of their migratory routes and the list goes on and on. Add to this our elephant proof trenches and electric fences. These human imprints have got the pachyderms confused and irritated.

Now, add the further irritants by us, like what we called the "Dharmapuri method" of driving elephants using large powerful lights. Initially elephants did avoid these lights and returned to forests. But hunger and thirst drove them back to human habitations. Then we invented bursting crackers along with powerful lights. It worked for some time.

Some where around 1999, I visited Jowalagiri forests while working in Foundation for Revitalisation of Local Health Traditions (FRLHT), Bangalore. While interacting with villagers on medicinal plants conservation and development, I heard heavy bursting of crackers accompanied by frenzied shouting by villagers. The villagers who were with me said that elephants have come crop raiding and they too need to join the crowd to chase the elephants. I followed them out of curiosity. Within a short distance of our meeting place, as we entered the ragi fields, we saw the crowd, which was chasing the elephants, come running towards us, shouting elephants are chasing them and that we should return expeditiously. And we ran for our lives. Still, sometimes I can relive those terrifying moments – shouting humans- trumpeting elephants – bursting crackers.

The game had reversed. The Chaser was being chased. Hunter was being hunted. The beginning of the phase where elephants lost their fear of man and his instrumentations. The mighty warriors of countless Indian battle fields and in the Hannibal's Carthaginian army, which defeated Romans, have started to show us how puny and vulnerable we human are.

Man is an egoistic animal. He would not go for truce with the elephants. Instead he has started waging an undeclared war on them. The resulting man – animal competition or conflict has claimed many lives on both the sides.

So, what do we do to mitigate this conflict?

I noticed during my tenure as APCCF (Protection & vigilance) the Valparai experiment on dealing with the elephant intrusion in to human habitats. This experiment had a team of fit tribal youth made more fit by rigorous exercise by Mr. Muniyandi. ex-service man and forester Rapid

action force, Valparai. This team on receipt of the information about elephants' intrusion, they went to the spot, kept close watch on the elephants, ensuring no public got close to them or disturbed them. The elephants were calmly escorted on their own pace. All the time warning people on the groups travel route to keep off and allow the elephants to pass through with out chasing them. This process was time consuming but has reduced human deaths by far and also ensured no revenge killing of the elephants by humans. A system of information sharing on the elephants' movement has been perfected in Valparai by Nature Conservation Foundation. This early warning system has put in place an elephant informant network, which receives and passes on alert messages about the elephants' presence to people in the landscape through mobile phones, with bulk-SMS facility,on daily basis, on the whereabouts of the elephants in the area. The elephants' presence is also communicated as a scroll on the local cable TV channel. Additionally, GSM-based elephant alert red indicator lights are mounted in prominent locations and remotely operated when elephants are within 1 km. These methods have been well received and implemented by the community and are proving to be effective. This methodology can be replicated in forest divisions like Hosur, where the conflict has reached peak proportions.

Methods practiced in Valparai Hills have saved lot of lives and money, which would have been spent as compensation and on fire crackers used to the chase elephants, as being done in many other forest areas with elephants' intrusion. Further, the money saved has been used to generate employment to tribal youth and ensured a well trained additional force in the hands of the local Ranger. This was a win-win strategy. There may be total crop loss to the owner of the land where elephants have camped for a longer period, on their guided trip back to forests at their leisurely pace. The compensation can be easily given to the farmer. The elephants will not get agitated and attack humans in this peaceful drive. Loss of lives can be avoided. Use these additional forces for protection and nursery works during periods when there are no crop raiding elephants to enrich the forests with fodder crops, for fire line maintenance and as eco-guides. Wildlife enthusiasts spend a fortune to go and see elephants in the wild. Use the opportunity to showcase these crop raiding elephants with guided tours using this rapid action force with the co-operation of the farmers and the fee collected can be used as an incentive to the farmers, on whose field the elephants are found grazing. This may sound outlandish and wishful thinking. Many a time, wishful thinking have a way of ending into out of the box thinking, paving way for successful enterprises.

Will the Forest department enlarge the scope of this experiment in to other forest divisions and save lives -both human and elephants?

An electrocuted elephant

SAVED SAKUNTHALAI MALAI, KANNIYAKUMARI DISTRICT

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Sometime during 2009 there was a proposal to construct a dam by the Public Works Department (PWD) across Ulakkai Aruviyaaru which flows from the famous Ulakkai Aruvi waterfalls located in Asambu Reserve Forest (RF) of Kanyakumari Forest Division. I was District Forest officer of the division at that time. This river forms a tributary to Pazhayaru, a historically important river that has been mentioned in the ancient Sangam Tamil literature as 'Pagruzhiyaaru'. According to the historians, over a period of time, the name 'Pagruzhiyaaru' has been modified into 'Pazhayaaru'. The dam was proposed here in order to augment the water supply to Nagercoil town.

Since the river originates and flows through Asambu RF, the PWD requisitioned the Forest Department (FD) to allot 4 hectares of forest land from the RF for that project. As per the Forest Conservation Act, 1980, if portion of any RF is to be diverted for non-forestry purpose, twice the extent of the land is to be given by the concerned department as compensatory land. The only condition is that the land which is proposed as compensatory land should be contiguous to any RF. In addition to this, the fund required for afforestation and for carrying out soil and moisture conservation measures is also to be deposited by the concerned user department with the Forest Department. Once all these conditions are fulfilled, due permission has to be obtained from the Government of India (GOI) or the delegated authority as the case may be. The PWD authorities had requested the Collector and got approval for allotting about 8 hectares of revenue land located close to Velimalai RF. Accordingly, the land identified for compensatory planting was shown to us. Since the land was having many encroachments, it was rejected. Kanyakumari district is known for encroachments. If we accept such area as compensatory land means, the headache of evicting the encroachments will fall on the head of the Forest machinery and it will become a perennial problem. Senior Forest Officers cannot forget the ordeals faced by the Forest personnel while they tried to evict the encroachments in the Jenmam lands of Gudalur taluk of Nilgiris district after accepting the lands from the Revenue Department with the existing encroachments. It is the bounden and foremost duty of the Senior Forest Officers to inform the younger Officers about the intricacies involved in such situations in order to improve their management skills.

The PWD authorities were in constant touch with the Collector for getting a suitable land in order to hand over the same to the Forest Department as the project had to be implemented early as there was acute water scarcity in Nagercoil town. In this situation, one day I and the Collector were discussing certain issues in his chamber. At that time there was a telephonic call from somebody to the Collector. From the way he reacted, I was able to understand that somebody had requested him for some obligation. Once the call is over, he requested me to suggest some way to save Sakunthalai Malai, a revenue poromboke hillock. I thought over it for a while and very immediately suggested to allot that hillock as compensatory land in lieu of 4 hectares of forest land from Asambu RF, which was required by PWD for constructing a dam. I further added that as Sakunthalai Malai is close to Therku Malai West RF (a hill range which runs parallel to Aralvai Mozhi to Kanyakumari road on its Eastern side), there will not be any problem in accepting the hillock. By hearing my suggestion he became very

happy. I was told that a so called educationist who hails from the same district wanted Sakunthalai Malai on lease basis for quarrying as he was in need of stones for forming a private port there. Since that person was having many educational institutions in Chennai and had close contact with the politicians, the Collector was having the apprehension of some political pressure in this matter. As already the people who live close to that hillock and other Environmentalists had raised objection and sent petitions to the District Forest Officer (DFO) and the Collector, it was decided not to allow any quarry there. So, immediately he called the Revenue Divisional Officer (RDO) and the Thasildar concerned and discussed the matter in detail. As most part of Sakunthalai Malai has rocky outcrops, it was decided to allot 20 hectares to Forest Department retaining about 10 hectares with the Revenue Department as they may require the same for future development.

The Divisional Engineer (DE), PWD was informed immediately. As seven copies of proposal had to be prepared with necessary maps of RF and the compensatory land along with other details for submission to the GOI after signing them by the Collector, the DFO and the PWD Engineer, the Revenue authorities and the PWD Engineers were requested by the Collector to assist me in preparing the same for early submission. Sakunthalai Malai also was inspected jointly by the Revenue authorities, PWD Engineers and the DFO. After the field inspection, all the three department officials sat together tightly and prepared all the maps and filled up the forms meant for the same. That day evening itself, seven copies of maps and the forms after duly signed by the DFO and the PWD Engineer were submitted to the Collector for approving and submitting to the GOI through the Principal Chief Conservator of Forests and the State Government.

As the list of the standing trees had been prepared and the value also had already been assessed, it was easy for us to fill up the forms. At that time there was an able and devoted person in the District Forest Office who had thorough knowledge about the encroachments and the various court cases that were pending with different courts. He was none other than Mr. Harihara Iyer, a retired Inspector of Survey. He was working in the department for more than two decades. He was engaged temporarily to assist the DFO, the Draughting section and the Lease Assistant in preparing counter affidavits for court cases, in evicting the encroachments and in preparation of proposal for recommending quarry, papers under Hill Area Conservation Authority (HACA), etc. He was of great help in preparing the forms and maps which are to be submitted to the GOI. Even at the age of 78, he used to accompany us to the field for verification of the boundary and permanent marks of cairns of various RFs. He was more thorough with the boundary and cairn marks than the beat and the section staff. In the same way he was more thorough with the case files. Once a while I was travelling to Chennai to attend a meeting pertaining to pending court cases, when I discussed with him, without any file, he was able to share details about different cases. Recently he passed away and his absence is really a great loss to the department. Many times, the Collector was seeking his help while signing the counter affidavits related to forest cases in which he was the first respondent.

The Collector signed all the copies of the forms and the maps and the same was submitted that day itself to the Government of India. Fortunately the next day I happened to be with the Collector in his chamber. When there was a telephonic call, he replied that the said hillock had been proposed as compensatory land to the Forest Department in

lieu of the forest land required by the PWD for construction of a dam and the file had already been submitted to the GOI a week back. He added further that as the file had been submitted to the GOI, nothing could be done at that stage. By hearing his convincing words, the Officer could not say anything further. Subsequently, I was told that the person who spoke to the Collector regarding the quarry lease was none other than the top most Officer of the Government of Tamil Nadu. It was evident that as the Collector expected this kind of heavy pressure from the higher ups, he was in a hurry in submitting the proposal to the GOI.

Thus, Sakunthalai Malai, a hillock located contiguous to the Therku Malai West RF was saved by our diligence and timely action. By way of saving the hill, we were able to help the district as a whole to enjoy the valuable ecosystem services for ever. Once in a while there was some discussion about the incident, Mr. Harihara Iyer recollected the sincere efforts of like-minded Officers in overcoming a crisis in saving one of the precious natural resources in the district. The task was able to be achieved only because of the sincere and earnest team work of like-minded Officers. When such Officers with optimistic ideas happened to work together, this kind of challenge could be overcome easily. That too when it is towards conservation of any natural resource, it is a great pleasure to carry out such activities enthusiastically and earnestly as humans are also part and parcel of Nature.

View of Therkumalai West Reserved Forest from different points

SEARCHING FOR BIOMIMICRY APPLICATIONS (PART – II)

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In continuation of my first article on biomimicry, I wish to extend the subject further here. Hope the introduction given in the first article may suffice justifying the importance of biomimicry application. Millions of years of evolution made many wonders, many of which, we can't easily replicate. Recently, I read in a news paper that our Indian scientist succeeded to replicate Carbon fixing capacity of the plants during photosynthesis process. This is one of the very complicated chemical processes that was achieved by the plants over a million years of evolutionary process. If this could be achieved by human knowledge, then, the energy problem along with pollution problem could be easily solved. But, that is not that much easy. Although it is a very common process by any plant with chlorophyll, for the human being it is the toughest process to replicate. However, there are so many other behaviours of animals that could be easily replicated if found useful to us.

I wish to share two recent marvelous technological findings that were derived from biomimicry application of animal behaviour and functional morphology of the animals. One is from Kingfisher bird and another is from whales.

1. Functional morphology of the Kingfisher's beak and head solved a highly challenging technical problem in the structure of the fast running Bullet train in Japan.

In Japan, they have these very fast bullet trains. They were getting so fast that the typical bullet shape was causing a loud booming sound when these trains would exit typical train tunnels. And the reason this booming was happening, they discovered, is that this cushion of air was building up in front of that speeding train, going at a speed of say 300 kilometers an hour. The sound was waking up people who lived nearby. It disturbed the wildlife too. The sound was so high to the extent that they even damage the tunnel wall to crack. A marvelous finding on the structure of the beak and head of the Kingfisher bird by a bird watcher scientist solved the problem connected with the bullet train's front face structure.

The kingfisher bird dives into the water although very fast it is very smooth and without much flash. The scientist thought that the structure of the beak and head is so aerodynamically designed, that they do not create flash effect. When they modified the front face design of the bullet train similar to kingfisher birds beak structure, to their surprise, the splash effect created by wind was highly reduced to the extent that it not only saved the energy consumption but also the solved the problem of booming effect. What a scientific marvel the simple beak structure has in it! (refer Figure 1).

Fig 1: Front face of the Bullet train designed by mimicking the Kingfisher's head and beak

2. Application of Bio-inspired technology in designing energy efficient wind energy turbine blades, derived from the tubercles of Humpback whales' flippers

Humpback whales are extremely agile swimmers, using their mobile flippers to bank and turn to

catch their prey. Surprisingly their flippers are clearly not smooth, being covered along the leading edge with bumps called tubercles. Scientist found that the functional morphology of these tubercles gave the flipper more lift and less drag, while allowing the angle of attack to be increased by 40 per cent before stalling occurred.

Scientists tried this aero-dynamics to solve the stalling problem of the wind energy turbine wings when the wind speed is lowered naturally. In order to run the turbine at low wind speed, additional coal energy is being used to keep the wind power on continuous operation. It is calculated that for every 200 megawatts of wind power, at least 100 megawatts of coal power is needed to fill in the gaps when wind power is not sufficient.

Now, the bio-inspired technology from humpback whales came to the rescue of the scientist. They copied the structural morphology of the flippers tubercle and applied the same in structuring the turbine blades. Modeling has shown that adding bumps to the leading edge of turbine blades directly addresses the stalling problems described above (Figure 2).

Fig 2. Turbine blades designed like tubercles of the Humpback whales flippers

THRICE BLESSED VANA MAHOTSAVA IN 1950

A.M. Mahmood Hussain, IFS (Retd),
Former Additional Chief Conservator of Forests, Chennai

It is difficult to believe – but it is nonetheless a fact. One feels desperately short of time and wishes a day had 48 hours. Memories haunt and pin one down to the seat for hours chewing the cud of a long innings. And there is the irrepressible urge to keep abreast of world affairs and the advancing frontiers of knowledge and our own maze of politics. A tall order – where is the time!

To recall the first Vana Mahotsava of July 1950 needs no effort. Kanhiyalal Maneklal Munshi, Union Minister of Food and Agriculture and founder of Bharatiya Vidya Bhavan was the architect and pioneer of one of free India's earliest greening campaigns. It was his aim to give a spiritual colour and thus embed tree planting in peoples' minds in the four corners of India. He had thus chosen the Kanchi Temple campus (Ekambaranathar Temple, I remember) as the southern venue for the inaugural effort. The Chingleput forest division had to organize the planting. It was just a couple of weeks since I joined duty as District Forest Officer in my first division. The Conservator of Forests of Salem circle Thiru. S.R.Rao, IFS, myself and the staff were in attendance. The function of planting container plants by the Honourable Minister and others went off smoothly.

My Conservator of Forests was keen on a second Vana Mahotsava celebration and chose to fix the Honourable Minister for Forests in the Madras Cabinet, Thiru. Neelam.Sanjeeva Reddy for inaugurating the planting in Mannur RF (about 30 miles from Madras) after a few weeks. It was part of the annual planting programme, but the Conservator of Forests felt that it would be alright as a token celebration. Only a few forest staff was present. There was no government vehicles those days with the District Forest Officer and I had to pick the Minister up from his Santhome residence and drive all the way in my Ford Prefect (10 HP) car. Can you imagine the lack of zabardast and banda? Life then was so simple. With barely one year's driving experience, was I not nervous with the ponderous load of the Minister and Conservator of Forests in the back seat? By my side was a peon (who was really an experienced driver). Such sticklers for rules, we were - to feel one can't ask a peon to drive. Fortunately, the traffic in 1950 was only a fraction of today's. And what a relief to be back home safely for lunch after the programme.

I was not too happy. The heart and soul of the campaign was that the message must reach and involve the people. And the way emerged soon enough. With my focused effort and the vigorous cooperation of one Thiru Rajadurai Michael, then Block Development Officer at Thiruvallur (a colleague of mine in student days in the Quit India Movement of 1942), a block of Government land extending over 9 odd acres in Vengathur village of Thiruvallur was identified and the Revenue Department hierarchy steam rolled to align with the cause. The land was allotted to a number of poor local farmers and tree planting inaugurated on Gandhi Jayanthi day (October 2nd, 1950) on the assurance that the land would remain under trees as the principal crop. The kick off public function before the planting was held at Thiruvallur town and was well attended. The Honourable Minister for Forests Thiru N. Sanjeeva Reddy and the Honourble PWD Minister Thiru M.Bhakthavatsalam and Thiru M.Kesavan Unni Nair, IFS., Chief Conservator of Forests of Madras Forest department participated in the function and the tree planting subsequently. Vengathur Village plantation was a pioneer attempt at extension forestry. That pursuit to involve the people in forestry possessed me all through the career and for 15 years after retirement in 1983.

Thirty years after the Vengathur function, I had the privilege of welcoming Thiru Neelam Sanjeeva Reddy again at Dodda betta peak sometime in 1980 or in 1981. He was then the Honourable President of India on official tour. Thiru Sadiq Ali was the Governor of Madras then. I was the Additional Chief Conservator of Forests (Wildlife) at Coimbatore and Thiru. Venkatakrishnan was the Conservator of Forests, Coimbatore circle. What a cavalcade of cars and multitude of personnel!

Visit of Honb'le President of India
Thiru N.Sanjeeva Reddy to the Nilgiris

TAMIL NADU FOREST DEPARTMENT - A STATUS UPDATE

G. Ramprasad
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The Tamil Nadu Forest Department has completed a journey of more than 160 years. Since the formation of the Department in 1856, during the last sixteen decades Forest Department had witnessed many transformations. We all know that Tamil Nadu Forest Department is in the forefront of several new initiatives in the realm of forestry and wildlife. It will be better if we get an update on the current scenario in a nutshell.

Forests in Tamil Nadu

Tamil Nadu has 22,877 sq km of recorded forest area, which amounts to 17.59 per cent of the geographical area of the State. As per the assessment of the Forest Survey of India (India State of Forest Report, 2017), the Forest Cover of the State is 26,281 sq km constituting 20.21% of the State's geographical area. The Forest Cover of the State increased by 73 sq km during the period 2013-15 as per ISFR 2017 vis a vis the revised figure of ISFR 2015. The forest and tree cover of the State now is 30,952 sq km which constitutes 23.80 per cent of the total geographical area of the State as against 33 per cent forest and tree cover to be achieved as mandated in the National Forest Policy, 1988. Among the Southern states, Tamil Nadu contains the maximum number of 9 of the total of 16 major forest types recognized in India by Champion and Seth. Within the major types, 48 sub types of forests are found in Tamil Nadu.

Biodiversity

Tamil Nadu is endowed with rich biodiversity, right from marine coastal systems in the Gulf of Mannar to terrestrial evergreen forests in the Western Ghats. Tamil Nadu shares the Western Ghats with the States of Kerala, Karnataka, Goa, Maharashtra and Gujarat. It shares the Eastern Ghats with the States of Andhra Pradesh and Orissa.

The angiosperm diversity of India includes 17,672 species. With 5,640 species of flowering plants, Tamil Nadu ranks first among the States in the country in angiosperm diversity. It accounts for nearly one-third of the total flora of India. This includes 533 endemic species, 230 red-listed species, 1,559 species of medicinal plants and 260 species of wild relatives of cultivated plants. The gymnosperm diversity of the country covers 64 species, of which four species are indigenous Gymnosperms and the rest are introduced species. The pteridophyte diversity of India includes 1,022 species of which Tamil Nadu has about 184 species. Tamil Nadu's wild plant diversity also includes vast number of bryophytes, lichens, fungi, algae and bacteria. The analysis provided the total number of plants in Polypetalae, Gamopetalae and Monochlamydae to be 1,944, 1,720 and 642, respectively. Distribution of plants in different plant taxa shows there are a total of 4,306 dicots and 1,241 monocots.

Tamil Nadu's faunal biodiversity is equally impressive. Dr. K. Venkataraman of Zoological Survey of India, Chennai has published about 595 species of freshwater faunal, 2,247 species of marine faunal and 1,898 species of terrestrial faunal species in Tamil Nadu. The faunal diversity of the State includes 165 species of fresh water fishes, 76 species of amphibians, 177 species of reptiles, 454 species of birds and 187 species of mammals. According to the CAMP reports, the red-listed species include 126 species of fishes, 56 species of amphibians, 77 species of reptiles, 32 species of birds and 40 species of mammals. The endemic fauna includes 36 species of amphibians, 63 species of reptiles, 17 species of birds and 24 species of mammals. Many faunal species have been included in the various schedules of the Wild

Life Protection Act 1972, considering their endangered status. Schedule I animals include 22 species of mammals, 42 species of birds and 9 species of reptiles. Schedule II includes 13 species of mammals. Schedule III includes 5 species of mammals and Schedule IV includes 5 species of mammals, 367 species of birds, 109 species of reptiles and 23 species of amphibians. Schedule V incorporates 13 species of mammals and 1 species of birds.

Wildlife Management

Tamil Nadu has been pioneer in conservation of wildlife and protected area management. Overall 30.92 per cent (7073 sq km) of the State's forest area is under protected area against the norm of 25 per cent. In all 5 National parks, 15 Wildlife sanctuaries, 15 bird sanctuaries, 2 conservation reserves and 4 Tiger Reserves have been established in the State. The State is having unique distinction of having 3 Biosphere Reserves known for rich and unique biodiversity. The Western Ghats are one of the 25 global hotspots and one of the 3 mega centers of endemism in India. Four Elephant Reserves are located within the landscape of Tamil Nadu.

The State's sincere efforts in establishing range of tiger habitats in Western and Eastern Ghats of Tamil Nadu have resulted in increase of tiger numbers from 163 in 2011 assessment to 229 in 2014. This is as per "Status of Tiger" report jointly published by the National Tiger Conservation Authority and the Wildlife Institute of India in 2015. Mudumalai Tiger Reserve(MTR), Sathyamangalam Tiger Reserve(STR), Annamalai Tiger Reserve(ATR) and Kalakadu-Mundanthurai Tiger Reserve (KMTR) are the four Tiger Reserves in the State presently.The elephant population of the State is estimated to be around 4000.

The compensation / relief (financial assistance) for human death or permanent incapacitation has been increased from Rs. 3 lakh to Rs. 4 lakh. For a major injury, the compensation will be Rs. 59,100. The compensation for crop damage is Rs. 25,000 an acre or the actual, whichever was less. Arignar Anna Zoological Park, Vandalur, Chennai, Children's Park, Guindy Chennai, Amirthi Zoo, Vellore, Kurumbapatti Zoological Park, Salem and Tiruchirappalli Zoo are the 4 recognised Zoos by the Central Zoo Authority of India in the State.

Arignar Anna Zoological Park, (AAZP) Vandalur

The Arignar Anna Zoological Park is located in Vandalur near Chennai spreading over an extent of 602 Ha. Since its establishment, this zoological park has emerged as a successful ex-situ conservation complex and a captive breeding centre for many endangered wildlife species like White Tiger, Lion Tailed Macaque and Nilgiri Langur. This park exhibits 2388 animals, which include 47 species of mammals, 94 species of birds, 34 species of 41 reptiles numbering 175 species of wildlife in all. This zoological park attracts about 25 lakh visitors annually. Online ticketing facility has been introduced during 2017-18.

Biosphere Reserves

Nilgiris Biosphere Reserve (NBR)

The Reserve encompasses 5,520 sq km in the three southern States of which Tamil Nadu's portion is 2537.6 sq km. It forms an almost complete ring around the Nilgiri Plateau. The Tamil Nadu part covers parts of the Nilgiris, Erode and Coimbatore districts. This area is very rich in flora and fauna.

Agasthyamalai Biosphere Reserve

The total area of the Bio-sphere reserve is 3500.36 sq km, out of which 1828 sq km is in Kerala and 1672.36 sq km in Tamil Nadu. The Bio-sphere Reserve covers parts of Tirunelveli and Kanniyakumari districts in Tamil Nadu.

Marine Wildlife Conservation

Gulf of Mannar Biosphere Reserve Trust (GOMBRT)- The Gulf of Mannar Biosphere Reserve Trust's (GOMBRT) activities include research, awareness creation, training programmes and eco-development activities. The Gulf of Mannar Biosphere Reserve, known for its 21 coral rich islands along with coast line from Rameswaram to Thoothukudi was declared as Marine National Park in 1986 by the Government of Tamil Nadu and later in 1989 Government of India declared it as the first Marine Biosphere Reserve of India. With its rich biodiversity of about 4,223 species of flora and fauna, the Reserve is prominent for its coral reefs, sea grass and mangroves. The Gulf of Mannar Biosphere Reserve supports several critically endangered species such as Dugong dugong (sea cow), sharks including whale shark, sea horses, green sea turtles, dolphins, sea cucumbers. The Government of India sanctions funds for this Reserve under two separate schemes viz. Gulf of Mannar Biosphere Reserve and Conservation and Management of coral reefs.

Forest Protection

The forest is vulnerable to damage and destruction due to encroachment, illicit felling of trees, fire, illegal grazing, ganja cultivation and poaching of wildlife. At present, 13 Forest Protection Squads are functioning for the protection of forests, apart from territorial and wildlife staff. 12 Forest Protection Squads are attached to the respective forest circles as a process of decentralization. Besides the Forest Protection Squads, there are 5 Strike Force Squads, 17 Forest Stations, 11 Roving Check Posts and 112 Forest Check Posts to protect the forest and wildlife wealth of the State.

Even though there is increased demand for forest land for various developmental end users, the forest department has ensured minimum diversion of forest lands for any non-forestry purpose. In a long span of more than 37 years, since enactment of Forest Conservation Act 1980, the diversion of Forest areas for non-forestry purpose is only about 5038.80 hectares involving 417 cases

Wetland Conservation

The major mangrove forests in Tamil Nadu are Muthupet (Nagapattinam, Tiruvarur and Thanjavur districts) Pitchavaram (Villupuram district) Ramanad (Ramanathapuram district).The total Wetland area in Tamil Nadu is about 9,02,524 Ha comprising 6.92 per cent of the geographical area of the State. At present there are 15 wetlands which have been notified as wildlife sanctuaries under Wildlife Protection Act, 1972 for protection of wildlife including birds. With a view to secure and protect the wetlands of the State, the Government of Tamil Nadu has formed the State Wetland Authority. Tamil Nadu State Wetland Authority is mandated with the task of policy development, implementing regulatory functions, capacity building, research net working, communications, and awareness and raising funds for wetland management.

Research and Education

The main activities of Research wing are biodiversity studies like, retrieval of Rare, Endangered and Threatened (RET) species, clonal assemblage of important timber species (Teak etc), standardizing clonal technology for important timber and fruit bearing species, assemblage of medicinal plants and their common uses. There are 54 research centers spread over 7 agro 29 climatic zones falling in 32 districts.

The Tamil Nadu Forest Academy, Coimbatore is imparting professional training to the Foresters recruited through Tamil Nadu Forest Uniformed Services Recruitment Committee and Forest Range Officers not only of Tamil Nadu but also of

other States. Forest College at Vaigai Dam also impart training to in-service front line staff like Forest Range Officers, Foresters and Forest Guards for upgrading their professional skills for conservation and protection of biodiversity in Tamil Nadu.

Forestry Extension

Dissemination of information to farmers on tree cultivation is done by 32 Forestry Extension Centres established in each district. The Extension wing has disseminated information to various stakeholders including farmers through training programmes, workshops, field visit and publications. The students and women are sensitized through various programmes and works on biodiversity conservation.

Important Ongoing Schemes

Tamil Nadu Biodiversity Conservation and Greening Project

Japan International Co-operation Agency (JICA)-aided Tamil Nadu Biodiversity Conservation and Greening Project (TBGP) with an outlay of Rs.686 crore is being implemented from 2011-12, which will continue till 2018-19. The project has been instrumental in reducing the threats to the native biodiversity of the State and in enhancing the natural resource base besides improving the capacity of field staff. 5.8 crore seedlings have been planted under Tree Cultivation in Private Lands from the beginning of the project, covering an area of 1.19 lakh hectare farmland benefiting 70,245 farmers.

Massive Tree Planting Programme

A massive tree planting programme has been continuing in the State from 2011-12 onwards with an objective to increase the green cover in the State. Planting and maintenance of 3.99 crore seedlings in the 32 districts throughout Tamil Nadu has been achieved through Massive Tree Planting Programme till 2017-18. During 2017-18, the programme was continued by planting 69 lakh seedlings out of which 64 lakh seedlings were planted by the Rural Development and Panchayat Raj Department and the remaining 5 Lakh by Forest Department under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). The scheme will continue with planting of 70 lakh seedlings during 2018-19.

Raising of Sandal plantations

The scheme of raising of sandal plantations in Reserved Forests in the traditional natural sandal bearing areas of Jawadhi hills, Shervarayan hills, Kolli hills, Pachamalai hills and Chitheri hills for a period of 10 years from 2015-16 to 2024-25 with an outlay of Rs.100 crore is being implemented.

Raising Teak Plantations

The scheme of raising teak plantations over an area of 6,000 ha is being implemented from 2017-18 for 8 years at a total outlay of Rs.52.64 crore, to enhance the tree cover and 36 timber resources of the State.

Rejuvenation of Vaigai and Noyyal Rivers

The scheme of rejuvenation of Vaigai and Noyyal rivers is being implemented from 2017-18 for 3 years at a total outlay of Rs.24.58 37 crore with 95% financial assistance from NABARD. Soil and moisture conservation works and a small component of planting work are carried out under the scheme..

Eco-Restoration of Pallikaranai Marshland

The State Government is committed to protect the Pallikaranai marshland, which is a unique fresh water swamp located within the Chennai Metropolitan area. Conservation Authority of Pallikaranai Marshland has been constituted to monitor all the activities. An area of 690.65 ha is

under the control of Tamil Nadu Forest Department. Restoration activities like habitat improvement, protection, research, monitoring, publicity and awareness has been undertaken under the scheme. The activities will continue from 2018-2019 to 2022-2023 at a cost of Rs.165.68 crore under National Adaptation Fund for Climate Change.

In spite of severe shortage of staff, Tamil Nadu Forest Department is making rapid strides in the field of Forestry and wild life management. As veteran Foresters, it is our bounden duty to extend helping hand to the Department in providing our experience, wisdom and eliciting peoples' cooperation. Let us wish the Forest Department more laurels in future.

GREEN TAMIL NADU IS GREAT TAMIL NADU

Data source: Policy Note of Forest Department for the year 2018-19 and website: www.forests.tn.gov.in

விவசாயம் வளம்பெற வேளாண் காடுகள்

இந்தியாவின் முதுகெலும்பாக விவசாயம் உள்ளது. இந்தியாவில் 60 சதவீதத்துக்கும் அதிகமானோர் நேரடியாகவும் மறைமுகமாகவும் விவசாயம் மற்றும் விவசாயம் சார்ந்த தொழில்களில் ஈடுபட்டு வருகின்றனர். தமிழகத்தின் வேளாண்மைக்கான அடித்தளம் சங்க காலத்திலேயே அமைக்கப்பட்டு அது இன்றளவும் வளர்ந்து அறிவியல் துணை கொண்டு சிறந்து விளங்குகிறது.

கடந்த காலங்களில் விவசாய நிலங்களின் வரப்பு பகுதிகள் மற்றும் தரிசு நிலங்களில் வேம்பு, வாகை, புங்கன், நாவல், பூவரசு போன்ற தழை உர மரங்கள் வளர்த்து பாதுகாத்தனர். மேலும் கால்நடைகளையும் வளர்த்து பயனடைந்தனர். தங்கள் உணவு தேவையான அரிசி, கேழ்வரகு, நிலக்கடலை, எள், காய்கறிகள் போன்ற தேவைகளை தாங்களே உற்பத்தி செய்து தன்னிறைவுடன் வளர்த்து வந்தனர்.

50 வருடங்களுக்கு முன்பு கிராமங்களில் 100 மீட்டருக்கு அப்பால் உள்ள பகுதி தெரியாத அளவில் மரங்கள் வளர்ந்து காணப்பட்டன. ஆனால் தற்பொது 1கீ.மீ தொலைவிற்கும் தெரியும் படி மரங்கள் வெட்டி அப்புறப்படுத்தப்பட்டுள்ளன. அக்காலத்தில் விவசாயிகள் தங்களுக்கு தேவையான உரங்களை கால்நடை கழிவுகள் மூலமாகவும், மரத்தழைகள் மூலமாகவும் பெற்றனர். மேலும் மரங்களில் வசிக்கும் பறவைகள், வண்டுகள், பட்டாம்பூச்சி, தேன் சிட்டு முதலிய உயிரினங்கள் விவசாய பயிர்களை தாக்கும் பூச்சிகளை உண்டு கட்டுப்படுத்தின. மேலும் மகரந்த சேர்க்கைக்கு உதவி செய்து அதிக மகசூல் பெற உதவின.

இயற்கை உரங்களை பயன்படுத்துவதால் மண்ணின் ஈரப்பதம் பாதுகாக்கப்பட்டு நுண்ணுயிர் வளர்ச்சிக்கும், மண்புழு உற்பத்திக்கும் உதவி செய்தது. தற்போது மரங்கள் அழிக்கப்பட்டதாலும், கால்நடை பராமரிப்பு குறைந்துவிட்டதாலும், இயற்கை உரங்களுக்கு பதில் இரசாயன உரங்கள் மற்றும் பூச்சிக்கொல்லிகளை பயன்படுத்தி விவசாயம் செய்வதால் மண்வளம் குறைந்து உற்பத்தி செய்யும் உணவும் தரமற்றதாக கிடைக்கிறது. இதனால் மக்களுக்கு பலவிதமான நோய்கள் வர காரணமாகிறது.

இந்தியா முழுவதும் விவசாயிகள் வருவாய் இழப்பு ஏற்பட்டு, இலட்சக்கணக்கான விவசாயிகள் தற்கொலை செய்து கொள்ளும் நிலைமை ஏற்பட்டுள்ளது. உலகின் கடைசி மனிதன் இருக்கும் வரையும் வயிறு என்று ஒன்று இருக்கும் வரையும், பசி என்ற பிணியும் இருந்தே தீரும். இப்பிணியை தீர்க்க விவசாயம் தவிர வேறு வழியும் இல்லை. எனவே மீண்டும் விவசாயத்தை பழைய நிலைக்கு கொண்டுவர தமிழ்நாடு அரசு வனத்துறை மூலம் அனைத்து மாவட்டங்களிலும் வனவியல் விரிவாக்க மையங்கள் ஏற்படுத்தி விவசாயிகளுக்கு தேவையான தேக்கு, குமிழ், வேம்பு, பலா, நாவல், பூவரசு, வேங்கை, மகாகனி, இலுப்பை போன்ற தரமான மரக்கன்றுகளை உற்பத்தி செய்து இலவசமாக நட்டு தருகின்றனர்.

ஒரு நாடு வளமாக இருக்க மூன்றில் ஒரு பங்கு வனமாக இருக்க வேண்டும் என்பது அறிவியல் விஞ்ஞானிகளின் கருத்தாகும். தமிழ்நாட்டில் 21 சதவீதம் மட்டுமே வனங்களாக உள்ளன. இதை 33 சதவீதமாக மாற்ற வேளாண்மை காடுகள் உற்பத்தி செய்வதன் மூலம்தான் அடையமுடியும்.

வேளாண் காடுகள் மூலம் விவசாயிகள் தங்களுக்கு தேவையான தடி மரங்கள் மற்றும் தழை உரங்கள், கால்நடை தீவனம் முதலியவை பெறுவதுடன் சுற்றுச்சூழலை மேம்படுத்தி விவசாயத்தில் அதிகப்படியான வருவாய் ஈட்ட முடியும். இதனால் தனக்கும் நாட்டிற்கும் நன்மை செய்வதுடன் வருங்காலத்தில் இந்தியா வல்லரசாக உயர உதவ முடியும்.

பிற தொழில் செய்பவரையும் காப்பாற்றுவது உழவர்கள் என்பதால் உலகம் என்ற தேருக்கு அச்சாணி போன்றவர்கள் உழவர்கள் என்பது வள்ளுவர் வாக்கு. எனவே விவசாயம் சிறக்க வேளாண் காடுகள் வளர்ப்போம்.

கே. ஆறுமுகம்
உதவி வனப்பாதுகாவலர் (பணி நிறைவு)

ROBERT STEEL BROWNE - FOREST OFFICER IN NILGIRIS

S. Subbarayalu, IFS (Retd)
Former PCCF

Robert Steel Brown was generally known as 'Quintus' among friends. He completed his forestry training in Edinburgh and reached Madras during 1922. He came to Coimbatore along with his batch mate Hicks for training. In 1947, he came back to United Kingdom as a broken man and died. His daughter Chloe Willing has written about her father-how she was able to write, I will explain here.

Quintus Brown was first posted to Coimbatore, and worked in Mount Stuart and raised teak plantations over 100 acres. He had to stay in a bamboo thatched shed for weeks. Along with, he supervised elephant capturing by pit method. When the pits were ready, the Chief Conservator of Forests (CCF) came and inspected. He was not satisfied, as sufficient pit covering had not been given and in an agitated mood he started moving about the place finding fault. Then there was a crash and the CCF was trapped! His first Division was Coimbatore. Once Wood, the Conservator of Forests was visiting Sathyamangalam and Hasanur area. He describes as to how in his Harley Davidson Army Bike, with his wife Elsie he had to negotiate huge pot holes where his bike used to disappear! He was a happy go lucky Forester. He loved to spend the evenings with his friends. At Nilambur, he arranged for a shoot for the Viceroy, which went according to plan. When he was there Peter Dawson his family friend built the first Iron Bridge at Nedungayam, . Once they were all camping there, Dawson went for a swim in the river never to return. He normally used to jump from the iron bridge for a dive in the river but this time it went wrong.

When the Second War broke out, Quintus was enlisted though he was above 40 years. He was Major Brown in the 16th Punjab regiment and did all the hard work in the jungles of Malay Peninsula in 1940. During 1942 Quintus became a prisoner of War; the Japanese packed him into a railway wagon and sent him to Chungkai Jungle Camp in Thailand. The prisoners were British, Australian, and Dutch and for work they were put on "The Death Railway". For every sleeper put in there was one death. They had only Rice to eat and had to clear jungle mostly with bare hands. Cloths were in rags and body skeletal on this condition he wrote home I am now having 'a fine, slim, schoolgirl figure'. As he was very ill the Japanese gave him a grave digger's job. He got some free time now and he explored the possibility of writing. There was a dispensary nearby and he collected some bits of paper and stubs of pencil. Then he started to write about his life in India and the work in Forest Department. Writing is not allowed in such camps; so Quintus did most of the writing in the bath room. When the bits and pieces of paper accumulated he got some clips and straightened them and used the wire to pin them in order. The problem was where to keep them. He hit on the idea of putting the bundle of papers in bottles. He could get bottles from the dispensary. These bottles he closed them as best as he could. Waited till the next body came and when burying, he also placed the bottle and finished the filling of earth. Like this he buried over 50 bottles. In the bottles placed with each body was his story!

The war ended by 1945. With almost no food they marched and by August 15th took a train for Bangkok. The Japanese surrendered. Quintus received a bundle of letters and he came to know that his mother had died two and a half years ago. The food was rice and sweet potato. Finally, early September they were flown to Singapore. So Quintus was alive and free. Out of the 40,000

prisoners about 15,000 had died. After all this he returned to Madras for discharge. He visited Ootacamund where it was the Hunt Week. The hunt ball was on, he entered the hall thin and pale, with all the light and music he was a CONFUSED MAN. The dancers FROZE then silence, have they seen a GHOST?.

Quintus went home on long leave to be with his family. They found him to be a different man. He used to be a happy go lucky man but now he was a quite and moody person. He came back to Madras on promotion and was posted to Mangalore. Then the time came for all of them to leave. Reluctantly, he got back to U K. He shifted from place to place. He was a very disturbed man. He never talked about the War, he mentioned about the bottles with his writings to his wife. In the mean time, the War commission had visited all important camps. They came across the bottles with Quintus's writings, took them all to U. K. Ultimately it was given to Quintus. He left the unopened packets in a box .His daughter says he became very ill and in the Taunton Hospital he became convinced that the nurses were prison guards. What an end. His daughter after years took the papers out and painstakingly read and rearranged them. The friends who were with Quintus helped her to get it published.

The book called 'Message in a Bottle' by Quintus Browne, was published in 2004 by British Empire and Commonwealth Museum Press, Bristol. The book of about 250 pages has been condensed to about 860 words, in the process, I have not been able to bring out in detail the extraordinary and hilarious character of Quintus Browne.