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Special Issue on Forests, Forestry and Forestry Education in India

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EDITORIAL

Forestry Education in India: Forestry is the art, science and practice of studying and managing forests and related natural resources. About 200 years ago there was a very dense forest in India. The changing forest composition and cover can be closely linked to the growth and change of civilizations. Over the years, as man progressed the forest began gradually depleting. The growing population and man's dependence on the forest have been mainly responsible for this. During the early part of the British rule, trees were felled without any thought for export. The first effort towards management of forests by British India was that trees could not be felled without prior permission of the authority. This step was taken to ensure that British were the sole users of the forest trees. But after some time, the British began to regulate and conserve forests. Forest management in India initially started, by men drawn from civil services and army without any forestry education or training. Teak plantations were raised in Nilambur by Collector Mr. Connolly assisted by Chatu Menon an Indian in the year 1840. The acacia and eucalyptus was planted in the Niligiri Hills from 1843 onwards to meet the shortage of fire wood in Ootacamund. Chatu Menon subsequently trained others to create similar plantations in Canara. He was well known as the father of Indian Teak plantations. He raised more than a million teak plants between 1842 and 1862.

In 1864, the British Raj established the Imperial Forest Department and Dietrich Brandis, a German forest officer, was appointed first Inspector General of Forests. He was a botanist

turned forester. The publication of Indian Forester the scientific journal of forestry in India started from the year 1875 with Dr. Schlich as the first honorary editor. The first issue of The Indian Forester was brought out in July 1875, initially as a quarterly and later from January 1883 as a monthly journal. Brandis the father of the Scientific Forestry in India, continued his ground-breaking work of forestry administration and training in India. Brandis visualized, bringing into existence, full-fledged services of scientifically trained officers, and therefore, made proposals for providing trained forest officers to man the forest service in the country.

Initially when Forest Education started in India young people were selected and posted to work in the field for one to two years as apprentice to gain forestry knowledge and then deputed to Roorkee Engineering College or any other Engineering college of India for further one year training to learn Survey, Plotting and laying of Roads. By this time a branch of Forest survey was inaugurated in Dehradun and officers were deputed to this institute for training in survey after working in the field for two years. These systems of trainings were found to be a failure as there was no regular education of Forestry subjects and was given up. By this time Brandis suggested opening of a Forest School in Dehradun for training of foresters.

The first years of scientific forestry in India were dominated by German foresters. Training in Forestry for superior posts was given in Germany and France. In 1867, five candidates

including an Indian, named Framjee Rustomjee Desai, were selected to undergo training in France and two more candidates were sent to Hanover in Germany for training. The period of training suggested by Brandis was two and half years.

Forestry education for the Forest Range Officers commenced, in India in 1878 with Captain Baily as the Director of School which was named as British Imperial Forest School and was established by Dietrich Brandis. There were two courses, one was in English medium for Range Officers, and the other one was in local language for Foresters. In 1938, the old name of School was changed to Indian Forest Rangers College. Training of Forest Range Officers continued at Dehradun but Foresters course was stopped and this was renamed during 1955 as Northern Forest Rangers College, training continued till 1984 when Government of India gave the responsibility of training Forest Range Officers to the State Governments.

In 1912, the Government of Madras started a Forest College at Coimbatore. The College provided training for Rangers in English and was to be run on the same lines as its counterpart at Dehra Dun. To start with, it was housed in Municipal buildings, and then moved into its own buildings in 1915. The College has a fine museum attached to it, known as the Gass Forest Museum. Though initially started by Government of Madras to train Rangers of Madras province, the College subsequently catered to the needs of the Central and South Indian States and Ceylon. After successfully working for over 27 years, it was closed in 1939 for want of adequate number of trainees. From 1912 to 1939, totally 640

Rangers were trained in this college. The College was reopened in 1945 by the Government of Madras. In pursuance of Government's policy of centralizing forestry education, the Government of India took over the College administration on 01-07-1948. On 1st April 1955 its name was changed as the Southern Forest Rangers College. Unfortunately SFRC at Coimbatore was also closed on 1.4.1988. Author is privileged to have undergone training in this institute in 1968-70 course. (For further details please see pages 6 to 8 of Vana Premi November 2016).

These two Ranger Colleges have been recognised as International Centers for Forestry Training by the Food & Agriculture Organization of the United Nations and catered to the needs of the neighboring countries also. Quite a few candidates from Afghanistan, Burma, Ceylon, Ethiopia, Iran, Malaya, Nepal, Sikkim, Bhutan, Thailand, British Guiana, Uganda, Sierra Leone and Ghana have passed through the portals of these two institutions.

The Forest Rangers Training in India is over 140 years old and Forest Range Officers were trained at the following Rangers Colleges by Government of India: Northern Forest Rangers College, Dehradun (Uttaranchal), Southern Forest Rangers College, Coimbatore (Tamil Nadu), Eastern Forest Rangers College, Kurseong (West Bengal), Central Forest Rangers College, Chandrapur (Maharashtra) and Forest Rangers College, Balaghat (Madhya Pradesh). The training of Forest Rangers was decentralized and some more rangers Colleges were opened by State Governments which are Gujarat Forest Rangers College, Rajpipla

(Gujarat), Forestry Training Institute, Haldwani (Uttaranchal), Orissa Forest Rangers College, Angul (Orissa), Forest Rangers College, Jabalpur (Madhya Pradesh), Forest Rangers College, Chikhaldra (Maharashtra), Northern Eastern forest Rangers College, Jalukbari (Assam) and Forest Academy Hyderabad.

Some of the other erstwhile Provinces and Princely States viz, the Provinces of Bengal, Bombay and the Princely States of Mysore and Travancore, also started Ranger's Colleges in their states to train their Range Officers but these were short-lived and subsequently closed. The present FRI was established as Imperial Forest Research Institute, and was a re-established name for Imperial Forest School. Forest Research Institute Dehradun is one of the oldest institutions of its kind and acclaimed the world over. In 1991, it was declared a deemed university by the University Grants Commission. It is established in a lush green estate spread over 450 hectares, with the outer Himalaya forming its back drop. The Institute's main building is with a plinth area of 25000 sq. mtrs, equipped with laboratories, library, herbarium, arboreta, printing press and experimental field areas for conducting forestry research, with the best of its kind anywhere in the world. There are seven museums situated in the main building namely timber museum, minor forest product museum, entomology museum, silviculture museum, social forestry museum and pathology museum.

During World War I forest resources were severely depleted as large quantities of timber were removed to build ships and railway sleepers and to pay for Britain's war efforts. Soon

after the First World War, demand for Forest Officers increased. The Government of India desired that all forestry officers be trained at one Centre. The Governor-General decided to inaugurate the training of Indian Forest Service officers at the Forest Research Institute, Dehradun, from the 1st of November 1926. The Indian Forest College at Dehradun started in 1926 and probationers selected by the Government of India, attended the first course held during 1926-28. The course continued until 1932, when it had to be closed down due to lack of demand for officers. In 1966, again the Indian Forest Service (IFS) was constituted. The first batch of Indian Forest Service probationers together with few foreign trainees from Malawi, Nigeria, Indonesia and Afghanistan was trained in the Indian Forest College, Dehradun in the 1968-70 course. Later in 1987, this college was renamed as Indira Gandhi National Forest Academy (IGNFA) after reorganization of forestry research and training institutions in the country. It is solely dedicated for training of Indian Forest Service Officers. The primary task of the IGNFA is to impart professional initial in-service training to the IFS Probationers and orientation courses to the IFS officers promoted from the State Forest Services.

It is to be mentioned here that a short-lived adjunct to the Indian Forest Service, the Indian Forest Engineering Service was inaugurated as a post-war innovation in 1921 and eighteen officers were trained from various States in 1921-22, mainly to develop the essential requirements of improved forest utilization, such as roads, tramways, ropeways, saw-mills, etc.

After the stoppage of recruitment of IFS officers in 1932, the demand for trained foresters cropped up again and thus Indian Forest College for training Gazetted Officers of forest department (ACF) was born in 1938. The Superior Forest Service officers, recruited from different states, were trained in IFC thus retaining the all India character of the service. The first batch consisted of 16 students of ACF batch, were trained at Dehradun and the College was named as the Indian Forest College which was located in one of the blocks of the main building of the Forest Research Institute. The Superior Forest Service course (ACF) continued in the college up to the year 1975. Consequent upon the constitution of Indian Forest Service with effect from 1.10.1966, the subsequent course for the training of State Forest Service officers in the Indian Forest College was termed as State Forest Service course. The IFS and SFS trainings were conducted together from the inception of All India Services in 1966, and the SFS was closed down in the year 1975. To cope with the increase in demand of trained State Forest Service officers, the first SFS College was started at Burhihat (Assam) in 1976, a second college was started at Coimbatore in January 1980 and subsequently, the third college was started again at Dehradun in May 1981. On 6th August, 2009 all the three State Forest Service colleges at Dehradun, Coimbatore and Burnihat were renamed as Central Academy for State Forest Service (CASFOS). The Directorate of Forest Education was appointed and is responsible for imparting initial in-service training to the SFS officers and

Forest Rangers sponsored by the State Governments and UT Administrations. Besides this, Directorate also organizes induction-training courses for the RFOs promoted to SFS and various short-term refresher courses for the SFS officers, Range Officers, etc.

Forestry training of all cadres includes tours to various types of forests in India for practical training.

Wildlife Institute of India (WII), Dehradun:

The Wildlife Institute of India is an autonomous and internationally acclaimed Institution, established in 1982, under the Ministry of Environment and Forests. The Institute conducts various research projects, academic and training programmes. This institute was accorded autonomy in April 1986. This Institute imparts training to government and non-government personnel, of various durations, to carry out research and advice on matter of conservation and management of wildlife in the country

To train protective staff of the Forest Department all the States of India are having one or two Forest Schools in each State with duration of training from six months to one year, to train their protective staff.

Vana Premi respects, honors and appreciates all the efforts of foresters who worked in India and protected India's forests from beginning till today, and are privileged for being given this significant task of serving the Nature through managing the valuable forest resources of our country. **QMK**

LETTERS TO EDITOR

Dear Sir,

This has a reference to Sri M.P.Reddy's letter to the Editor published in October 2018 issue of your esteemed journal wherein he has found fault to my observations that the FRA approves of allotment of 4 hectares of forest land in situ and that I had called most of the other forest dwellers as pure encroachers in my article 'Of Societies Civil And Otherwise' published in the previous month of the journal. In this connection I wish to clarify as under:-

1. Mine was a response to numerous articles including that of Mr.Reddy's and was not particularly about his article.This has been explained by me right in the beginning of that article.

2. My article was written with an all India perspective keeping in mind the practical aspects of the implementation of FRA in a milieu of 'Bharat' that is India' (pun intended) where 'under actual occupation on the date of implementation of the Act' and 'which shall in no case exceed land of four hectares' occurring in section 4(6) of the Act was bound to be taken as an invitation to encroach at least 4 hectares of forest land and in any case lodge claim of 4 hectares or more of such areas.This is exactly what happened in most of the states where the Act was implemented. People not only encroached more areas but even lodged claims to standing forest if the land in their occupation was less than 4 hectares. Mr.Reddy may like to glance through page 18 of Vana Premi of October 2018 where Dr. A.K. Jha has given some details of implementation of FRA in Yaval Wildlife Sanctuary of Maharashtra. Dr Jha mentions of numerous cases where land in excess of the prescribed limit of 4 hectares was not only claimed but actually settled as well.Thanks to very loose drafting of the FRA, a new set of land mafia called 'Navad Patils' have sprung up to facilitate encroachment and the subsequent lodging of claims and then allotment of such land to the alleged encroachers (page 14 of the same article). There are hundreds of such cases.This was bound to happen when the primary adjudicators are the claimants themselves and their own representatives (not necessarily the elected ones only). .

3. Mr.Reddy himself admits that since 1940 a number of times encroachments were regularized, there is hardly any chance of any of 'the people who had lived for centuries in harmony with the nature' having been left out in these regularization proceedings.Thus .even if by any chance their rights were not recognised during the settlement proceedings for constituting the R.F. by a biased FSO concerned as has been argued by Sri Reddy, the same must have been regularized during the subsequent series of encroachment- regularizations. Consequently those who still remain in unauthorized occupation of forest land must be freshers or pure encroachers.

4. In the light of these revelations there may be no prizes for Sri Reddy's poser " FRA - Who lost and who gained'. Obviously the country lost a big chunk of its forests and the real gainers may be 'Navad Patils' and their like!

S.B.Singh.

Editors Note: further correspondence on this subject will not be entertained.

“MAGNA CARTA” (THE DOCUMENT OF CHARTER ESTABLISHING “RIGHTS”) FOR BAMBOO!

By
Dr. Raghotham Rao

We know pretty well that **one of the gregarious associations which occur in the moist deciduous and dry deciduous forests, as well as in the wet evergreen forests, is bamboo. To consider only the silvicultural treatment of bamboo as an under storey in these forests would hardly do justice to a family which is not only widespread throughout the tropical & subtropical (and even temperate) parts of the world but has such tremendous importance in the everyday lives of so many millions of people.** In many parts of the tropics, and particularly in our continent of Asia, bamboo is considered, next to rice, as the staff of life. To list its almost infinite uses would be to give a catalogue of practically every human need, even cockle warming food in the form of fresh (or preserved) young shoots! It is used in construction of houses, bridges, furniture, fishing poles, water pipes, weapons, bags, baskets, cloth, reinforcement of concrete, and paper manufacture. Consequently, **brushing aside caviling**, the bamboos are treated here in some detail:-

1.Silvical factors:

Pure bamboo forests are found in compact or open clumps, or singly, but usually bamboo forms the under storey of the evergreen, semi-evergreen, moist deciduous and dry deciduous forests of tropical areas.

In most cases, the under storey consists of a single bamboo-species and only rarely more than one species found together. In wet-

evergreen forests of *Dipterocarpus spp.*, *Calophyllum sp.*, *Artocarpus sp.*, one finds the bamboo *Dinochloa sp.*, under *oak, deodar, spruce and silver fir, Arundinaria* is most frequent, whereas under dry deciduous type, *Dendrocalamus sp.*, is most common. Typical of the evergreen, semi-evergreen and moist-deciduous forests in the bordering areas of our country towards East are such bamboo species as *Melocanna bambusoides, Bambusa tulda, B. teres, B. vulgaris, Oxy tenanthera sp., Dendrocalamus hamiltonii, D. longispathas and Melocalamus compactiflora*. Associated non- bamboo species in these forests are *Phyllanthus emblica, Litsea polyantha, Holarrhaena antidysenterica, Pterospermum tetragenum, Grewia spp., Saraca indica, Vitex spp.*, and *Ficus spp.*, Associated with the bamboo *Melocalamus compactiflora* is an important climber *Spatholobus roxburghi*.

2.Succession:

Bamboos are readily colonizing species and when not wanted are difficult to eradicate.

In many parts of our country *Dendrocalamus strictus* is found invading open soil areas and *Oxytenanthera Spp.*, and *Melocalamus Spp.*, is seen to persist in the wet evergreen forests, developing to the climax stage. Following flowering and seeding, the culms of most species wither and die and the stand may regenerate from seedlings which germinate in the succeeding rainy season, or sometimes from new culms sprouting from underground

rhizomes.

Following disturbances such as burning or extensive clear cutting, bamboo regenerates readily by producing new culms from the perennial subsurface rhizomes. *Melocanna bambusoides*, for example, invades clearings where shifting cultivation is practiced, spreads rapidly — thanks to its vigorous rhizome growth — and discourages or suppresses other species of bamboo as well as true tree species. **To obtain natural regeneration of timber species even it becomes necessary to cut the bamboos repeatedly. Discomfort & anguish are the bedrock of strength & courage and only the tenacity, patience & wisdom of nature can teach us that!** Such cutting or maintenance of complete overhead canopy, particularly on unfavorable soils caused the bamboo to deteriorate or to be eliminated altogether.

3. Seed production and establishment:

For the most part, bamboos flower gregariously but sporadic flowering in patches is common, and annual flowering is known to occur in *Arundinaria wightiana*, *Bambusa lineata*, *Ochlandra rhedii*, and in the 'species' of Western Hemisphere. Among the species which flower sporadically are *Dendrocalamu sstrictus*, *D. hamiltonii*, *D. lengispathus*, *D. giganteus*, *Bambus atulda*, *Oxytenanthera spp.*, *Arundinaria* and *Cephalostachyum*. **The ability to predict the year in which flowering will take place would be very useful**, though no authentic data is available about:

- (i) any relation between flowering time and age,
- (ii) any relation to size of clump,
- (iii) any relation to thickness of stem,
- (iv) any relation to soil fertility and moisture,
- (v) any relation to exposure to sun,

- (vi) any relation to climate factors, or
- (vii) any relation to locality differences.

In some Spp., it is known that plants of different ages may flower at the same time.

In the gregariously flowering species, the interval from germination of the seed to the genes of flowering establishes the life cycle, which seems to be fairly constant.

Gregarious flowering takes place in three stages: preliminary sporadic flowering, gregarious flowering and final sporadic flowering, with varying intervals between these stages, according to Troup who recorded the phenomena a hundred years ago. It may occur over small areas or over hundreds of square kilometers. It begins in one locality and spreads in a definite direction, requiring several years to extend over the entire flowering area. When the flowering occurs, the culms retain their leaves in the early stage usually dropping them as flowering proceeds. Flowering occurs usually in December/January and fruits ripen from February to April or in some localities as late as June. Seeds germinate quickly but can be preserved for three months to two years.

As for our country, the failure to produce new culms for one year is held to be a reliable sign of prospective flowering during subsequent year, though this may not be universally true, although observations on clump-forming species point in this direction. Physiological disturbances (caused by injury, cutting, or prolonged hot, dry weather) appear to be possible stimulus to flowering.

4. Stand developments:

The bamboos are of two classes: the most important **clump-forming** bamboos, with peripheral extension from rhizomes (*caespitose*), and bamboos with **single culms**

scattered over a network of rhizomes (*dometose*). The former one, represented by the genera *Bambusa*, *Dendrocalamus* and *Guadua*, is generally tropical and cannot endure freezing temperatures. The latter class, represented by the genera *Arundinaria*, *Phyllostachys* and *Melocanna*, are usually found in temperate regions.

Growth habits of clump-forming Bamboos are well illustrated by the various species of *Dendrocalamus spp.*, which produces a grass-like seedling the first year, after germination. The plumule, which appears as a conical bud (covered by sheathing scaly leaves) develops rapidly into a thin wiry stem (bearing 'single leaves alternating at the nodes), covered by the leaf-base. Fibrous roots form at the base of the young shoot and successive pointed buds appear on the rhizome — these buds form short rhizomes, curving upward to produce an aerial shoot, the process continuing for several years.

Growth habits of the non-clumping group are shown by various species of *Melocanna* which produce laterally spreading rhizomes, running to considerable distances and sending out single culms at varying intervals. Seedlings grow vigorously and form strong culms (becoming quite high in one season) and reaching merchantable condition in four to five years — culm development depending on average thermal conditions.

Fire and grazing are injurious agents: although bamboo is able to recover from burning and some grazing, young seedlings & sprouts (in newly regenerated areas) need to be protected against both. If cutting operations leave too few culms standing, strong

winds may cause serious blow downs and breakage.

5.Silvicultural practices:

These practices are adapted to the genetic features described in the foregoing lines: mature culms are cut, usually on two-to-five-year cutting cycles, regeneration being obtained from the shoots produced annually from new or established culms. Both selection-cutting and clear-cutting are feasible for all species and world areas and for both clump forming and non-clump-forming types.

6.Conclusion:

The gregarious nature and vigorous growth of most bamboos requires that they be considered as an important element in the silvicultural practice of the wet evergreen, the moist deciduous forests. Where the true tree species of these forests are more important for commercial or protection purposes than the bamboo, measures to control latter need to be developed and applied. But **where the requirements for rapidly-grown raw-materials are paramount, then management of natural bamboo-stands, or even propagation & establishment of bamboo-plantations, deserves serious consideration.** In both cases, as indicated in the preceding paragraphs, there is a need for concentrated research in many phases of bamboo silviculture and management, the redeeming feature being education in cony field is the manifestation of perfection already present in man. **This is especially important in view of the rapidly increasing demand for bamboo for numerous uses, and particularly for pulp & paper, as well as housing construction.**

EASTERN U.P.'S FOREST DWELLERS ARE FINALLY ON THE REVENUE MAP

Collected & Sent by K. Padmanabha Reddy

Vantangiyas, who derive their name from a Burmese tradition of hill cultivation, has lived in in shacks without toilets for decades.

There is no proper road to jungle Tinkonia – 3. As its name suggests, one must pass woodland of sal and teak trees to reach it. The situation gets even more precarious during monsoons and medical emergencies, as the village does not have any health centre.

Its infrastructure is ramshackle, with most residents living in mud houses sheltered by tin roofs and with not a single toilet for a population of 3,300 people. Yet there is a sense of renewed hope and excitement in this village, buried in a forest near Gorakhpur in Uttar Pradesh.

In a culmination of decades of extended struggle by its inhabitants Tinkonia is finally being exposed to the benefits of Government schemes and a wider range of employment and utilization of resources previously prohibited by forest laws. Previously a forest-bound village, Tinkonia is among the 23 Vantangiya villages in Gorakhpur and Maharajgunj that have been declared as revenue villages by the Yogi Aditya Nath Government, opening the doors of development in the neglected settlements for the first time since independence.

No facilities:

As the earlier fell under the forest department, these villages and their residents were deprived of basic government schemes and could not even get basic facilities, including BPL cards, Employment guarantee projects, Health care, Education, Electricity connections, Pensions, loans and permanent housing.

After being declared a revenue village by Chief

Minister Aditya Nath as a “Deepavali Gift” last year, it has been electrified with solar connections, seven water tanks and three hand-pumps have been established, and ration cards issued. But a lot still needs to be done for them. “Slowly but sturdily we are getting the rights we were deprived of. I hope that by the end of this month we will have money deposited into our accounts, and get benefits under the housing and toilet scheme. And with the commitment of Yogi Aditya Nathji, I am sure even the kutcha road will be transformed”, said Ram Ganesh the mukhiya or headman.

He stands outside the shed like structure of the Vidya Peeth, run by the Guru Goraksh Seva Sansthan, the only source of education in the village for several years.

At a distance, scores of villagers have gathered under a tree with documents as they fulfill formalities to qualify to get new houses under the Government scheme. However, Chandrajeeth an elder, Vantangiya, as these villagers are known, says, “the biggest respite is that since last year, the forest officials no longer threaten to evict us from here”.

His relief underlines the Vantangiyas’ long struggle to gain ownership rights over land and permanent settlement in the state. As estimated 50,000, Vantangiyas live in U.P.

‘Tangiya’ is a distortion of the word for the Burmese technique of shifting hill plantation, Taungya, under which the space between the planted trees was used for growing seasonal crops by the laborers. Inspired by the Burmese, this was introduced to U.P. by the British around 1922 to offset the huge loss of trees due to

expansion of the railways. Landless laborers, mostly from backward and Dalit castes, were deployed in these forests as settlers, earning them the name Vantangiya. For their services, the laborers were allowed to keep the produce of the crops but endured a nomadic existence as they had to shift from one location to another after every four years and did not enjoy any land rights.

“The Vantangiyas have a special way of planting trees. They would dig gullies that were 18 inches deep and 14 inches wide, and divided the plantation into 3 sections”, said Parmatma Nishad, the mukhiya of Chilbilwa, the second of the five Vantangiya villages in Gorakhpur.

Caretakers banished:

The Vantangiya system continued after 1947 but in the 1980s, after the Forest Co-operation took shape, the forest working planning was scraped and the Vantangiyas were served eviction notices and asked to give up all claims to the forest. Once known for nurturing the forests, they were now branded encroachers.

“While some agreed to sign the eviction notices, others did not and protested, to which the forest department retaliated with oppression. The Vantangiyas were raided, their huts set on fire, crops trampled by tractors and many of them arrested for violating forest laws”, said Vinod Tiwari, an activist.

Parmatma recalls how in 1985 the conflict reached a peak after two protesting Vantangiyas were shot dead and 28 injured, following which 9 forest officials were convicted. The Vantangiyas then got a stay from the High Court and gradually started organizing themselves for citizen rights. Manoj Singh, a senior scribe in Gorakhpur, says they got their voting rights in 1995. But this was only for the Lok Sabha and Assembly polls. They still had no rights in their own villages.

Helped by FRA

Their claims to land was bolstered by the Forest Rights Act, 2006 and in 2011, when the BSP was in power, the Vantangiyas for the first time, received land titles, getting their share of rights on forest land. “But we could not still build any permanent structures and forest officials did not stop harassing us. The biggest problem we faced for long was that we could not get our caste certificates. That deprived us of a permanent identity”, says Parmatma.

In 2015, after another sustained movement, the Vantangiyas earned the right to participate in the Panchayat elections but only as voters attached to other Gram Panchayats. Though they still did not have an independent village identity, this was a historic movement. “Two of the Vantangiyas even won”, recalls Manoj Singh. The scribe, who has tracked the Vantangiya movement closely, says the conversion into revenue village has finally opened the doors of development. “Even after independence they were not counted in any schemes or given caste certificates. Two full generations were deprived of basic rights”, said Mr. M. Singh.

“The Vantangiyas are good at fishing but were prohibited from using ponds near their settlements. The Forest department sold the fish, while the Vantangiyas had to purchase fish coming from other states”, he said.

At a review earlier this month C.M. Aditya Nath instructed officials to speed up the development work.

Bringing Vantangiyas into the mainstream is a priority for Mr. Aditya Nath, said Commissioner of Gorakhpur Division Amit Gupta. The process of identifying beneficiaries and carrying out development in these villages was on at a fast pace. Mr. Gupta said since the settlements were declared revenue villages, over 6,000 houses and 8,000 ration cards had been issued.

The Hindu, dated 23rd September, 2018

WILDLIFE WEEK AND ZOO DAY CELEBRATED

The 64th *Vanya Prani Saptah* combined with 55th Zoo Day and presentation of KVS Babu Memorial Awards was celebrated on October 06, 2018 at Nehru Zoological Park (NZP). The occasion was utilized for celebration of 50th anniversary of Toy Train. This train was donated by Bharat Heavy Electricals Ltd. (BHEL). Sri Uday Kumar Executive Director and Ashok Barad General Manager (M &A), representing the BHEL, graced the occasion by their participation. The Toy Train was decked up with flowers and it was a feast to the eyes. The Zoo Officials happily released a new born Squirrel Monkey and Hyena. The highlight of the programme was to celebrate the 80th Birth Day of the grand old elephant, RANI, donated by the Nizam of Hyderabad. The Animal Keepers and others were jubilant in singing Happy Birth Day to Rani and cutting a cake.

At the main function Sri Sidhanand Kukrety, Adl. PCCF & Director, NZP read out his message, after the Curator, NZP Smt. Kshitija welcomed the guests. Sri Kukrety made a reference to the initiatives taken up to improve animal enclosure maintenance and visitor amenities. There are plans to bring new animals into the zoo. He appreciated the interactive talk shows of the animal keepers with visitors. Sri Munindra and Smt. Sobha, Adl. PCCFs, gave their messages. The

Chief Guest Sri Raghuvveer, elaborately explained the importance of the week-long celebrations of the Vanya Prani Saptah and the need for conservation of wild animals and their habitat. He reminded to the audience the citizens fundamental duty as enshrined in the Constitution of India to protect and improve the natural environment including forests, wild animals and to have compassion to living creatures. The special issue of VANA PREMI published by the Retired Forest Officers Association was released on the occasion. The curator said that the good show was the result of hard work of the zoo workers for the last 10 days.

School children who participated in various competitions held for the occasion were given prizes. KVS Babu Memorial awards were given to Zoo Supervisor K. Mohan, Animal Keeper M. Balraj, Garden Supervisor, Laxman Naik, and Head Gardener K. Ramulu. These awards were initiated out of the Memorial Fund created by Smt. Phani Prasunamba, wife of the late KVS Babu, Prl.CCF and Ex-Officio Secretary to Government of AP. Prizes were given to the Zoo Staff who participated in the games and sports commemorating the Zoo Day. Sri Maqsood, ACF, compeered the proceedings.

K.B.R





Sri N.Sridhar, I.A.S., C&MD, SCCL inaugurating Telanganaku Harithaharam in Singareni



6 years old plantation
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- SCCL contributes 10% of country's total coal production. SCCL achieved the highest ever coal dispatches of 64.6 M.T. during 2017-18.
- SCCL planted 3.72 crores of saplings in 10,932 Hectars of land (up to July 2017)

Rehabilitation of RF land (Non mandated)

- SCCL honoured with "Indira Gandhi Vriksha Mitra Award - 2004", "Teri Corporate Environment Award - 2004", "Golden Peacock Environment Management Award-2005" and "Golden Peacock Innovative Product/ service award -2015" and many more for it's Eco & Environmental friendly mining.
- Sri N.Sridhar I.A.S., C&MD SCCL honoured with "Asia Pacific Enterprenuer Ship Award - 2018" and "Outstanding Leadership Award - 2018".



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WOMEN IN FOREST SERVICE

By

K.B.R. Reddy

"Frailty, thy name is woman". In soliloquy, Hamlet had said these words against the character of his mother. It is a sweeping generalization of misogyny during Shakespearean time. But it does not hold good any longer. In reality it is not so in India and elsewhere; women enjoyed equal status and equal rights in ancient India and in modern society as well. Woman cannot be called *abala* any more; she is *sabala* like any male. The principle of equality is enshrined in Art 14 of the Constitution of India and working women have a right to work with dignity. The women in India have excelled in many fields like sports and games, defense, science, engineering, medicine, ministerial and administrative services. Indian Forest Service and Indian Police service till recently was male bastion but not anymore.

All India Services is the brainchild of Sardar Vallabhbhai Patel. The All India Services Act was enacted by the Parliament in 1951 under Article 312 of the Constitution of India and it was amended in 1953. The Act enabled the Government of India to constitute the All India Services (AIS). In the beginning there existed only two services namely Indian Administrative Service (IAS) and Indian Police Service (IPS). The amendment to the Act enabled the G.O.I. to add another service, viz. Indian Forest Service (IFS) with effect from 1966. Sri Hari Singh, the then Inspector General of Forests (IGF) is instrumental to bring the service into existence.

In the IPS and IFS, men only occupied dominant position. The first woman to join the IPS was Kiran Bedi in 1972. She, as a Police Officer, turned out

to be an officer par excellence. As Police Commissioner of Delhi, she organized seizure of illegally parked vehicles by employing cranes and earned an epithet "Crane Bedi". Her skillful organization of traffic during the Asian Games in 1982 in Delhi is proverbial. It goes to her credit that even the Prime Minister's car was not spared and was booked for breaking the traffic rule. As IGP, she was posted to the Delhi Prisons, where she introduced several reforms which qualified her for winning the Ramon Magsaysay award in 1994. She served as Police Advisor to the UN Secretary General. Dr. Kiran Bedi, as the Lieutenant Governor of Puducherry visited Hyderabad recently and addressed a packed gathering. She said, "Office is management. But the field is creative. In the field there is a chance to learn, appreciate and reward." This is an eye opener to foresters.

Smt. C.S. Ramalakshmi is the first woman IFS officer of AP State belonging to 1980 batch. After passing out from the Indira Gandhi National Forest Academy at Dehra Dun, she held charge of DFO Guntur and Karimnagar divisions; and rose to the rank of Prl.CCF and retired as Commissioner, Sericulture Department.

Smt. R. Sobha is the next woman IFS officer; joined service in 1986 and rose to the rank of Adl.PCCF presently working as such in Aranya Bhavan since 2011. She held charge of Chittoor East division for 4 ½ years. She worked earlier as Sub-DFO in Anantapur district. She successfully performed other duties as Project Director, DRDA, Anantapur District, Joint Secretary and

Adl. Secretary to Government in Finance. & Planning. Dept., and Spl. Secy. AP Pollution Control Board. The next accomplished woman IFS Officer is Smt. C. Suvarna, entered service in 1991 worked in different capacities in natural resource management, national and international organizations, Self Help Groups, Telangana Biodiversity Board. The best part of her career was as the Dir. Forest Academy at Dulapally. She is presently the Commissioner of Fisheries Dept. Notable among other women IFS Officers are: Sunitha M. Bhagwat, A. Soni Bala Devi, Priyanka Varghese, Shivani Dogra performing very well in their respective jobs.

Women entered the State Forest Service in the year 1999. Dr. S.J. Asha, Smt. T. Jyothi and Smt. N. Kshitija are the first entrants. They performed well as ACFs, and DCFs and have good experience of handling important territorial divisions. They are recently promoted to the IFS. Others waiting for promotion are Smt. Sri Lakshmi, Smt. Subhadra etc. I wish them well.

Range Officer is said to be the backbone of forest administration. Women Rangers have to perform the same arduous duties as their male counterparts and I think they are living up to the expectations. Smt. N. Kavitha, M.Sc (Botany), B.Ed., was selected in 2006 and sent for training to Forest College, Kurseong (W. Bengal). She worked as R.O. in the NZP. Later, she was appointed as Research R.O. at Dulapally. The most important part of her career was at Pargi where she worked for about 6 yrs. as R.O. Social Forestry. She is now holding charge of Mankhal Range in RR district. She successfully executed Continuous Peripheral Trenching work on boundaries of 7 Blocks covering 40 kms. There was resistance from the villagers around but she was able to

convince them of the long time benefits. She maintains good public relations by participating meetings in 4 Mandals. Smt. Vamshi Priya, is working as FRO in the Biometrics Branch in the Aranya Bhavan. She attended a course for 3 months in the National Remote Sensing Agency. She likes the job as interesting. Earlier, she worked as FRO in charge of Mahavir Harina Vanasthali National Park for a brief period. She took the Rangers course and passed out from the Telangana State Forest Academy in 2015.

Smt. Bhuma Laxmi Devi is the Dy. R.O. in the NZP. She was appointed as FSO in Hyderabad division in 2004 and worked as such till 2009. She worked as FSO Mothukupalli. She joined NZP about 1 ½ year ago. She has the job satisfaction and is able to perform her duties well. Smt. V. Saroja, was appointed as FSO in Warangal district in 2004. Between 2004 and 2013, she worked as FSO at Kambalpalli, Kesasmudram, and Jamallapalli of Mahabubabad district. Her duties in Aparajpally, Pongondla, Budhraopet, in Gudur and Narsampet Ranges were most challenging and difficult because of hostilities of villagers and nuisance created by Naxalites. She lived through unscathed. She worked for a while in KBR Park and working now in NZP.

The few examples quoted above are a tribute to the women officers. The front line staff at the cutting edge level can hopefully work better if some basic facilities like residential quarters, assistance during patrolling of forests etc are provided to them. Their problems may be ascertained and periodically reviewed by their superiors.

SAND DUNES AND THEIR CONSERVATION

By
V.SANTHASEELA BABU

During our Rangers training in Southern Forest Rangers College, Coimbatore, we had the opportunity of visiting the sand dunes at “**Kuthirai Mozhithere**” in Tirunelveli District (Presently Thoothukudi District) in Tamilnadu.

Sand Dunes appear as life less unproductive mounds of sand either built by water flow or wind velocity. The ingredient of sand is either quartz or silica. It is formed by the erosion of rocks. As the erosion takes place, the consequential material is either moved by wind or water. The sand that is transported by water gets deposited in the river beds and then in the bed of ocean. The loose sand without any binding vegetation on it is moved by the velocity of wind. The sand grains that are being transported by wind get deposited when there is an obstruction like a tree or a rock or some hard substance. Sand dunes are formed at the place where the obstruction is caused. These sand dunes are energetic natural formations that develop, swing and move from place to place. Generally we find the sand dunes in the banks of rivers, coastal belts and deserts.

Where these three variables; 1 Loose sand 2 Wind and 3 Obstacle merge, a sand dune forms. As the wind picks up the sand, sand travels, but generally only about an inch or two above the ground. Wind moves sand in one of the following three ways:

1. Saltation: The sand grains bounce along in the wind. About 95 percent of sand grains move in this manner.

2. Creep: When sand grains collide with other grains — like clay or gravel — causing them to move. Creep accounts for about 4 percent of sand movement.

3. Suspension: Sand grains blow high in the air and then settle. About 1 percent of sand moves this way.

Once it's in motion, sand will continue to move until an obstacle causes it to stop. The heaviest grains settle against the obstacle, and a small ridge or bump forms. Because the obstacle breaks the force of the wind, the lighter grains deposit themselves on the other side of the obstacle. Eventually, the surface facing the wind crests, and the lighter grains of sand cascade down the other side, or the **slip face**. This is how a sand dune may actually move over time — it rolls along, maintaining its shape as it goes.

How and why does a sand dune crest? As the wind moves sand up to the top of the sand pile, the pile becomes so steep it begins to collapse under its own weight, and the sand avalanches down the slip face. The pile stops collapsing when the slip face reaches the right angle of steepness for the dune to remain stable. This angle, which scientists call the **angle of repose**, is usually about 30 to 34 degrees.

After enough sand builds up around an obstacle, the dune itself becomes the obstacle, and it continues to grow. Depending on the speed and direction of the wind and the weight of the local sand, dunes will develop into different shapes and sizes. Stronger winds tend to make

taller dunes; gentler winds tend to spread them out. If the direction of the wind generally is the same over the years, dunes gradually shift in that direction. Any vegetation that crops up will stabilize the dune and prevent it from shifting. The fact that sand dunes migrate is fascinating because it makes them seem alive. But their migration actually threatens local agriculture and towns. In China, for example, sand dunes have been advancing upon some villages at the rate of 65 feet (20 meters) per year. In many cases, fencing will arrest sand dune migration. In some cases, people actually drench the sand with crude oil to stop the movement — not the most environmentally-friendly solution. Migrating dunes may even collide and merge into one large dune. Or they create the illusion of passing through each other.

Types of Sand Dunes:

Sand dunes develop into all shapes and sizes, but that doesn't stop scientists from piling them into generalized categories. By using satellite and aerial photography of the world's deserts, the United States Geological Survey (USGS) has identified five types of sand dunes:

- **Crescentic Dune**, also called the barchand dune, is the most common type of sand dune. As its name suggests, this dune is shaped like a crescent moon with points at each end, and it is usually wider than it is long. Crescentic dunes form when winds blow from one direction. This dune traverses desert surfaces faster than any other type of dune. The migrating dunes in China are crescentic dunes.

- **Linear Dune** is straighter than the crescentic dune with ridges as its prominent feature. Unlike crescentic dunes, linear dunes are

longer than they are wide — in fact some are more than 100 miles (about 160 kilometers) long. The ridges are long and snakelike, and these dunes usually occur in parallel sets separated by other sand, gravel or rocky corridors.

- **Star Dune** has arms that radiate out from a center pyramid-shaped mound, hence the descriptive name. Star dunes grow upward instead of outward and are a result of multidirectional winds. Common to the Sahara Desert, they tend to show up around topographic barriers. They are among the tallest sand dunes on Earth — some star dunes in China are more than 1,600 feet (500 meters) tall.

- **Dome Dune** is rare, oval- or circular-shaped and has no slip face. Dome dunes sometimes appear at the ends of crescentic dunes. Most dome dunes are low — only a few feet high.

- **Parabolic Dune** is U-shaped, but differs from the crescentic dune because its crests point upward, with elongated arms that follow behind. A parabolic dune's trailing arms are typically anchored by vegetation. The longest known parabolic dune has a trailing arm nearly 7.5 miles (12 kilometers) long.

- Coastal sand dunes are a bit different from desert dunes. They form when an accumulation of sand blows inland from the beach. Coastal dunes always form in the predominant wind direction, but their shape and size depends on the shape of the beach. If a beach is shallow-sloped, more sand deposits on the shore, resulting in bigger dunes. On a steep beach, more sand washes back out to sea, and the dunes are smaller. Coastal dunes are a unique

ecosystem, and they help to protect the surrounding area from erosion. Vegetation like dune grass acts as a stabilizer for coastal dunes. Interestingly, scientists have recently confirmed the existence of sand dunes underwater, using advanced sonar equipment. Called **sand waves**, they can reach up to 700 feet (213 meters) long and more than 30 feet (9 meters) high. Changing tidal patterns, sediment and erosion help these underwater dunes to form.

It is a wrong notion that a pile of sand could never support a thriving ecosystem. But sand dunes host countless numbers of organisms. From sweet-smelling flowers to small rodents, many living things have adapted to a life in the sand. Dune vegetation pays back the favor by protecting the dunes from damage.

Stabilization of Sand Dunes: Sand dunes are the most degraded landscapes devoid of any plant life. Their movement from one place to the other, though slow, will cause ecological imbalance. There are instances where fertile agricultural lands have been encroached upon by these sand dunes. They have very low moisture retainable capacity. Obviously, desert and dune plants must be drought-tolerant. Some plants store rainwater in their leaves and stems, while other plants have long root systems that burrow down to the water table. The long roots tend to stabilize and anchor the dunes, preventing them from eroding during a storm. Some of the plants and flowers that grow in sand dunes include: pink sand verbena, white dune evening primrose and yellow sunflower. Shrubs are also well suited for dune life and many animals depend on bushes like *Prosopis species*, (Mesquite) a spiny tree or shrub of the pea family,

native to arid regions of south-western US and Mexico. It yields timber, tanbark, medicinal products, and edible pods. *Larrea species* (Creosote Bush) and *Fagopyrum esculentum* (Buckwheat) for shade and shelter

The sand dunes could be stabilized by selecting highly drought resistant species which possess well developed root system capable of withstanding high temperatures and cool climate. They must be able to regenerate either by root suckers or by coppice. The stabilization of sand dunes can be done by planting locally available planting material in strips as wind brakes with species like *Dalbergia sissoo*, *Azadirachta indica*, *Acacia nilotica*, *Zizyphus mauritiana*, *Albezzia lebbek*, *Parkinsonia* etc, species across the direction of wind and also by taking up planting or seed sowing on the sand dunes with suitable species like *Vachellia tortilis*, *Acacia planifrons*, (Umbrella thorn), *Acacia senegal*, *Prosopis juliflora*, *Tecomella undulata* (Rohida), *Parkinsonia*, *Ailanthus excelsa* etc; and *Ipomeas*, *Bougainvilleas*, *Ocimum bacilicum*, *Agave americana*, *Aloe vera* etc, species as soil binders. Developing of hedges by planting hedge plants like *Euphorbias* or *Jatrophas* also can be taken up. Raising of shelterbelt plantations with *Casuarina* is also one of the methods to arrest drifting of sand.

One year old seedlings must be planted in pits of 0.60 M³ filled with fertile soil. Hardening, of the seedlings have to be done by exposing the seedlings to Sun when the sunlight is low and by increasing it gradually. Planting has to be done immediately on the onset of monsoon when the sand is moist. The seedlings should be planted with the ball of earth going deep in

to the sand leaving a few sets of leaves above the ground to prevent the uprootal of the plant during heavy winds. For shelterbelt plantations with *Casuarinas* at an espacement of 2M X2M and for other broad leaved plants an espacement of 5M X 5M may be adopted.

Fauna in the Sand Dunes: Sand snakes and lizards also make the sand dunes their home. These reptiles burrow rapidly through the sand, an action known as 'Sand Swimming'. Hundreds or even thousands of types of insects also make their habitats in sand dunes. Beetles, moths, wasps, flies, crickets and spiders all live in the sand. Many of these insects prey on each other as well as feed on dune vegetation. Certain rodents also can live in sand dunes and create complicated burrows within the dunes, emerging to feed on the seeds and leaves of dune plants.

-Sea turtles are also important to coastal sand dunes. Many turtles nest in the sand, and their eggs provide valuable nutrients for dune vegetation.

The reason we see "Stay off the Dunes" signs at the beach or a river is because walking around on the dunes can damage the vegetation. And, as we have learned, the long root systems of dune vegetation help to keep the dunes anchored and stable.

Conservation: Because these fragile ecosystems are all dependent on each other, it is important to protect sand dunes. Beaches and sand dunes need each other — beaches need the dune's sand reservoirs in order to replenish after a storm, and dunes need the beach's sand to form in the first place. Coastal sand dunes

suffer from erosion during storms and hurricanes and when humans interfere. Deforestation- also contributes to sand dune erosion because loss of vegetation makes the dunes unstable. As sand dunes lose sand — perhaps from waves reaching them during a particularly strong storm, or because humans disturb their structure — they also lose their ability to absorb storm surges. Dunes can take decades to recover from this sort of destruction. Dune habitats provide niches for highly specialized plants and animals, including numerous rare species and some endangered species. Due to widespread human population expansion, dunes face destruction through land development and recreational usages, as well as alteration to prevent the encroachment of sand onto inhabited areas. Some countries, notably the United States, Australia, Canada, New Zealand, the United Kingdom, Netherlands, and Sri Lanka have developed significant programs of dune protection through the use of sand dune stabilization. In the U.K., a Biodiversity Action Plan has been developed to assess dunes loss and to prevent future dunes destruction.

Singing Sand Dunes: From Nevada to Chile to Morocco — sand dunes are singing. Called booming dunes, these sand dunes emit loud, deep hums that can last for several minutes. Dunes produce these bizarre sounds when very dry sand slides over itself, like an avalanche. We can make it happen by sliding down the slip face of a dune. As the sand begins to vibrate, we will hear the singing. **(Source: Internet.)**

FOREST LAND ESCAPES FROM JAWS OF DEATH

By
A. V. Reddy

This is not a fiction; but it is no less. Hard to believe but it really happened. It is a fact verifiable on record. Kothaguda Reserve Forest land of 274 acres, right in the heart of fast developing Greater Hyderabad Metropolitan City, which was facing certain death in the name of eco-tourism had just started breathing easy – thanks to a local Residential Welfare Association and intervention of Sri K. Chandrasekhara Rao, honorable Chief Minister of newly born Telangana State.

Detailed story will run into several pages. To cut the long story short; the then Andhra Pradesh State Govt. conceived the Eco-tourism project under Public-Private Partnership (PPP) on renewable lease of 33 years to three private investors to develop three components viz. a) Botanical Garden, b) Night Safari & Eco-Park and c) Bird Park. The Andhra Pradesh Forest Development Corporation (APFDC), the State Government Undertaking, was named User Agency with the responsibility to implement the project. Project Proponents were identified and Concession Agreements, heavily loaded in their favor, were promptly concluded. The Central Govt. accorded Stage-1 and Stage-2 Clearances under Forest Conservation Act stipulating certain conditions some of which were subsequently relaxed in favor of the investors. A comprehensive Management Plan prepared by the User Agency was Okayed and recommended by State Government. It received approval from the Central Govt. post haste and thus a Reserve Forest Land of 274 Acres in the midst of fast-

developing prime area of Twin Cities of Hyderabad & Secunderabad was to be lost forever in the name of eco-tourism.

The proposed activities in the Project include raising huge permanent structures to serve as hotels with hundreds of rooms, convention centers, malls, multi-level parking for thousands of vehicles, multiplex theatres with a dozen screens, merchandise shops, bars, restaurants, food courts, ball rooms, spa, card rooms etc. The other facilities proposed include creation of artificial make-believe exotic environment of Polynesian zone, desert zone, rain forest zone, rocky mountain zone, backwater zone etc a with night safari. Needless to say that the project sought to impact the ecology, topography, biodiversity and the environment as a whole affecting the existing forest growth adversely with irreversible damage. The project also provided for introduction of exotic flora and fauna which is antithesis to the very basic principles of ecology. The State and Central Governments and their officials appeared more than willing to accommodate the commercial interests of the investors at the cost of professional ethics and public interest.

There is a residential colony by name *Lumbini SLN Springs* abutting the forest land. When the huge clouds of dust thrown up by the heavy earth moving machinery enveloped their homes and the high decibel sound of the machinery made normal conversations inaudible and the scared fauna like rabbits, peacocks, wild-boars etc ran into their

premises for shelter, it was suddenly a different life in the otherwise peaceful colony. After great deal of effort and making several trips to various offices, they could learn of the project and its details. It was a rude shock for them and it was not difficult for them to realize that should the lung space vanish, it would be a different life for them.

The Residents welfare society could not afford to be a mute spectator. A committed group, of whom this author is one, volunteered to take up the matter, but the going was not easy. Officials in various offices concerned were openly non-cooperative and many a time hostile. It was a struggle on several fronts. Having obtained approval under FC Act, the proponents were sitting pretty with a Management Plan approved by Central Government in hand. We approached several experts, intellectuals, civil societies and environmental activists for help and guidance only to be told that all the permissions were accorded for the project and the process cannot be reversed. It was in this critical period when we were on the verge losing hope and confidence, we were told by a friend to meet Sri J. V. Sharma. We later came to know that the person who took Mr. Sharma's name had worked under him about 45 years ago!

We met Mr. J. V. Sharma, IFS (Retired) at his small MIG Housing Board apartment. Barring a faded old name plate, hardly conspicuous, there was nothing to suggest that a retired Indian Forest Service Officer lived there. The apartment was small and simple. Initially, he appeared hesitant to get involved. He relented only after we assured him to be committed to the cause and prepared to fight till the end and if necessary up

to the highest court. Thus began our campaign to save the forest land. From then onwards, Mr. Sharma has been the guide, strategist, script writer and director, all rolled into one. Our only regret is we did not take care to remember the exact day we met him, for it must be surely the auspicious day for environment.

The campaign so started some time in 2010 had seen several highs and lows since then. The residents' association, *M/s Lmbini SLN Springs Welfare Association*, filed a complaint with Ministry of Environment & Forests (MoEF) who got it enquired through the CCF (Central), Bangalore. Mr. K. S. Reddy, who visited the site and went deep into the matter and submitted a detailed factual report to DGF confirming the concerns of the complainant, The CCF's report was a sort of revelation as well as an eye-opener for the functionaries in MoEF because, as it could be surmised from later correspondence, they never realized till then that they had committed grave error in clearing the project. Evidently to make amends to the callous manner adopted in scrutinizing the project, Sri Jairam Ramesh, then honorable Minister for MoEF addressed a strongly worded DO letter on 10th March 2011 to the AP Chief Minister making it clear that the activities taken up in the name of eco-tourism are objectionable and unacceptable. He also said that they could attract punitive action and cautioned withdrawal of clearances accorded by the Centre. This DO letter was followed by a formal communication to State Government the very next day suspending the approvals accorded.

It will be relevant to mention here that the DGF addressed Forest Departments of all States to

bring it to the notice of the MoEF if any such irregularities took place in their States.

A meeting of the Forest Advisory Committee was held on 6th April 2011 at New Delhi to which we were invited and we made out our case with a power point presentation and supplied voluminous evidence in support. The FAC, after hearing the User Agency also, ordered for initiating action against violations and restitution measures of closing the dug up pits and planting with the onset of monsoon that very year. The FAC again discussed the matter on 21st June 2011 and reiterated the guidelines to be followed.

While we were happy for turn of events in our favor, our adversaries had different intentions. Evidently as a result, the CM talks to Mr. Jairam Ramesh and a high profile delegation from the State visits Delhi to clarify doubts (?) on the project. In the meantime Ms. Jayanthi Natarajan took over as Minister, MoEF. She constituted a special 5-Member Committee to advise the Government on the project despite FAC's opinion on record. It needs to be remembered here that FAC is a statutory body provided in Forest Conservation Act to consider, scrutinize and advise the Central Government about any proposal received for diversion of forest land. In the instant case, the honorable Minister, MoEF sought to hijack the procedure stipulated by law. Mr. M. Kamal Naidu, IFS, a retired forest officer of Andhra Pradesh, known for his bias for the project, was nominated as Chairman while the Vice-Chairman & Managing Director, APFDC (User Agency) who was strongly batting for the project is made the Vice-Chairman. Thus a foolproof arrangement was put in place to

obtain a report for continuation of the otherwise objectionable project.

Our entreaties before the Kamal Naidu Committee proved futile. The Committee report, signed by only two members, strongly recommended for continuation of the project, not on its merits, but because the proponents had already invested, substantial amounts on consultants etc. The Committee defended investors' right to have their pound of flesh thereby justifying commercialization. There were other inconsistencies on facts regarding the standing forest growth, height of trees, soil, topography etc. We obtained the note file of the Ministry under RTI Act wherein we found that the DGF vehemently opposed the project disagreeing with the Committee report. He recommended shelving the project outright as the best option.

About the time the file reached the Minister, a news item appeared in local vernacular paper about the abuse of forest land in the name of eco-tourism. The High Court of AP took *suo moto* cognizance of the matter and issued notices. We filed implead petition in the case and even as we were preparing to argue the case, the Respondent Government told the Court that the Special Committee report is under consideration of the Government. The Court disposed off the matter with directions to Ministry of Environment & Forests to examine the report submitted by the Committee and to take appropriate steps in the matter in accordance with law after considering the pros and cons of the report so filed by the Committee. It was a sort of setback for us in the sense the High Court did not go into legality,

competence and tenability of the Committee itself though we had raised serious objections in that regard in our implead petition. The MoEF, already over solicitous to project proponents, did not lose time to get the Committee recommendations okayed by the FAC and brought the project again on to rails with instructions to modify the project in accordance with Kamal Naidu Committee recommendations and to obtain Environmental Clearance and approval for land use change.

Private investors did not waste any time and approached the Environment Impact Authority (EIA) for Environmental Clearance. Our stiff opposition before the State Environment Appraisal Committee (SEAC) paid off when it recommended rejection of applications. Though we put up a stiff fight before the EIA, it took the unusual recourse to get the matter appraised by an outside committee. However, this development put brakes on further progress of the project.

Taking care to see that no loose ends are left, the Welfare Association has also filed a complaint with the Director General, Vigilance & Enforcement, pointing out omissions and commissions in the project.

The change of Government with the formation of Telangana State was the crucial turn in favor of the forest land. Earlier dispensation which strongly batted for the project was out. Sri K. Chandrasekhara Rao of Telangana Rashtra Samithi, had known about the irregular ecotourism project even when he was out of power and had indeed been kind to address a letter to Ms. Jayanthi Natarajan, Minister, MoEF while he was an MP in opposition requesting

her to drop the project and notify it as a National Park. He stood by his word and now his Government of Telangana State filed an affidavit in the case filed by the Residents Welfare Association informing the High Court that the eco-tourism project is neither in the interest of the State nor of Public. The Kothaguda Reserve Forest land which was considered lost forever has just got the respite with the hope of the project being shelved and the green patch in the concrete jungle will be notified as National Park for the benefit of posterity.

The legal and procedural fight apart, our campaign against the dubious eco-tourism project to save the forest land (also called Botanical Garden locally), has been multi-pronged. From the very initial stage we took care to assiduously cultivate public opinion against the project. Media has been very cooperative and helpful in this regard. Public representatives, cutting across political parties lent their weight to the campaign. Intellectuals and environmental activists actively participated in the agitation. Dharnas were held and protest marches were conducted. No opportunity was lost to make the public aware of the price the City would be paying if the project materializes. The struggle before the environmental bodies was particularly noteworthy. The Lumbini SLN Springs Welfare Association and Walkers Association were in the forefront with day to day guidance from Sri J V Sharma (*Author is a Member of Lumbini SLN Springs and Secretary, Botanical Garden Walkers Association.*)

CAUSES FOR DEPLETION OF WILDLIFE IN INDIA

By
BMT Rajeev

India is one of the world's top twelve *Mega Biodiversity* countries. It is rich in flora as well as in fauna because of its zoogeographical drift from Madagascar about 100 million years and formation of India about 40-50 million years ago and its varied physio-ecological habitats. The diverse flora and fauna of India had the advantage of religious, cultural and aesthetic influence in conservation right from the ancient times. The invasion of India by different dynasties from Arab countries and the Moghuls in medieval age and then the British in 18th century influenced for the change in cultural heritage of Indian people towards forest and wildlife. The advent of *Science and Technology*, industrialization and urbanization in 19th century and the explosion of human population in the 20th century led for the depletion of forests and wildlife in India, to meet the ever growing demand for forest produces and land.

Saga of Indian Culture, Tradition and Heritage: India, inherited a glorious tradition of concern for conservation of all forms of life. The 'Yajur Veda' invokes the universal peace in a poem "Peace of air, peace of earth, peace of water, peace of plants and peace of trees" which reveals the benediction of nature- flora and fauna. Even the *Upanishads*-speculate, the man's spiritual destiny were attained only by retreat to forests for peace and penance "*Aranyakasha*".

In about 600 B.C. Lord Buddha proclaimed "*Ahimsha Paramodharma*" an act of compassion towards animals. The preaching of Buddha on

forests was "*The forest is a peculiar organism of unlimited kindness and benevolence that makes no demand for its sustenance and extends generously the product of its life's activity. It offers protection to all beings, offering shade even to the axe man who destroys it.*"

Pic:Preaching Buddha

Both Buddhism and Jainism preached prudent use of natural resources and non-violence towards nature - flora and fauna equally (Prof.N.S.Ramaswamy)

Consider the measures described in the treatise on statecraft called the "*Artha Shastra*" of Kautilya-321 B.C. the Prime Minister of Chandra Gupta Mourya, where "*Certain forests with game beasts open to all were specially protected. In these protected forests, there were strict supervision and certain mammals and birds were fully protected. If these animals became vicious, they were to be entrapped or killed outside the sanctuary so as not to disturb the rest. The extraction of timber, burning of charcoal, collection of grass, fuel wood and leaves, the cutting of cane and bamboo, trapping of animals for fur, skins and tooth and bone were all totally prohibited. Such forests were called- Abhayaranya*" and some of their measure can claim to be the forerunners of the *National Parks* of the modern era. The history reveals that there was a regular *Forest Department* to administer the forestry and wildlife in the administration of Chandra Gupta Mourya. There were *Reserve*

Forests for king where animals were reserved for the shooting of the king and RFs for the State.

In 242 B.C. Emperor Ashoka's fifth pillar edict gave protection to *fish, animals, birds and forests* throughout his empire. He stopped shooting of animals for recreation after embracing Buddhism. During Gupta Empire, the forests were yielding revenue (629-645 AD). After Gupta Period, India was divided into large number of States ruled by different kings and dynasties between 800-1400 AD. The medieval rulers were warring among themselves for supremacy and indulged in exploitation of forests for revenue and in Shikar-hunting of animals for sports and enjoyment and the forest fires were also common.

With this background of Indian tradition, culture and heritage, let us examine the causes for the depletion of wildlife

1) Decline in Ethics of Traditional Culture and Heritage: The Indian culture and heritage of compassion for flora, fauna and nature were subjected for obscurantist erosion with the change in administration and lifestyle of the people during the invasion of India by many dynasties from Arabian countries; some plundered the richness of the country and some established their own dynasties and ruled India ruthlessly by imposing their own traditions on the natives. The Kings and Rulers in medieval age indulged in Shikars breaking the ethics of compassion towards wildlife.

To quote recorded historical evidences of 17th century AD, the Mughal emperors like Akbar and Jehangir captured about 12,000 wild elephants and trained them to use in warfare; and cheetahs

in hunting of fast moving antelopes. It reveals that the Emperor Jehangir personally hunted 3,203 large mammals between his ages of 12-48 years. The Mughals' approach towards forests was utilization without any comprehensive measures for conservation. The traditional value of compassion for all living being with special love towards fauna of Indian culture gradually changed to the utility value in the medieval age.

2. Advent of British Raj and Firearms: With the fall of Mughal Empire and invasion of India by the British (1858), the feudal lords and kings of India got encouraged by the modern weapons and gave good bye to the Indian heritage of compassion to wild animals. They continued to hunt wild animals as game for pleasure and show of bravery, valour and skill in armory by involving the British ruling class, which became one of the root causes for decline of wildlife in India. There are records to show that mass hunting expeditions were arranged to hunt tigers / lions and well grown tuskers, rhinoceros, bison and even big antlers by using modern guns, torch lights and vehicles in the nineteenth century.

A.A. Dumbur Brander in his book "*Wild animals in Central India*" (1931) has put on records, that the tigers were so numerous; it seemed to be a question as to whether man or tiger would survive.

The assessment of the population of tigers and other co-predators and herbivores in plenty, induced the rulers for hunting unabatedly. The big game hunting was the prime sports of the British ruling class and the Indian Princes in the 19th century and caused for the quick decline of

tigers. To indicate the scale of hunting - one officer shot 98 tigers, 4 leopards and 25 bears in one not weather furlough. The wild animals hunting continued in the 20th century unabated and even rewards were given by the government for destruction of tigers and leopards. *About 9,000 tigers and 27,000 leopards were said to be killed in five years in 1900s in British India.* Some sportsmen even boasted of keeping up an average to a tiger per day for a fortnight, when on shooting leave. Some claimed to have shot thousand tigers in their shooting life. In the early 1930s, one British officer posted in **Kathiawad** (Gujarat) hunted 80 lions during his 3 years stay in Gir forest and another British Officer shot 14 lions in 10 days.

In the British regime, the royal hunters and the men on support used to have pride in taking photographs by laying the shot lion / tiger in front of the row of the hunting party with guns in hand and derive pleasure and pride (*Indian wildlife by Ramesh Bedi, 1984*).

For example - on a day in 1886, five rhinos were shot before lunch by a single shooting party in Cooch Behar; the feat noted thus "*I do not think this record has been beaten*". The **Maharaja of Cooch Bihar** during 1871-1907 AD killed 370 tigers, 208 rhinos, 420 bisons and 324 barasingas. **Maharaja of Kashmir** had a tally of hunting 58,613 wild animals during 1907 -1919 AD and King of Rewa 618 tigers. This hunting spree regime of British till independence and even after independence till restrictions imposed on hunting in 1952 by **Indian Board for Wildlife** (IBWL), destroyed the wealth of magnificent wild animals of India, to the point of no return to the

old legacy in wildlife.

3) The Policy of British Regime: The policy of British Raj was not conducive and not compassionate for the wildlife in India. They were interested only in game - shooting of magnificent animals for pleasure, thrill and trophy. Only a few, like **Lord Curzon - the Viceroy of India**, had vision to realize the decline in population of lions in Gir forest and urged the **Nawab of Junagadh**, to take up protective measure to save lion from extinction, by refusing an offer made to him, to hunt lions in Gir in 1900 AD. **Sir Malcolm Hailey**, the Governor of U.P. also had a vision and encouraged for the conservation of wildlife by declaring Hailey National Park in 1935 (The present **Corbett National Park** of U.P.). Rest of the British rulers never visualized the importance of wildlife and in fact, relentlessly indulged in encouraging killing of wild animals, when they found that, they were vicious to human life and property. To quote a few, they were as follows.

i) *Tigers and leopards* were ordered to be killed and massacred as they were said to be causing danger to human life - as man eaters and as cattle lifters by paying rewards (*India's wildlife and Wildlife Reserves, 1986 by B.Seshadri*).

ii) *Elephants* were ordered to be hunted and slaughtered for ivory and also to keep their population low in 1873 by the Government of Madras Presidency by offering rewards (*Sport in the Nilgiris and in Wynad (1911) by Fletcher*). The high population of elephants was considered vicious for the human property as they were interfering by depredating on crops

and human habitation. This permission for killing elephants induced the unscrupulous marks-men in killing the young and female elephants in hundreds for rewards.

The elephants so disturbed in the indiscriminate hunting spree act of government, started attacking the human in the course of movement on human habitations by instinct of fear, or due to wanton act of many which has left the animal gravely injured, maimed and in pain, turning it into an aggressive beast intent on wrecking vengeance on all members of the same species as its original tormentor; once things have gone to this stage, there is no alternative other than declaring aggressive elephants as rogue. Such '**Rogue**' elephants were shot and killed all over India. The authorized killing of elephants directly and indirectly for ivory by poachers paved the way for the decline in elephant population.

iii) Organized and unchecked **ritual hunting** by certain omnivorous tribal communities of Madhya Pradesh, Orissa, Bihar, Maharashtra and Assam states for meat and trophies, were also causes for the decline of wild animals like ungulates and antlers, the very source of prey animals to the carnivores. Likewise the hunting spree and anti wild animals' policy of British rule has caused irreparable damage to wildlife and their population.

4) Lack of Wildlife Protection Measures: Even though India has inherited the compassion for flora and fauna right from the period of Vedic culture, there was no comprehensive policy or measures promulgated by the rulers till the dawn of modern scientific era i.e. second half of the nineteenth century. The 19th century saw

measures like rules made under the *Indian Forest Act (IFA), 1865* or *State Forest Acts* for regulating hunting, shooting and fishing in Reserve Forests and other specified forest areas, like *Tamil Nadu Preservation of Wild Elephants Act 1878* and supplemented by special Central Acts like *Elephant Preservation Act, 1879*. Then, Acts like the *Wild Birds and Animals Protection Act, 1912*, **Indian Forest Act, 1927** came in to force. *Under the British policies, hunting of wild animals outside the Reserve Forests or Protected Forests was not an offence. Anyone could have killed any number of animals outside the Reserve Forests and Protected Forests at his will and fancy including tiger and elephant. Even in the restricted areas the punishment for the violation was low and negligible.*

In addition to the above policies some States took some special measures to conserve wildlife. E.g.: Declaration of **lion** as protected animal in 1900, establishment of **Bandipur** Wildlife Game Sanctuary in 1931, declaration of **rhino** as protected animal in 1932 in Bengal and constitution of **Gir** Wildlife Sanctuary in 1932. *Amendment to 1912 Act and enactment to Wild Birds and Animals Act, 1935 with provisions to constitute wildlife sanctuaries, for protection and conservation of wild animals and birds.* Constitution of Hailey National Park in U.P. in 1935 etc with limited conservation efforts for some species in a particular region or locality were all the efforts of the British Rule for protection of wildlife in India.

5) World Wars and Independence Movement: The **world wars** I and II and the **independence movement** of India against the

colonial rule were the two issues that were simultaneously affected the administrative fabric of British regime in India. British were preoccupied in mobilizing resources for wars and also in countering the independence movement right from the dawn of 20th century till they left India on 15.08.1947. During this period, vast forests were cleared felled and quality timber extracted for ship building for warfare, railways and also for fuel wood and charcoal for energy etc. Thus, cause shrinkage and degradation of forests and wildlife habitats.

The preoccupation of British in world wars and in internal disturbances gave ample opportunity to the unscrupulous elements to exploit the situation by indulging in smuggling of valuable timber and poaching of magnificent wild animals like tiger, rhinos, elephants, leopards, wild cats, jackals etc for animal articles for trade in the lucrative international market with the advantage of modern weapons reached India during global wars and caused irreparable damage to wildlife resources in India.

6) Post Colonial Era -Dawn of Independence:

In the absence of comprehensive policy to preserve wildlife in the Colonial Regime, "Attempts were made in various provinces to preserve game, mainly in order to ensure the continuance of the sports- big and small game shooting. With the same object in view, an even greater amount of preservation was done by the rulers of many of the Princely States." **Most of the present PAs were the hunting grounds of the erstwhile rulers of the Princely States.** E.g. Bandipur NP, Rajaji NP, Gir WLS, etc.

At the dawn of independence in 1947, however

much of this good work was un-done by the ordinary people who, suddenly realizing that it was now, they, who owned the animals, often went on into the wild places and massacred whatever they could find.

It was five years after independence before Government of India could start to devote time to the task of wildlife preservation; the '**Indian Board for Wildlife**' was constituted in November 1952 (*The Wildlife of India by E.P.Gee-1964*). This period of 5 years after the independence- free for all, gave chance to common man to hunt and massacre the small games for meat and skin /trophies all over India causing depletion of wildlife-our national heritage. The enactment of **Bombay Wild Animals and Birds Protection Act, 1951** was an eye opener to India in wildlife conservation, which influenced to lay down some more restrictions in 1952 through 'Indian Board of Wildlife' for conservation of threatened wildlife species in India. Finally Indian **Wildlife Protection Act, (WPA) 1972** was enacted paving way for complete protection and conservation of wildlife. Lack of authoritative policies for conservation of wildlife, till 1972, led for the decline of wildlife population in India.

7) **Lust of International Trade:** Lust of lucrative money for wild animals' articles like *ivory of elephants, horns of rhinos, fur and skin of tigers, monkeys, leopards, bears, skin of crocodiles, snakes and other antlers and bones of some animals like tigers and feathers of some birds,* lured the unscrupulous people to indulge in indiscriminate poaching of wild animals for trade in **wild animals' articles** in the

international market and had caused for the depletion of their population till a comprehensive Wildlife Act was promulgated in India in 1972.

In spite of the rigid and very powerful policy and rules against poaching of precious animals, the poaching of wild animals is still persisting in India, causing concern on the survival of rare species of wild animals like tiger, rhino, lion, elephant, leopards etc.

For example-Early in the 20th century, European and American countries were the destination for the wild animals' articles trade. Now, China and North-East Asia are the lucrative destinations for trade of tiger parts, ivory of elephants, horns of rhino etc,

8) Degradation of Wildlife Habitats: Habitats have direct bearing on the health and composition of flora and fauna. Any degradation in the quality of wildlife habitats in terms of water, food, shelter, space for movement and safety will adversely affect the wildlife of those habitats. The factors causing degradation of wildlife habitats are many and some of them are as follows (N S Negi, 1993 et.al.)

a) Shrinkage of forest lands or wildlife habitats

: The most dangerous cause for the degradation of wildlife habitats is the *greed of man for land* to expand his habitation i.e. for housing, agriculture and for creation of infrastructures like reservoirs, dams, canals, roads, electricity lines, telephone lines, railways, industries and other institutions like schools, colleges, universities, play grounds, military establishments etc. and for mining.

The explosion of human population and his cattle with the comforts of science and technology has forced the successive

governments right from British Raj to till 1980 i.e. *Forest Conservation Act, 1980* to clear and vacate vast stretches of forests i.e. the wildlife habitats in favour of human beings.

Rehabilitation of immigrants forced from the partition of India in 1947 in to forest areas; large scale clearing of forests and making way for agriculture under grow more food campaign in independent India in 1950s and 1960s, clearance of vast stretches of forests-wildlife habitats for construction of multipurpose or hydel power or irrigation projects and rehabilitation of displaced people of the said projects and location of military establishments etc took heavy toll of vast wildlife habitats. Then the Forest Right Act, 2006 opened a flood gate for the state governments who were waiting since 1980 to fulfill their political agenda to release forest lands for cultivation for landless to release vast forest areas under ST&OTFDRA,2006 causing reduction in wildlife habitats.

b) **Encroachments:** Encroachment of forests is the unlawful greed of the man on wildlife habitats which has forced successive governments to concede vast areas of wildlife habitats, for cultivation till 1980 (F.C.A. 1980) for cultivation and housing. In addition to encroachment, some tribals have contributed for loss of quite a chunk of forests by their habit of shifting cultivation - especially in Madhya Pradesh, U.P, Bihar, Orissa states. A good chunk of forest areas- lakhs of ha encroached earlier to the 1978 has been given up in favour of the encroachers as decided by the popular governments all over India as a prelude to the FCA 1980. Even after the FCA 1980, about 16.20

lakh ha of forests is said to be under encroachment in India (as per news Dec.2008) The tribals have been given with power to decide their right to settle anywhere in the forests with rights over 4 ha of forest that they were cultivating- wildlife habitats other than PA's as per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. About 1.30 million beneficiaries ie 85% of the applicants got right over forests that they were enjoying in the forests. This is the worst disastrous happened to wildlife. In the name of this Act, many encroachers hoodwinked the forest department.

c) Demographic pressure: Advent of science and technology, industrialization and urbanization checked the mortality of human and created a boon of comforts which led for the explosion in human population in India by the middle of 20th century. This rise in human population has also caused for rise in cattle population forcing indiscriminate cattle grazing and penning in forests. Then cutting and removal of timber, fuel wood and NTFP's for bonafide use has silently caused for the opening / depletion of forests making them unfit to be called as wildlife habitats. This is the scene even now in most of the forest areas other than wildlife P.A's in India.

d) Smuggling of forest produce: In addition to authorized exploitation of forest produce by the government and the right holders and unauthorized exploitation by non-right holders for bonafide use, the smuggling of timber, fuel wood and charcoal and other NTFP's by the unscrupulous people has caused for the depletion of wildlife habitats in the past. Now, it

is invisible in most part of the country, since forest wealth itself is limited and alternative to the fuel wood like the electricity, LP gas, gobar gas and Solar energy have made inroad in to the kitchens in rural India. The agricultural residues also have contributed for the reduction in fuel wood demand in rural areas like Coconut in S. India.

e) **Natural causes:** Degradation of wildlife habitats by natural causes like;

(i) **Forest fires:** Forest fires are the worst adversaries responsible for the degradation of forests. Each year thousands of hectares of valuable forests are either damaged or destroyed in summer forest fires. Most of the fires are incendiary fires than the natural causes like lightning, volcanic eruptions and frictional sparks generated by rolling stones or bamboo culms or moving vehicles etc. The wild fires in Protected Areas are getting worst with the passage of time due to accumulation of head wood loads and debris of unpalatable weeds.

(ii) **Invasion by exotic weeds:** Invasion of forest floor by exotic weeds like *Eupatorium spp*, *Lantana camara* and *Parthenium spp*. have made vast stretches of moist forests unfit for wildlife specially herbivores. Other species like *Desmodium spp*, *Indigofera spp*, *Lea spp* etc have also invaded the forest floor making it unfit to bear grasses. The carrying capacity of the PAs in southern states are fast depleting due to these weeds causing concern for the wildlife in terms of fodder, space for movement etc.

(iii) **Disease / Epiphytes:** are also causes for the depletion in quality of wildlife habitats. E.g: Diseases to Sal, Teak, Sandalwood, Eucalyptus,

Chirpine etc. and epiphytes on Goose berry trees (Loranthus).

9) Droughts and Floods or Climatic Effects:

a) Droughts –

Continuous failure of rains for years resulting in drying up of surface water resources for drinking of animals and shortage of fodder for herbivores forces the wild animals for migration to the safety places where they can get sustainable food, water and shelter. In the course of migration the wild animals are subjected for physical harassment and the weak ones will succumb to the hardship and die. The small animals and organisms which cannot cruise long distances for water and which cannot migrate to distant habitats have no alternative other than starve to death. Droughts cause negative and decimating role on the wildlife.

For example: In 1975 Velavadar National Park of Gujarat faced a severe drought during which period, the black bucks were fed by the park authorities. More than 600 black bucks congregated around the forest rest house were fed with food and water. The black bucks became weak during this period and regained their strength on the onset of monsoon. If there were not to be artificial watering and feeding, the black bucks would have decimated in the drought (*India's wildlife by Ramesh Bedi 1984*).

b) Floods - Floods of incessant rainfall or cyclonic rains are devastating even to the wild animals. Cyclonic rains are generally with storms, cause more harm to the wild animals. E.g. More than 923 black bucks died in the Velavadar National Park in 1976 in the floods of cyclonic rains that followed the drought of 1975. Floods of tsunami

are also severe and more fatal to the wild animals.

Even in recent years we have witnessed the toll of wild animals in the Orissa's cyclonic havoc of 2000 A.D. where in, lot of wild animals died in Bittarkannika Wildlife Sanctuary and even in the Nandankanan zoo and the tsunami havoc in Tamil Nadu was a nightmare.

10) Poisoning / Electrocutation of Wild

Animals: Invention of pesticides to eradicate the disease causing pests to plants and rodents harmful to man and poison for other medicinal purpose became handy for the unscrupulous people to poison and kill the wild animals. People living close to the wildlife habitats mercilessly poisoned the kills of tigers, lions and leopards when they preyed on their cattle and killed them. It was said to be rampant before the enforcement of WPA 1972.

Even now, the poisoning of wild animals and birds is common in India. Between 1968-74, eight lions were killed by poisoning in Gir Wildlife Sanctuary (*India's Wildlife by Ramesh Bedi, 1984*).

With the popularization of electricity for lighting and lift irrigation, the farmers have taken the easiest ways to electrocute and kill the wild animals those, depredate in to their farm fields by connecting live current to the wire fence around the farm lands. Electrocutation and killing of elephants/ wild bores is a big problem in the recent days in India- Karnataka and W.B. states.

11) Biological Reality or Lack of Sustainable

Reproduction: Success in evolution is measured in terms of survival and failure by

extinction. The ability of species to adopt themselves to changing environmental conditions varies from one species or even from one race to another according to the particular biological or ecological circumstances. A basic consideration in the balance between the mortality and reproduction, some of the endangered species are handicapped by having a naturally low reproductive rate under optimum conditions may not be of serious disadvantage, but it can have a serious repercussion, if normal reproduction is thwarted by undue disturbance, or by such factors as weakening of a species vitally through fragmentation of the population. This biological phenomenon can cause quite an amount of concern for the depletion of population of wildlife in India with large-scale fragmentation and obscurant disappearance of habitats of wildlife with the passage of time from the dawn of independence in 1947. Creation of corridors for the spread of the genes of wildlife over regions is only the better answer for this problem.

12) Diseases to Wild Animals: Diseases like Rinderpest (R.P), Anthrax, Foot and Mouth (F&M) diseases to ungulates and antlers, Pasteurellosis (*Haemorrhagic septicaemia*), Brucellosis, Rabies, Feline Enteritis, Protozoan diseases, Black-quarter, Tuberculosis are the diseases that affect the wildlife. Some of the diseases have played havoc in wiping out the population of some herbivores. These diseases are communicable diseases of bacterial, viral and parasitic origin that can be transmitted from wild animals to wild animals or from domestic cattle to wild animals. Among all the diseases rinderpest is the

dangerous epidemic that takes a very heavy toll once affected to the bovines - bison and wild buffalo. It is generally transmitted by cattle to wildlife. This epidemic has caused large scale death of gaurs in Bandipur National Park and Mudumalai Wildlife Sanctuary in 1968 and in Bhadra WLS in 1998 when hundreds of bisons were died instantly. This disease also caused large scale death of barasinga and gaurs in Kahn NP in the past.

The seizure of lungs, resulting in death- disease was occurred in 1996 - summer during the pinch period in Bandipur National Park, Mudhumalai WLS and Wynad WLS and took a toll of about 10 elephants including the big ones. This was diagnosed to be caused due to highly polluted and contaminated water in the Protected Areas (P.A's). In the prolonged dry spell of summers most of the water holes go dry and the little water available in some water holes get polluted and contaminated due to the habit of elephants' urination and dropping in to water holes while watering and also due to the habit of dipping in water. When the elephants continued to drink the polluted water, forage the dry and non- succulent fodder and bark in the open Sun in deciduous forests, cause loss of the natural resistance, giving way for their body bacteria-*Staphylococci* to multiply and attack the lungs causing the mighty animal-elephant to fall down and struggle for hours and breathe last (BMT Rajeev-1996).-0-

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MINUTES OF 89TH GENERAL BODY MEETING OF RETIRED FOREST OFFICERS ASSOCIATION OF TELANGANA AND ANDHRA-PRADESH HELD ON 30TH SEPTEMBER 2018 AT ARANYABHAWAN, HYDERABAD.

1. WELCOME ADDRESS:

The Secretary Sri A.V.Govindarajulu, welcomed the Members to this 89th General Body meeting of the Association and requested Sri.S.K.Das, President, Sri.T.NarayanaSwamy, Vice-President, and Sri. Qamar Mohd. Khan, Editor, Vana Premi, to occupy their seats on the Dias. The Agenda for the meeting was placed before the President with a request to preside over the meeting and conduct the proceedings.

2. SHRADHANJALI:

The Secretary informed with regrets that in interim Period between the last General Body Meeting and the present Meeting, Sri. Atal Bihari Vajpayee, BHARAT RATNA, a renowned poet an iconic political leader and Best Parliamentarian who became Prime Minister of India thrice had passed away on 16th August 2018, at the age of 93 years, after illness at AIIMS, Delhi. Further the following officers had died in the above said period on the dates given against each:

S. N.	Name & Designation	Date of Death
1	Sri. K.Vidyasagar IFS Chief Vigilance Officer MDC, Hyderabad	08.09.2018
2.	Sri. G.Devasahayam A.C.F (Retd,)	18.08.2018
3.	Sri. P.Ramaswamy A.C.F (Retd,)	07.09.2018

Sri.K.Buchi Ram Reddy, Senior Member and Permanent Invitee to General Body Meeting, read out Obituary after recalling their contributions during their life time. Members stood up in silence for two minutes as mark of respect to departed souls.

Sri.S.K. Das, President of the Association took up the Agenda and conducted the meeting.

3. ACTION TAKEN REPORT :

The secretary, presented the action taken report on the decisions taken in 88th General Body Meeting held on 24-06-2018 at ArnyaBhawan and the 100th Executive Committee Meeting held on 15-08-2018 at Telangana State Forest Academy, Dulapally, Hyderabad as under:

i .Conducting 89th General Body Meeting of the Association : It was resolved in the Executive Committee Meeting held on 15-08-2018 at Dulapally to conduct General Body Meeting on 23-09-2018 at AranyaBhawan, Hyderabad. Later it was found that the Ganesh Nimajjanam is taking place on 23-09-2018 at nearby Hussain Sagar and the resulting traffic problems to the Members coming to the meeting. In view of this situation, the General Body Meeting to be held on 23-09-2018 is postponed to 30-09-2018 in Consultation with President, Vice-President, Jt.Secretary, Treasurer, Editor, VanaPremi, Auditor and a few Executive Committee Members who attended the Executive Committee Meeting on 15-05-2018.

The Members were informed the postponed date and venue through SMS and Mobile Phone calls. Accordingly the General Body Meeting is held today 30-09-2018.

ii. K.V.S.Babu Memorial Award ceremony at Telangana State Forest Academy, Dulapally, Hyderabad.:

The function of late K.V.S.Babu memorial award was held in Telangana State Forest Academy on 72nd Independence Day, the 15th August 2018. The family members were informed and invited for the function as assured by authorities concerned to the Assn of Retired Forest Officers. Many Officers of the Association including President, Vice-President and office bearers attended the ceremony as special invitees.

iii. Guest lecture in General Body Meeting: As approved in Executive Committee Meeting on 15-08-2018, Sri.C.Achalender Reddy, IFS(AGMUT-1986), Principal Chief conservator and Director (I/C)- Centre for Innovations in Public Systems (an Autonomous centre of ASCI established by Govt of India) was invited for giving Guest lecture in General Body Meeting in September-2018.

iv. Printing of Association Telephone Directory: Final call for detailed information of Association Members was given in June 2018 issue of Vana Premi. A few members had given the details. The Printing will be taken up soon after the compilation of details.

v. Bio-data of Association Members: Members were requested to provide Bio-data through VanaPremi of June 2018 issue. Members are again requested to Kindly co-operate in providing Bio-data early.

vi. Increasing the strength of Executive committee from Seven to Eight: As approved in previous General Body Meeting and Executive Committee Meeting, increasing the strength of Executive Committee from Seven to Eight is put up for Confirmation in the current General Body Meeting.

vii. Sri.B.M.Swamy Das as Executive Committee Member: Executive Committee approved on 15-08-2018 for making Sri.B.M.Swamy Das as Member of Executive Committee and the same is put up for approval of General Body.

viii. Increasing the monthly re-numeration to VanaPremi staff: As approved by the Executive Committee on 15-08-2018 the monthly remuneration to part time staff Sri.B.S.N.Prasad from Rs.5000/- to Rs.6000/- and that of Mr.Anwar from Rs.2000/- to Rs.2500/- is put up for approval of General Body.

4. FELICITATING THE MEMBERS ON ATTAINING AGE OF 75,80,90,and 95 YEARS:

Sri.P.S.Reddy. DCF(Retd)-(DOB-30-09-1932) is felicitated along with his spouse by shawl and Flower Bouquets by President and Vice-President of the Association.

Sri. P.S.Reddy thanked the General Body and recollected his memories in the service of Forest Department.

5. CONFIRMING THE STRENGTH OF EXECUTIVE COMMITTEE:

Increasing the strength of Executive Committee from Seven to Eight is confirmed by General Body and Sri.B.M.Swamy Das is accepted as Executive Committee member from 15-08-2018.

6. RENUMERATION OF STAFF WORKING WITH ASSOCIATION :

As unanimously agreed in the Executive Committee The Proposal to increase the re-numeration of Sri.B.S.N.Prasad from Rs.5000/- to Rs.6000/- and that of Mr.Anwar from Rs.2000/-to Rs. 2500/- is approved by General Body.

7. Talk By SRI.T.NARAYANA SWAMY.VICE-PRESIDENT: Sri.T.NarayanaSwamy talked about latest developments in pension payments.

8. ADDRESS BY SRI.S.K.DAS,PRESIDENT OF THE ASSOCIATION :

The President, Sri.S.K. Das requested Sri. K. Achalender Reddy, IFS, Principal Chief Conservator of Forests and Director, to give Guest Lecture on Innovations in Public Systems.

9. GUEST LECTURE BY SRI.C.ACHALENDER REDDY, IFS.:

Sri. C.AchalenderReddy, IFS. Principal chief Conservator of Forests and Director, Centre for Innovations in Public Systems,gave Power Point Presentation on "Changing Role of Forest Department" (Journey from Timber to Biodiversity). He gave a 'SWOT Analysis' of the Forest Department and expressed that Forest Department has to Change further with Changing times.

He also stressed that Permanent modern nurseries with latest technology have to be established in every District to supply tall seedlings of endangered,local and medicinal trees to farmers at subsidized cost or free of cost to increase the green cover on private lands. Besides, streamlining the permissions for felling and transportation of timber from farm

lands, enforcement mechanism should be strengthened, he added. It was also stressed that we need to manage Biodiversity holistically and make efforts to implement Access and benefit sharing mechanism under the Biological Diversity Act to facilitate Ploughing back to providers certain percentage of profits earned by the users of bio-resources.

At the end of the presentation Sri. C.Achalender Reddy, IFS. And his spouse Smt. C.Reka Reddy were felicitated by Sri. S.K.Das, IFS(Retd), President of the Association and Sri.T.Narayana Swamy, IFS(Retd), Vice-President the Association.

10. VOTE OF THANKS BY SECRETARY :

The Secretary thanked the members who attended the General Body Meeting. He also thanked Sri. C.Achalender Reddy, IFS for his presentation on "Changing Role of Forest Department" in an innovative manner.

Thanks were extended to Sri.K.Govinda Rao and Sri. K.Suryanarayana from Vishakapatnam.A.P. who came all the way for to-day's General Body Meeting.

Sri.Basva Shankar, Sri.K.Pradeep and Sri.A.Kishan were thanked on behalf of Association Members for Hosting lunch and refreshments in General Body Meeting and for orderly arrangements to ladies and aged seniors.

Sri. B.M.Swami Das was thanked particularly for the arrangements done for smooth conduct of General Body Meeting and for assisting the hosts in lunch arrangements.

The Meeting ended with vote of thanks and Members dispersed after the lunch.

Secretary.

Birthday Greetings
We wish the following born on the dates mentioned
" A very Happy Birth Day "

S.No.	Name of the member	D.O.B.		
	Sarva Sri		7.	P.Raghuveer 30-11-1960
			8.	Anoop Singh 01-12-1965
1.	T.P. Thimma Reddy	06-11-1956	9.	D.Bheema 15-11-1967
2.	P.S.Sankar Reddy	09-11-1936	10.	D.V.Reddy 15-11-1964
3.	C.Sivasankara Reddy	10-11-1951	11.	G.Mukund Reddy 16-11-1978
4.	G.K.Reddy	12-11-1931	12.	V.Prabhakar Rao 26-11-1964
5.	K. Prabhakar Rao	01-12-1950	13.	K.Damodar Reddy 28-11-1967
6.	C.Madukar Raj	19-11-1951		
7.	D.Nagagopala Rao	23-11-1952		Secretary
8.	K.Venkat Ramudu	23-11-1948		
9.	K.Murali Krishna Rao	29-11-1940		
10.	P.K. Sharma	01-12-1956		
11.	A.H.Moosvi	05-12-1936		

S.No.	Name of Serving Officers	D.O.B.
1.	Alan Chong Teron	08-11-1976
2.	Elusing Meru	11-11-1965
3.	P.Ram Mohan Rao	15-11-1962
4.	Anand Kumar Jha	25-11-1969
5.	Kanwar Jit Singh	25-11-1959
6.	Sanjeev Kumar Gupta	26-11-1970



CONVOCATION AT TELANGANA STATE FOREST ACADEMY, DULAPALLY HELD ON OCTOBER 1, 2018

Convocation of 18th Batch of FSOs and 25th Batch of FBOs is held on October 1, 2018 at Telangana State Forest Academy. In an impressive Ceremonial Parade, Sri Prudhvi Raju, Prl.CCF (Prod), Chief Guest took the salute. After the welcome address by the Director, Dr. Tirupathaiah in the Auditorium, the Course Directors Sri P. Sagar and Sri P. Anil Kumar presented their respective reports of FSOs Course and FBOs Course. The guests of honour on the dais were Sri Raghuv eer, PCCF (IT & P) who presided and conducted the proceedings; the others are – Sarva Sri Y. Babu Rao, K. Buchiram Reddy, T. Narayan Swamy, Retired Officers and Dr. Sunil S. Hiremath, DFO Khammam.

The course directors read their reports, which reveal that the students in both the courses are taught in several subjects which include Silviculture, Social Forestry, Forest Law and Protection, Forest Botany, Wildlife Management, Information Technology etc. A good number of the students have secured Honours and the remaining passed in Higher Standard. This is an indication of the standard of teaching by the

Faculty of the Academy. 26 medals are awarded among the FSOs, and many of the medals are won by women viz. R. Kavitha, L. Aruna and S. Suchiritha. R. Kavitha is the topper of the batch. In the FBOs batch B. Suresh and M. Mohan won good number of medals, while B. Suresh is the toppers. The highlights of the two courses are: in the FSOs course, there are two post-graduates, 16 graduates, 4 Intermediates and 4 with other qualifications; in FBOs course, there is one post-graduate, 10 graduates, 10 Intermediates, and 10 school final and lesser qualifications. Further, in the FSOs batch against the total strength of 27, there are 4 women; and out of a total strength of 51 in FBOs batch, there are 16 women.

Sri Raghuv eer, Sri Prudhvi Raju and other speakers spoke on the occasion and exhorted the trainees to perform their duties honestly and sincerely to uphold the reputation of their *Alma mater*. Smt. Sunitha, ACD proposed a vote of thanks. The proceedings concluded with mass singing of National Anthem: *jana gana mana adhi nayaka jaya hay..... KBR*

“We are running the most dangerous experiment in History right now, which is to see how much corbondioxide the atmosphere...can handle before there is an environmental catastrophe...” (Elon Musk)



GreenAP Mobile App



- ◆ With a vision to increase green spaces and to improve the quality of life of the people, **Andhra Pradesh** Government has come up with a unique initiative with the support of APG&BC in launching **GreenAP** mobile application.
- ◆ This app helps in bridging the gap between consumers and the vast vendor eco-system across the country who are dealing with green products and services.
- ◆ Consumers will now have access to vendors to procure plants of various kinds including indoor, exotic, lawns, roof top gardens, vertical gardens, etc.
- ◆ With this mobile app they will have access to the products like pot vendors, aquariums, landscape designers and many more.

Salient Features



Vendor Directory



News



Enquiries



Forums



Events

Consumers can select vendors who are closer to their city or town for any purchase by browsing through the hundreds of profiles available in the **GreenAP** mobile app. Consumers can access vendors via WhatsApp, SMS or Phone.



Download **GreenAP** app today!



For more information, please contact our help line number: **+91 7997650835**

WHEN FANS OF THE FIG CAME TOGETHER

By
N. Shiva Kumar

Fascination for this complex plant species has led to enriching research by a team of botanists focussing on the Eastern ghats. When a young botanist and two veterans team up, something unique is bound to happen. And so it was with the trio of Dr JV Sudhakar, his guide Dr GVS Murthy and Dr N Chandra Mohan Reddy, who came together to bring out the only book on Indian figs after Independence.

In the pursuit of this goal, the three of them, who had between them a combined experience of 70 years in Indian flora, faced daunting challenges — travel, photographing, editing, and assembling material for publication on the “Figs of Eastern Ghats, India”, and all this while they held their regular jobs. It took seven years before their glossy handbook emerged, with the financial support of the National Biodiversity Authority. The book has been designed for foresters, researchers, faculties, students, gardeners, landscape architects and even naturalists. But to know how their paths met and they took up research into figs, we need to go back a bit to the past.

‘Medical leader’

Sudhakar grew up in the tiny remote village of Mori, 90 km from Kakinada. While at school,

which was surrounded by jungles, he was often made ‘Medical leader’ to distribute medicines to students and also gather seeds for sowing in the school campus. That was how his interest in Botany was kindled.

After stints as part-time lecturer with private colleges, Sudhakar chanced upon an advertisement by the Staff Selection Commission. He applied for and got the job of Junior Scientific Assistant in the Botanical Survey of India (BSI). He joined the BSI in Coimbatore in 2006.

It was during his tenure at BSI that Sudhakar picked up the challenge of focusing on the “Ficus in India” as research topic for his PhD. His guide was GVS Murthy, then Additional Director of BSI, who motivated him to pursue his passion. Sudhakar started digging data on all relevant Ficus literature from 1753 and also extensively explored tricky terrains like the Eastern Ghats and Andaman islands with the support of his colleagues. He was awarded his PhD in 2014. In the intervening period he had another opportunity in 2010 to apply for a higher post in BSI and was directly recruited as Assistant Botanist.

Sudhakar's insights into figs led him to discover new species for Peninsular India, like *Ficus anamalayana* from Tamil Nadu and *Ficus amplissima* from Karnataka. He deciphered existing taxonomic challenges relating to *Ficus benghalensis* (Banyan tree) and *Ficus krishnae* (Krishna's Butter Cup) and published 20 noteworthy findings in scientific journals.

Room for more Sudhakar and his PhD guide measuring the hollow space inside the massive trunk of a fig tree in the rainforests
N Shiva Kumar

Fortuitously, just when Sudhakar began wishing he could go beyond paper work and earning degrees came the call from N Chandra Mohan Reddy — out of the blue.

Chandra Mohan Reddy, IFS (Indian Forest Service) and Managing Director, AP Urban Greening and Beautification Corporation Limited (APUGBCL) at Vijayawada, also happened to be a fan of the fig and he proposed a collaborative publication on figs. The rest, as they say, is history.

Today, Sudhakar is a happy man on two accounts; he is close to his home town, returning after 12 years to help his ageing parents who had provided him unconditional support during his

early education. The second is, his love for figs has resulted in a book with 150 pages packed with information on Ficus plants that is getting rave reviews.

Sudhakar, who is today stationed at Yanam as Assistant Professor in the department of Botany at SRK Government College, says his future plans are to publish a comprehensive hardback on Indian Ficus with aspects that will remain as permanent reference. Also, he plans to develop a 'Ficus India Group (FIG)' with Ficus enthusiasts to exchange ideas and to develop practical applications with figs of India to benefit all of humanity.

British legacy

Interestingly, a profusion of botanical surveys and innumerable specimen collections took place during the British era in India, new discoveries were made and several botanical gardens were founded to study the natural history of the plants. The most famous is Kolkata's 100-hectare Botanical Gardens created in 1786 and even now home to more than 12,000 species. (The writer is a wildlife enthusiast and photographer based in Noida)

(Please see page no.41 for Photo)

“The question is, are we happy to suppose that our grandchildren may never be able to see an elephant except in picture book.” (David Attenborough)

NEWS AND NOTES

How Chewing On Cardamom (Elachi) Pods May Help Promote Weight Loss: -

Are you on a weight loss diet? We are sure by now you have made a dozen changes to your diet. Weight loss is no cake walk, it calls for a certain level of dedication and several smart choices. One of the key challenges that most of us face during our weight loss journey is to look for foods that could boost metabolism. Metabolism refers to the chemical processes that occur within cells essential to maintain life. People with a high metabolism are able to burn more calories and lose weight more quickly. One must understand that each body is different. Some are just genetically blessed with high metabolism, while some are not so lucky. However there are many foods, herbs, spices that can help rev up metabolism naturally. Cardamom is one such aromatic spice that can help burn belly fat. There are number of benefits of cardamom that make it a *desi* favorite spice, but not many know that this fragrant spice can also help promote weight loss.

Cardamom's role in boosting metabolism and weight loss

According to the book 'Healing Foods' by DK Publishing House, cardamom is "an effective digestive stimulant and diuretic cardamom boosts metabolism and helps the body burn fat more efficiently." Poor digestion can lead to weight gain, as we are not able to absorb and assimilate our nutrients properly, moreover, it may not be able to eliminate waste from our body efficiently either. This may lead to slowing

down of the metabolic rate. Cardamom also helps reduce water retention, and release extra water in form of urine. Cardamom also serves as a great detox for your system. When your body is flushed toxins, your metabolism increases. It is also packed with powerful nutrients like melatonin that increases the burning process of fats in the body.

How to eat cardamom for weight loss

You can just chew into two-three pods for best results. The juices released upon chewing helps facilitate digestion. You can add cinnamon to your tea too. Make sure you do not add sugar to it.

Disclaimer: This content including advice provides generic information only. It is in no way a substitute for qualified medical opinion. Always consult a specialist or your own doctor for more information. NDTV does not claim responsibility for this information.

Bengaluru Rallies Behind Upright Forest Officer, Makes CM Stall His Abrupt Transfer!

Credited with recovering 130 acres of forest land from private encroachments, Ravindra Kumar's unceremonious transfer orders had evoked strong protests from citizens activists!

One of the enduring tragedies of governance in India is how honest, upright and rule-abiding civil servants are shunted out by vested interests just for doing their job.

Last Friday, Karnataka Chief Minister HD Kumaraswamy, who also heads the Department of Personnel and Administrative Reforms,

signed off on the transfer of Ravindra Kumar, Assistant Conservator of Forests (Bengaluru Urban), the man responsible for the recovery of 130 acres of forest land from private individuals and businesses looking to encroach upon it. In place of Ravindra, the CM had appointed another bureaucrat who has only six months left in service.

According to The Newsminute, the trigger for Ravindra's transfer was a move to recover 10 acres of forest land in the Bengaluru South area, a decision opposed by an influential MLA.

Appalled by the CMs decision, many environmentalists, wildlife activists, volunteers and private citizens expressed their displeasure and even threatened to protest publicly. State opposition leaders like PC Mohan and Rajeev Chandrasekhar (both MPs) and local MLAs also jumped into the fray and posted their displeasure over this transfer on social media.

"Instead of honouring him with a Rajyotsava award, he has been shunted out of the Bangalore urban division for his honest service to the government and humanity. Reserve forests are the last lung spaces in a burgeoning city where more than 10% of urban tree cover has been destroyed over the last few years," an eco-wildlife volunteer told The Newsminute.

Reports indicate that the transfer order came at an inopportune time for Ravindra Kumar, as he was in the process of recovering a further 70 acres in the Turahalli forest area (a dry and deciduous forest 20 km from the main city off Kanakapura road) and 45 acres in the Anekal reserve forest.

Why should we care?

Remember the recent floods in Kerala and Kodagu? Well, scientists and activists contend that a lot of the devastation in these parts was due to deforestation. Moreover, without these trees, the city wouldn't enjoy the kind of the weather it has become famous for.

Hurt pride: How a disease and administrative apathy have imperiled Gir's

lions: - On an ordinary day, the Jamvala rescue centre, in the heart of Gujarat's Gir National Park, surrounded by teak trees and herds of spotted deer, receives only the odd injured wild animal. But today there is a frenzy of activity — officials from the forest department and vets from the Delhi Zoo and from the Indian Veterinary Research Institute in Bareilly have converged here to observe and test four wild lions for a deadly disease that is ravaging the park's prides. Visitors are strictly barred, so I can only catch a fleeting glimpse of the felines from a distance, through a mesh. They look lethargic. "I just took a blood sample from one cat for a test," a forest official tells me. "It appeared very sick, out of energy." I am told they are not eating very much either. Among these are the last three surviving lions of a pride from the Dalkhania range: between September 12 and October 1, 23 lions from this pride died, at least five of them from the canine distemper virus (CDV) and babesiosis, a parasitic disease transmitted by ticks.

The fourth lion at Jamvala has been brought in from a range close to Dalkhania for observation; and another 33, from surrounding ranges, are

being similarly observed at the Jasadhar rescue centre a few kilometres away.

The anxiety is palpable. This is the biggest death toll among Gir lions from disease in recorded history. But conservationists are concerned for another reason. This outbreak could have a more far-reaching consequence: Gir's estimated 600 lions are the world's last remaining population of Asiatic lions; so a threat to this sole wild population means a threat to the survival of an entire species.

Scrambling for solutions

But under equal scrutiny of the scientific community has been the Gujarat government's handling of the crisis. When the first 10 lions died in the middle of September, the government attributed it to territorial fights. But by October 1, when the death toll more than doubled and made national and international headlines, the State government — which often prides itself for bringing back the Asiatic lion from the brink of extinction — found itself scrambling for causes and solutions.

To begin with, 36 lions were rounded up from the vicinity of Dalkhania and taken to the two rescue centres. Swab samples from the cats were sent to the veterinary college in Junagadh, the National Institute of Virology in Pune, and the Indian Veterinary Research Institute in Bareilly. Experts were approached at London's Royal Veterinary College, and 300 vaccine vials were bought from the U.S.

"We were first told the lions were dying from infighting and other causes. Territorial fights typically kill cubs and adult males, not adult

females in one area. Attempts were made to suppress and deny the real cause of death and to distract attention. And now that they have acknowledged the crisis, they are not handling it very scientifically," says Ravi Chellam, a wildlife biologist who has been involved with Asiatic lions since 1985.

For one, taking dozens of wild animals into captivity, forcing them into really close contact when they are potentially infected with the very contagious, airborne virus is "going to do nothing less than aid the spread of the disease," points out Chellam. Then, there have been reports that some of the rescue centers are overcrowded: Jasadhar, where 33 lions are being kept, has the capacity to handle only around five cats at any given time.

Just not prepared

The outbreak also exposed the ill-preparedness of the Gujarat authorities in dealing with a crisis of this magnitude. "Nowhere in Gir do we have the facility to treat a dozen cats simultaneously. We have no trained personnel or even the necessary medicines or vaccines," says a beat guard who doesn't want to be named.

For several years now, not a single forest officer from Gir has been sent to the Wildlife Institute of India in Dehradun, for the nine-month course in wildlife management.

"As a forest officer, one should easily be able to identify symptoms of disease during patrolling. I would be able to detect a disease in an animal just from the way it is coughing," says a senior forest official Anil Johri. However, in the case of the Gir tragedy, forest officials and guards were

unable to spot the outbreak until the decomposed carcasses of seven lions were found in Dalkhania.

CDV, a highly contagious and airborne disease, is characterised by high fever, coughing and an inflammation of the eyes and nose. The virus has in the past infected several wild animals across the world: coyotes, foxes and pandas. And, most significantly, in 1994, it wiped out a third of the lions in Tanzania's Serengeti National Park. A study has shown that a 'co-infection' such as babesiosis played a role in this mass mortality. The study of the Serengeti deaths, published in the scientific journal *Plos One* in 2008, finds that CDV mass deaths can be triggered by climate extremes, such as droughts, and widespread herbivore die-offs.

Dogs are considered a primary reservoir host for CDV and they could have transmitted the disease either directly or via an intermediate carrier, such as jackals or hyenas, for instance, says Abi T. Vanak, an animal ecologist with Ashoka Trust for Research in Ecology and the Environment, who has studied the transmission of CDV from feral dogs to foxes around Maharashtra's Great Indian Bustard Sanctuary.

"It could have spread through a shared carcass. Then, a secondary tick-borne disease could have eventually proven deadly. But there does not appear to be any systematic monitoring of this in Gir." With a population of just 600, "what we really need is constant scientific surveillance, and over a long period of time. But we don't seem to have the capacity for systematic wildlife disease monitoring," says Vanak.

Formidable threats

The last major tragedy to strike Gir lions was in 2007 when eight cats were killed by poachers in two separate incidents.

There is no doubt much to celebrate about Gujarat's lion conservation success story. The Asiatic lion once roamed a huge geographical swathe, from present-day Iraq to eastern India. By the early 20th century, hunting pushed them to near extinction, and the few that remained were restricted to Gir. This area happened to be protected by the Nawab of Junagadh, who controlled hunting and the population revived. Their numbers jumped again from 411 in 2010 to 523 in 2015. Now, the big cats are found across 8,000 square miles, in eight districts of Gujarat, both within and outside protected areas — in cities such as Rajula or Kodinar and in the farmlands of Amreli district.

But Gir's lions face formidable new threats today. Being clustered in one region makes them vulnerable to extinction in the case of a disease outbreak. For this very reason, the Supreme Court in 2013 had ordered that some lions be shifted to Madhya Pradesh as an alternative home. The judgment said this was not about the Asiatic lion being 'the pride of a State' but about the preservation of an endangered species. Five years later, there has still been no compliance.

Pride apart, there is gross apathy, which has ushered in unregulated tourism and mining in the habitat. In 2016, the Gujarat government recommended the reduction of the eco-sensitive zone (ESZ) in Gir from 10 km around the protected areas to just 500 meters.

Following public interest litigation, the High Court thankfully stayed the proposal.

Shown to the lions

Officials say the government is under intense pressure from the tourism lobby. "Two dozen hotels and resorts have sprung up near Gir national park, while some farmhouses have also come up recently," says a local forest guard.

There is a huge influx of tourists and, to feed their hunger to see a carnivore, there are now patently illegal, paid 'lion shows' — organized in and around the protected area. A few months ago, a video surfaced of a lioness being baited with a chicken as a group of tourists looks on. In another video, irritated lions are seen walking away, abandoning their kill as raucous tourists shout and whistle. After the clips went viral, seven persons including four tourists were arrested. Locals have been known to organize illegal 'lion safaris' around the park.

To add to Gir's woes, in March this year the National Board for Wildlife permitted limestone mining in 417.35 hectares just 6.25 km from the park.

"What you are seeing now was only expected. The authorities invited this upon the lions," says a forest officer who I meet at the Jamvala rescue centre. The State government showed its "utter disregard for lions in particular and wildlife in general," he says, when in May this year it abruptly transferred Deputy Conservator of Forest, Sasan Gir Ram Ratan Nala, who had refused to permit the desilting of the Singhoda dam inside the national park as part of an initiative launched by Chief Minister Vijay Rupani to deepen water bodies before the monsoon. Nala

had also refused to permit a religious function at a temple in the forest that the Chief Minister was to visit.

Ironically, after the deaths, Nala has now been brought back to assist the Chief Wildlife Warden and Principal Chief Conservator of Forests.

As this goes to press, 23 lions have died and another 21 have been found to be infected. The government has, however, denied that more animals have been infected. The Chief Minister has said the situation in Gir "is under control", that "the lions are completely safe in the forest", and that "they will not be relocated." Meanwhile, the Indian Council of Medical Research has recommended that the "healthy lions from Gir Forest be shifted to an alternate suitable location."

Chellam, however, says, "Much as I am in favour of part of the lion population being translocated, this is not the best time. We have a crisis on hand. What we need to focus on is investigating the source of the outbreak, because without that we will not be able to contain it."

Irrespective of the source, the forest department should ring-vaccinate all domestic dogs in and around Gir to provide a buffer of immune animals and reduce the possible sources of CDV, he says. "Vaccinating 600 wild lions is not feasible, and it makes little sense to vaccinate those that have already been exposed to CDV."

The government, says Chellam, must get the scientific community together and give them access and freedom to do their work. "And yes, we must eventually look to implementing the Supreme Court judgment about trans locating

the Asiatic lions to establish an additional free-ranging population — we cannot afford to put all our eggs in one basket any more

Tiger authority slams Maharashtra government for hiring shooter for tigress: -

The National Tiger Conservation Authority (NTCA) has pulled up the Maharashtra government and its wildlife department for their haste in seeking the services of a private shooter in eliminating problem tigress T-1 in Pandharkawda forest of Yavatmal. In a letter to the state's Chief Wildlife Warden dated October 9, the statutory authority pointed out certain lapses in following the standard operating procedure and has sought a factual report on the ongoing manhunt.

Currently, the Maharashtra wildlife department is carrying out an operation that has now stretched over a month to capture or kill T-1, a tigress with cubs that has allegedly killed 13 people over two years. The wildlife department was under fire for hiring services of controversial shooter Shafat Ali Khan of Hyderabad.

The letter was fired after NTCA received numerous complaints and grievances against the wildlife department's questionable tactics and methods used to capture the problem tigress.

The letter stated that, "state authorities may ensure the compliance of SOP's, advisories and guidelines of this authority and take conscious and prudent decisions while dealing with the situation ensuring long-term objective of tiger conservation." It added, "While we solicit holistic approach in the matter, the action plan drawn

up to mitigate the situation and the factual status report may be furnished to this authority."

"We received many petitions and complaints about the ongoing action in Maharashtra and even the environment ministry received similar complaints and they asked us to intervene," said Anup Kumar Nayak, member secretary and additional director general, NTCA. Nayak stated that as per the SOP, the first preference when attempting to capture a problem animal is always given to the state's experts who are adept at tranquilizing tigers. Only if everything fails, as the last resort, can a private person can be approached.

Though Khan was asked to step away from the operation last month, the Maharashtra wildlife department has now roped him again to use para gliders that have been brought in the Pandharkawda forest to track the elusive tigress. Karnataka-based conservationist HS Prayag is also using perfume to lure the tigress, as per some reports.

India's supreme court approves shoot-to-kill-order for 'man-eating tiger': -

An appeal to prevent forest rangers from executing a tiger believed to have killed as many as 13 people has been rejected by India's supreme court.

The court has said it would not step in if any attempts to sedate and relocate the animal were unsuccessful.

The spate of deaths over the last two years has caused panic in Pandharkawada, a town in central India, where bodies have reportedly been found missing limbs and covered in large

scratch marks.

Officials say the female tiger has killed at least five people, while local reports put the number as high as 13.

But activists have questioned whether the tigress was behind all of the deaths as it is very rare for a single tiger to have attacked so many people.

Forest officials have said they would first try to tranquilize and capture the tigress, known as T1. Last week the *New York Times* reported rangers were gearing up for a "military-style operation" to deploy rangers with tranquiliser guns on the backs of half a dozen elephants to surround the tiger, capture her and move her to a zoo.

"If this is unsuccessful, the animal will have to be shot in order to avoid further loss of human life," forest official Pradip Rahurkar told the BBC Marathi service.

Local politicians are under pressure to have the tiger shot dead, particularly after three people were reportedly killed in August.

"I don't want to kill this beautiful animal," KM Abharna, a top forestry official in the Pandharkawada area, told the *New York Times*. "But there's a hell of a lot of political pressure and a hell of a lot of public pressure."

India hunts man-eating tiger blamed for 13 deaths in territory confl

Officials said they will also try to tranquilise and relocate the tigress's two cubs along with a male tiger called T2, which has also been spotted in the area but has not been blamed for any deaths. India's efforts to conserve its tigers have seen an increase in numbers of the animals – up from

1,411 in 2006 to an estimated 2,500 today, meaning India is now home to 60 per cent of the world's tigers.

However, the country's booming population and mushrooming towns and cities have seen forests shrink to become isolated islands, and when tigers attempt to move between them, they are increasingly coming into conflict with humans.

They called it "The Vulture and the little girl"

This photo of a vulture waiting for a starving Sudanese girl to die was taken by Kevin Carter who later won the Pulitzer for this picture, but he lived just few months to enjoy his supposed achievement because he later got depressed and took his own life.

He was actually savoring his feat and being celebrated on major news channels and networks worldwide.

His depression started when during one of such interviews (phone in program) someone phoned on and asked him what happened to the child. He replied, "I didn't wait to find out after this shot as I had a plane to catch..."

And the person replied,

"I put it to you that there were two vultures on that day. One had a camera"

His constant thought of that statement, led to depression and his ultimate suicide.

In whatsoever we do, let humanity come first before what we can gain out of the situation.

Kevin Carter could have been alive today if he just picked that little girl up and taken her to the United Nation's feeding Center where she was attempting to reach.

LEGAL NOTES

Aruna Basu Sarcar IFS Vs. State of Tamil Nadu & Ors

This case highlights the need for communicating Adverse Remarks in the Annual Confidential Reports on time; considering representation made against them and taking proper decision, finally on the representation strictly in conformity with the AIS (Confidential Rolls) Rules 1970 is another important aspect of the matter. It also explains the effect on delayed communication of adverse remarks and improper decisions on the representation made by the authority concerned.

Dr. Aruna Basu Sarcar was recruited to Indian Forest Service on 09.05.1983, first into Junior Time Scale, promoted to the Senior Time Scale on 0.9.1987, Junior Administrative Scale on 01.04.1992. She was the first woman IFS officer in the state of Tamil Nadu. By virtue of seniority, merit and ability, she deserved promotion to the Super Time Scale. But ignoring what she deserved, her two juniors were promoted as conservators of forests. It was understood that, because of adverse remarks in her Confidential Rolls for the period ending 31.03.1992 and 31.03.1993, her name was not included in the panel. The adverse remarks were communicated to her in June 1995. She made representation to the Government on 21.07.1995. No orders were passed on her representation until she approached the Central Administrative Tribunal

at Madras. The representations made in March 1996 and October 1997 was rejected.

Dr. Aruna B. Sarcar contended that the respondents have not stated any reason for the inordinate delay in communicating to her the adverse remarks though it is in violation of the AIS (Confidential Rolls) Rules 1970. It was submitted by the Government in the reply that the adverse remarks for the period ending 31.03.1992 were expunged and adverse remarks for the period ending 31.03.1993 were allowed to stand. The applicant submitted that the failure of the government to communicate the adverse remarks in time and their failure to consider the representation cannot be made impediment for her inclusion in the panel for promotion to Super Time Scale. It was urged that there has been a clear violation of Art 14 of the Constitution of India. In support of her argument a decision of the Supreme Court in State of Haryana vs. Wadhwa, IPS was cited (AIR 1987 SC 1201).

It was argued on behalf of the Government that Rules and Regulations were followed in the matter of the applicant's claim and that the Hon'ble Tribunal has no jurisdiction to entertain the application of Dr. A.B. Sarcar.

The judgment of the Supreme Court was considered by the Tribunal. In the ruling of the

Supreme Court, the adverse remarks against the respondent IPS officer were communicated after about 27 months after closure of the relevant period. Therefore the writ petition was allowed. The Supreme Court, while confirming the judgment of the Division Bench of the High Court, examined the scope of the AIS (Confidential Rolls) Rules 1970. Briefly stated, the Supreme Court held as follows:

The object of making and communicating adverse is to give the officer concerned an opportunity to improve his performance, conduct or character, as the case may be. The adverse remarks should not be considered as punishment but it should be taken as advice to improve his service career. The object of making adverse remarks would be lost if they are communicated after an inordinate delay of 27 months. Referring to Rules 5, 6, 6-A & 7 of the Rules relating to Confidential Rolls, the Apex Court explained the duties of reporting officer, reviewing authority and accepting authority and the time limit within which the authorities must

act. The rules are not mandatory but directory. Compliance after the inordinate delay would be against the spirit and object of the directory provisions. The whole process should be completed within seven months. The Supreme Court did not approve the inordinate delay of communicating the adverse remarks to the officer concerned. The appeal of the Government was dismissed.

In A.B. Sarcar's case, there has been delay of 2 years. While expunging adverse remarks for the 1991-'92, adverse remarks for 1992-'93 were allowed to stand. In the circumstances, the Tribunal considered that authorities should convene a review by the DPC to consider the claim of the applicant for the post of Conservator of Forests on the same as that of 4th respondent. It is directed that the exercise should be carried out within eight weeks of the order. The order was pronounced by a Bench presided by the Vice Chairman Sri K.S. Bhkthavatsalam on 17.03.1999. **KBR**

*When nails grow long, we cut nails not fingers.
Similarly when misunderstandings grow up, cut your
ego, not your relationship. (Dr. Abdul Kalam.)*

OBITUARY

K. Rajasekhar Reddy, 1.7.1935-21.10.2018



Rajasekhar (Reddy), who retired as Chief Conservator of Forests, Andhra Pradesh, has breathed his last on 21st October 2018 while undergoing therapy in Apollo Hospital, Hyderabad; the trade-mark ever-smiling face that

marked him out in any gathering is no more and vanished forever.

He was diagnosed with a medical condition described as "Interstitial Lung Disease and Pulmonary Embolism", which in layman's terms seem to mean interruption of blood movement to the lung. He was into his 84th year on 1 July 2018, having completed his 25 years in retirement.

Born on 1 July 1935 to Sri Kethu Sura Reddy and Smt. Chennamma in Cuddapa in an agriculture-based family, he had six sisters. After early education in Cuddapa he moved to Loyola College in Madras for his graduation and thence to Banaras Hindu University to obtain his Master's in Geology. (It was an interesting coincidence that his later career-mate R K Rao was his contemporary in the university!) Thereafter he joined Andhra Pradesh Forest service in 1958 as Assistant Conservator of Forests and later moved to Indian Forest Service as it was constituted in 1966.

He served in a variety of capacities in his lengthy thirty-three year career, like holding district charges as Divisional Forest Officer notably as in Mahboobnagar and Chittoor East; heading Anti-Smuggling unit to arrest timber theft more so the Red Sanders wood in Chittoor and Cuddapa districts, and; writing Working Plans for forest management practices. Besides he had a long stint both as a Deputy Conservator and later Conservator of Forests with Thirumala Tirupathi

Devasthanam (T.T.D) which he devoted to introduce an Administrative and Management set-up for the vast forest stretches which were subject to mal-practices. (He was also credited later, when his work showed remarkable results with his successors' efforts that fetched Vrikshamitra Award for TTD). He also headed the unit of Pre-investment Survey of Nallamalai Forests, besides holding the charge of State Silviculturist at Tirupathi. Later on his promotion to the rank of Chief Conservator of Forests, he was picked up for deputation to Government of India and posted at Guwahati to serve as a regional head for North-Eastern States in enforcing the provisions of the Forest Conservation Act. Finally he returned to the State in 1991-92 to serve as Chief Conservator of Forests and retired in June 1993.

He was always charming with pleasant demeanor. At personal level he endeared himself with his staff. His individual persona always belonged to intellectual milieu. He had also in him some radical tinge: He preferred to delete the suffix 'Reddy' in his given name as he felt it was a tag. He was a great admirer of late Jiddu Krishna Murthy, the philosopher, who remained his eternal mentor. He was a spiritual replica of Krishna Murthy's thought-processes. He had maintained his connection with Sri Krishna Murthy Foundation and Rishi Valley School for its roots in his mentor's philosophy.

He had an early marriage with Mrs. Bharathi even before entering into his career. They were blessed with five daughters. Now he leaves behind his wife, daughters, sons-in law and a host of admiring grand children in his family domain, several friends to mourn his loss-and not to forget the three undersigned who were his career colleagues and retirement mates, contiguous with his own term for sixty years. **AVR, RKR, and VJN**



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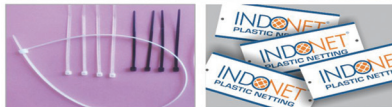
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