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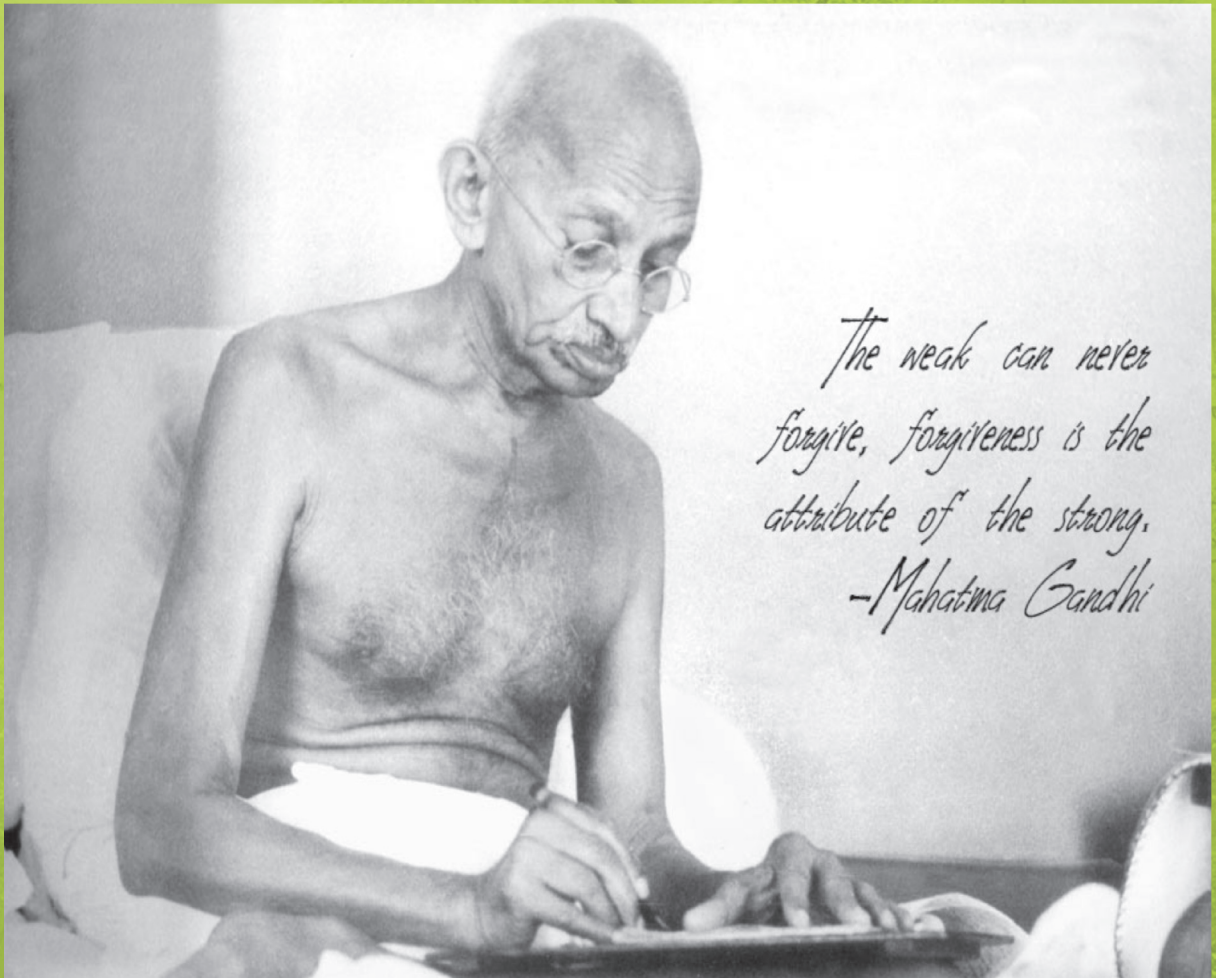
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Vol. 22

OCTOBER - 2021

No. 8



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Date of Publication: 26-9-2021

/Total Pages 64

Editorial

International Day of Non-Violence: Mahatma Gandhi, the iconic national leader of India, was born on 2nd October 1869. This day is celebrated every year as Gandhi Jayanti all across India in the honour of Mahatma Gandhi, to commemorate his unparalleled contribution to the Indian Independence Movement. Mahatma Gandhi believed in the principle of non-violence and practised it throughout the freedom struggle of our country and his life. The Father of the Nation, Mahatma Gandhi had fought a long battle for the independence of our country. We celebrate Mahatma Gandhi's birth day to spread his valuable teachings of non-violence among all. This year we are celebrating 152nd birth anniversary of Mahatma Gandhi. He is very popular as Mahatma Gandhi and Bapuji. He was one of those freedom fighters who fought for the nation to help us live as an independent life. Gandhi Jayanti is celebrated to pay him homage and to preach his philosophy of non-violence, and harmony. People celebrate Gandhi Jayanti by conducting prayer meetings, cultural programs, and various other social events on Gandhi Jayanti day. India has only three national holidays and Mahatma Gandhi's Jayanthi is one of the National Holidays, the other two being Republic Day on 26th January and Independence Day on 15th of August every year. On Gandhi Jayanti statues of Mahatma Gandhi throughout the country are decorated with flowers and garlands. In the year 1930, he was awarded the title of "Man of the Year" by America's Time magazine.

Mahatma Gandhi Jayanti is celebrated as the International Day of Non-Violence all over the world, as declared by the General Assembly of the United Nations on 15 June 2007 and it adopted a resolution which declared that 2 October will be celebrated as the International Day of Non-Violence throughout the

globe every year. According to General Assembly of 15 June 2007, which established the commemoration, the International Day is an occasion to "disseminate the message of non-violence, including through education and public awareness". The resolution reaffirms "the universal relevance of the principle of non-violence" and the desire "to secure a culture of peace, tolerance, understanding and non-violence".

Mahatma Gandhi was born in Porbandar to Karamchand Gandhi and Putlibai. Mahatma's father was diwan of Porbandar, Rajkot and Wankaner. In May 1883, the 13-year-old Mohandas was married to Kasturba Makhan Kapadia who was elder to him. The Gandhi couple had four children, all sons. He is the one to set an example of great thinking while living a simple life. He always valued simple and intelligence over money and violence. He was always against any kind of addictions. He is a face of intelligence, non-violence, and great thinking minds to the world. He pursued studies in law at the University College of London. He went to South Africa, in 1893, to represent a merchant of Indian origin in a lawsuit, and stayed there for 21 years. It was during these 21 years of stay in Africa when Mahatma Gandhi realized and developed strong political opinions. The fierce racial discrimination faced by the Indians in the British Empire triggered the spirits of nationalism in Mahatma Gandhi and engendered the non-violent nationalist protest movements led by him, in South Africa and later in India. Mahatma Gandhi led the Indians on the path of Independence through various civil uprisings that emphasized non-violence. The Quit India movement, the Satyagraha movement, the Non-cooperation movement, and the Civil Disobedience movement, are coined in the history of our nation as the main pillars of our freedom struggle. Mahatma Gandhi led

these mass movements with a rigorous practice of non-violence. He had liberated the country from the British, based on the non-violence movement. Gandhi fought against the caste system and was instrumental in the abolition of untouchability. He not only led a non-violent life but also talked about its importance. The great inventor Albert Einstein was greatly influenced by Mahatma (Bapu). Einstein said that people would not believe that such a person had ever come to this earth. Poet and Nobel laureate Rabindranath Tagore gave Gandhi the title of Mahatma. Lord Mountbatten said that Mahatma Gandhi will go down in history on par with Buddha and Jesus Christ. Gopal Krishna Gokhale said, he is a man among men, a hero among heroes, a patriot among patriots and we may well say that in him Indian humanity at the present time has really reached its high water-mark.

A total of 53 major roads in India are named on Mahatma Gandhi, not only in the country but also abroad, a total of 48 roads are named on Mahatma Gandhi. Some of the countries which have named Roads on Mahatma Gandhi are Argentina, Belgium, Brazil, Canada, Croatia, Germany, Iran, Italy, Netherlands, and Morocco. Netherlands has named 16 roads which is the highest number and Morocco has named 14 Roads on the name of Mahatma Gandhi which is next to Netherlands.

On January 30, 1948, Gandhiji was shot dead by Nathuram Godse while he was walking the grounds of Birla House in New Delhi at night. Godse and his co-conspirator Narayan Apte were later convicted and hanged on 15 November 1949. "Hey, Ram" in Devanagari is written on Gandhi's memorial at Raj Ghat, New Delhi. It is widely believed that these were the last words that came out of Gandhi Ji's mouth when he was shot.

Wildlife Week: Wildlife usually refers to all wild

animals, plants, and other organisms that grow or live wild in an area. Wildlife plays a significant role in maintaining the ecological equilibrium of nature. Wildlife is really important for the survival of all living organisms like animals (all pet animals) and human beings. Every living being in this world has been created by God for some or other use. So, destroying the wildlife means destroying ourselves. The presence of wildlife is also an effective way to assess the quality of the environment. Therefore, it is good for us that in our planet we have such a diversity of wildlife. Therefore, let's take care of our environment as a whole and thereby will consider taking good care of the wildlife. Mahatma Gandhi said "the greatness of a nation and its moral progress can be judged by the way that its animals are treated".

India has a rich and fascinating array of wildlife resources. In order to conserve and protect these resources, the state governments have designated several areas across the country as protected areas, wherein human occupation or at least the exploitation of natural resources is limited. The following number of protected areas were declared by various State Governments in our country under Wildlife Protection Act 1972. National Parks 104, Sanctuaries 566, Conservation reserves 97, and Community reserves 214. Approximately 171,921 Square kms of area is under protected area, covering 4.88% of the country's geographical area. The main objective of this campaign is to promote the conservation and protection of animal life. It teaches the people about the animal's life and encourages them to save the wild animals. Wildlife week is celebrated from 2nd October to 8th October because, 2nd October is the birth day of Mahatma Gandhi the apostle of Ahinsa, who preached nonviolence throughout his life. The Wildlife Week was started in 1952 by the erstwhile Indian Board for Wildlife which is replaced by the National Board for Wildlife, with the aim of raising

awareness in the public the important measures for the protection of wildlife. It is very important that people conserve wildlife and forest in order to maintain an ecological balance in the environment.

An ecosystem is made up of all animals, plants and non-living matter, in a particular place. All living things in an ecosystem are interdependent on each other. The actions and reactions that affect one particular organism, affect the entire ecosystem in some way or the other. For example, if tigers, being at the top of the food chain disappear, it would increase the population of grass eating mammals like deer and other herbivorous animals. Without the tiger to control their population, these animals would ravage the vegetation of the jungles, destroying the habitats of smaller herbivorous animals and insects and, agricultural fields. These insects will then move to farmlands in search of food, thus impacting the food resources of the human population. If

herbivorous animals disappear the carnivorous animals will not get their food in the forest and come to villages for food. These carnivorous animals will attack pet animals and finally human beings, which is very dangerous situation.

The following are reasons why we should protect wildlife. Healthy eco-system, medicinal values, agriculture and farming, healthy environment, preserving rich Bio-diversity, recreation, economic value, livelihood of individuals, aesthetical value and socio-cultural value. The most important role played by the Wild animals is pollination without which we will not be able to produce our food. Insects, birds, and some of the animals are responsible for pollinating and producing our food.

Vana Premi wishes that Government brings complete awareness among the general public for the protection of Wildlife for the betterment of all living organisms. **QMK**

Letters to the Editor

Sir,

It was a pleasure to go through the Vana Premi Magazine of September-2021 which was shaped excellently with a robust photograph of a Royal Bengal Tiger on the cover page. The Editorial regarding our National Flag was the highlight of the Magazine. You have explained various aspects like the background of its adoption as Indian National Flag, the laws governing the manufacture, usage and the precautions to be taken for hoisting the National Flag etc. Some of the facts you have mentioned in your Editorial are not known to many of us. Thanks for gathering and presenting the valuable information about our National Flag.

Sri. S.B. Singh ji has narrated excellently the various stages that took place in the article "From Private Forest to a Biosphere Reserve – The Story of Nokrek National Park" and it was quite interesting to go through the different events of its transformation.

In this connection I appeal to all our retired officers to contribute their valuable experiences in the Department to the Vana Premi Magazine which will be of great help and guidance to the younger generation of our Forest fraternity.

Regards,

SANTHASEELA BABU. V.

VISAKHAPATNAM.

Wildlife Conservation is Increasingly Challenging

By
B.K. Singh

Changes in land use pattern and landscape dynamics have resulted in loss of corridors and fragmentation of habitats of wild animals. Forests have been severely impacted due to development projects, expansion of agriculture, mining, resource dependency of communities, and receded with passage of time. Human induced changes have altered the dynamics of the landscape. Tiger occupancy was reported from 92,000 sq km area in the first cycle of All India tiger estimation in 2006, and has been reduced to 88,000 sq km in the fourth cycle in 2018. Despite all stringent measures undertaken for conservation, we have lost areas occupied by tigers. Western Ghats landscape itself has lost 527 Sq km tiger occupancy in four years between 2014 and 2018. North eastern part of the country has lost more than 6000 Sq km in this period.

Tigers and elephants have received greater attention of Government and management interventions are implemented and monitored in project mode. As Prime Minister has announced Project Lion and Project Dolphin from Red Fort in his Independence Day address in 2020, Union Environment and Forest Ministry will have to cover these species also for project level management, although nothing tangible has happened in this direction.

Often Wildlife experts say that the tigers being flagship specie, its conservation would entail the conservation of all biodiversity. Never the less, Project Tigers and Project Elephants cover limited landscape in not more than 20 States in India, some more projects will cover additional forest landscapes, marine ecosystem, rivers and inland water bodies.

Numbers of development projects are in the pipeline in many pristine forests of the country. These are tiger and elephant landscapes, as well as catchments of rivers and tributaries. To name a few, State Board for Wildlife has approved a rail project between Hubballi and Ankola in Uttara Kannada district of Karnataka sacrificing more than 800 ha pristine forests, leading to the fragmentation of elephants' habitats and corridors. Government of India has approved Saravathi pump storage project sacrificing more than 250 ha evergreen rain forests in Lion Tailed Macaque (LTM) Sanctuary in Shivamogga and Uttara Kannada districts. Do we need Project LTM to prevent the loss of evergreen forests? Many more such projects in the pipeline will not only threaten wildlife conservation, but will prevent ecological services the vast expanses of forests provide.

Several rivers originate from Western Ghats and the forests provide their catchment. A catchment that has natural forests and healthy organic matter enriched soils intact is likely to regulate the hydrology – the so called “sponge” effect by allowing infiltration and deep recharge to ground water. Deforestation is also linked to declining precipitation.

In the fast-changing landscape dynamics, it is necessary that the concern of all Departments for infrastructure development works in the landscape is addressed. The concerned agencies of State and Central Governments should have master plan for landscape level development. We may need planning in smaller landscapes and then integrate them to work out master plan for bigger landscape.

Government departments in the process would need consultations with stake holders, and villagers.

NTCA chapter introduced in 2006 in Wildlife (Protection) Act lays down to constitute "Steering Committee for Tiger Conservation" headed by Chief Minister. This is the opportunity for Departments to work on their master Plan for the development of larger landscape. Since landscape dynamics is changing fast, it must address the concern of wild animals as well. Forest department on such forum can explain tiger dynamics, ecologically sensitive Zones, Management Plans of Protected Areas and requirement of at least 800 to 1200 sq km inviolate areas for tigers and other wild animals, needed for ecological services to the society. They must engage with stakeholders such as Infrastructure development, Roads & National Highways, Revenue, Irrigation, Power, Horticulture, Railways, and plantation crops managers etc, who plan and implement landscape development. States do not conduct such important coordination meetings between the departments. The projects sacrificing wooded areas are directly taken to State Board for Wildlife for approval, where bureaucrats and politicians bulldoze the experts and grant clearance to the projects.

Experts have found a link between viruses, wildlife and habitat destruction. Loss of habitats would bring animals in closure proximity with human and transmit virus. The whole world is facing the pandemic due to transmission of corona virus. This has resulted in contraction of economic activities and GDP numbers of the first quarter in India tells the complete story. Even when the infection is spreading at alarming rate, we are forced to unlock the activities for livelihood of so many. Furthermore, we have eased environmental clearances to kick start constructions, industries and mining etc. Economic packages are announced by Finance Minister Nirmala

Seetharaman and Rs 50,000 Crore is meant for infrastructure development in Coal sector. Iron ore and coal mines projects would mean sacrificing more natural forests and increase the interaction of wild animals with human, which may have potential to cause the spread of another virus. Deforestation would reduce ecological services and invite more and more climatic catastrophes.

When a human is mauled by tiger or leopard or trampled by elephant, action is demanded by public and Forest Department is on the receiving end. Animals are tranquilized, captured and brought to captivity. Often, we find the Zoos and Rescue centres are having enough of them for the life time care. On the contrary if the animal is healthy, the practice in the past was to release them in wild. There were instances that the elephants were released 400 km away from the place it came in conflict with human and was captured. In all the cases it was consistently observed that the animal returned to the original place and again came in conflict with human.

Destroying natural habitats and corridors of wild animals for any human activity/ development projects cannot be sustained. The rising cases of conflicts would pose a threat to conservation and would also threaten the ecological services rendered to humanity.

First week of October is the time for Wildlife Week celebration everywhere in Forest department. Drawing and essay competitions for school children, expert talks and screening of movies for education & awareness and walk for wildlife are some of the events organized during the celebration. Corona virus pandemic this year makes the celebrations virtual and public gatherings low.

Our success should be judged by the measures implemented to conserve habitats and corridors and resolve wildlife conflicts. The fragmented and degraded habitats are further impacted by increasing

presence of invasive species such as lantana, eupatorium and parthenium etc. It not only threatens wildlife conservation, but also prevents ecological services the vast expanses of forests provide. Programs are implemented to reduce the dependency of rural folk on forests.

A book "Forestry in India during British Era – Karnataka case study" by retired Principal Chief Conservator of Forests, Karnataka Dipak Sarmah, brings out a quote from our first Inspector General of Forests Sir Dietrich Brandis on 1876-78 famine. It goes as "In the districts the demarcation, protection and improvement of public forests is a measure of pressing necessity, which must be no longer deferred. The misery of the late famine has been greatly increased by the denudation of the country, which has diminished the production of the cattle fodder and has had an injurious effect on the water supply in streams and tanks (ponds)."

To reduce the dependency on forests, households on the fringes of forests are supplied with cooking gas connection, solar lamps, solar water heater, bio gas plants, social security plantations and fruit orchards etc. Supply of LPG to the families bringing firewood from forests has been a very important component implemented for more than two decades. A similar program with much wider coverage is *Ujjawala* scheme. Despite these programs, people have continued bringing firewood from forests and wildlife habitats continue to degrade, except in period when free LPG was provided to support families who lost income during corona pandemic.

'*Ujjawala*' is an important scheme monitored by our Prime Minister Narendra Modi. In his words, "millions of mothers and sisters are relieved of inhaling smoke and their costs of curing illnesses are saved." The scheme is linked to forest conservation and reduction of Carbon emissions. PM in the key note address of

UN ECOSOC has said that the implementation of efficient use of energy, installation of 450 GW renewable energy projects, supply of cooking gas and electrification of villages has contributed in reduction of 38 million tons of CO₂. During the pandemic 40 million households were provided with free LPG cylinder under the scheme till September 2020. Further PM has also launched *Ujjawala* 2.0 in April 2021 during second wave of corona virus pandemic; under the scheme free LPG cylinder to the families was announced to be provided till December 2021. This would go a long way in bringing behavioural changes in users of firewood and quite a large proportion of families may adopt cooking on LPG. It will certainly bring down the degradation of forests as well as burning of wood and will have sizable cut on GHG emissions.

A study in Malnad belt has found that the supply of solar water heater can reduce the consumption of firewood by 33%, in villages adjoining forests. The evaluation of the program has revealed that the beneficiaries do not have water supply through pipes from overhead tanks, no vent is fitted with it for the escape of excess heat. Solar water heaters are non-functional, putting additional pressure on forests. It is necessary to focus on proper and aggressive implementation of the scheme as it will be quite beneficial for conservation of forests and restoring wildlife corridors.

The programs meant for restoring the wildlife habitats are poorly implemented. Unless the gaps are plugged, the wild animals will find its habitats shrinking and the corridors for their movement lost. Human wildlife conflict then assumes a dangerous proportion. When a human is mauled by tiger or leopard or trampled by elephant, action is demanded by public and Forest Department is on the receiving end. People generally mob the scene and pressurize the Department for immediate capture of the conflict

animal or even shooting to kill it. Elephants in big herd move outside forests and damage agriculture crops. Ex gratia payments approved by Government is often inadequate for high value crops like tissue culture banana, coffee, areca nut and paddy etc.

People also get agitated when highly priced cattle are killed by tiger or leopard. They go in revengeful mode and put poison on the carcass of the cattle. When carnivore revisits the carcass, it consumes the poison and gets killed. People in coffee estates take revenge on elephants, herds as well. To drive away the herd, they often open fire injuring some of them. Elephants profusely bleed, develop septicaemia and die even after six months. Even if the post mortem finds metal pieces embedded in the body of the elephant, there is no method to trace the culprit.

To protect the crops sometime a villager illegally connects the wire run all round his field with power and elephants get electrocuted. By the time Departmental staffs visit the scene of offence, culprits and materials are untraceable. Culprits are not brought to book even in 25% of these cases.

Increasing human habitation, expansion of agriculture and mining, development of linear infrastructures has resulted in loss of elephants' habitats and corridors. Forests once provided adequate food and shelter for wild animals are now sufficiently degraded. Regeneration of palatable species has been impacted and forest floors are covered with invasive species like eupatorium, lantana and parthenium. The cropping pattern on the edge of the forests are also changed and high value crops like tissue culture banana, paddy, areca nut and palatable tree species for shades in coffee estates attract elephants. The damages are not adequately and timely compensated by Forest Department which leads to unrest among the victims.

Farmers, who become desperate to protect their crops, illegally draw power from transmission lines passing through the area and power fence the field for the night. Elephants straying out in human areas and moving through agricultural fields come in contact and get electrocuted. Farmers also resort to providing power connection to trap ungulates like deer and sambhar for meat and quite often it leads to electrocution of wild elephants. Another way of electrocution of elephants is that they come in contact with sagging 11 KV transmission line even while moving in forests and get electrocuted.

Electrocution of elephants is heinous crime and investigation of FIR in such cases requires coordination with Forest, Electricity and Police departments. Government has issued advisories and all electrocution cases are booked and investigated by Police Department. When Forest officers come across any electrocution case, they visit the spot and hardly find any evidence to collect for Police investigation. The wires are removed and one cannot even find which agriculture field was power fenced and who is the owner of the field.

In 75% cases, culprits are not arrested. I do not remember any case in last one decade where anyone is prosecuted in elephant electrocution case. The investigation and enquiry in these cases have therefore no deterrence and culprits get emboldened, who is encouraged to try the trick again and again.

Without restoring and developing habitats, conservation of wildlife is an uphill task. Department must focus on Eco development and habitat development programs to conserve wildlife. Celebration of wildlife week is becoming too formal and hardly any useful purpose is served on the ground.

(B K Singh Retired Principal Chief Conservator of Forests (Head of Forest Force) Karnataka)

A Raid to Remember – Raid in (V) Gangaram

By

Paresh Kumar Sharma

As Karim Nagar East Division used to have sizeable number of Teak trees, about 10-12% of the existing crop, the same used to be vulnerable to illegitimate felling & smuggling. Normally the illicit felling was restricted to local use like hutting and agricultural implements. The same for commercial purposes was sporadic in this Division due to poor connectivity. Roads were fair weather ones hence plying of lorries and jeeps was for a limited period, not exceeding 6 months. As there was only 1 BT Road in the Division, the movement of vehicles could easily be watched. AS such the poor connectivity proved to be a boon for the protection staff of this Division. In the other Divisions of the Circle, illicit felling for commercial smuggling was a big problem.

The commercial smuggling used to be a lucrative business because of high demand of the Teak Timber in the construction industry. It used to have 3 stages. The smuggled timber used to find way to nearby villages as well as distant towns and cities, as far as Hyderabad, Vijayawada, Bangalore and Chennai as well. Teak smuggling involved a big racket and chain to operate. At the forest level poor people used to be engaged for felling the trees. These trees used to be converted into wood logs in the forest itself by pruning the branches and the leaves and sizing. In the 2nd stage these logs used to be transported to the storage places which could be an isolated place in the villages, agricultural fields or some abandoned houses etc. and concealed in the hay stacks or any other commodity. In the final stage, at opportune time, a vehicle; generally, a Lorry, used to be sent to the place of storage and after loading the timber (wood logs) it used to be dispatched to the decided

destination. All these operations used to be carried out in the most clandestine manner. These vehicles used to avoid the Forest as well as Commercial Check Posts to avoid detection of contraband goods. Sometimes they used to bribe the Check Post personnel, in order to safely take out the vehicle unrecorded at the CP. All these operations used to be organized by the Kingpin sitting in big town and city; who used to finance & manage the entire operation through middlemen at all levels.

In general, the protection of forests was good in the Division. All the Beats used to be inspected regularly by the Section Officers and the FROs as per the schedule and the Sub-DFO and DFO used to test check the Beats. There used to be reports of sporadic felling; but not of large-scale destruction. In one such test check of Beat inspections during July 1985, I found unusually large number of felling in Annaram and Palwal Beats of Mahadevpur Range. These were apparently with a view to encroach upon the forest lands for cultivation purpose. Staff reported that by and large the area consisted of non-Teak trees, hence the value of destruction was nominal. I was not convinced though. Earlier slightly a greater number of felling were reported from Nastharpalli Beat. In villages Bayyaram and Rudramam of Bhopalpalli villages raids were conducted and 1 Lorry Load (approx. 3 Cmt.) of Teak Timber was recovered.

My gut feeling was that there was more to it than being revealed. Hence, I kept questioning. On investigation it was revealed that there was involvement of smugglers from Gangaram village in

this destruction. Further investigations revealed that lots of Teak timber had been stored and was ready for dispatch in village Gangaram of Mahadevpur Range. After discussion with the FROs it was decided to conduct a joint raid in the village with staff drawn from 2 Ranges of the Division and the local Police. I spoke to the Superintendent of Police and requested him to provide a Section of Police for this task looking at the possibility of trouble being created by the smugglers and villagers. SP readily agreed for the same and passed on the instructions to the ASP and the SHO. A Lorry was also drawn from the Logging Division.

Having arranged this, on 21st of July 1985, I along with all the staff and Officers and Police section proceeded to the village in the morning and started the search operation. None of the field Officer was willing to enter any of the houses for fear of the reprisal or assault. Even the Police personnel did not dare to enter the house. Someone had to bell the cat. As I had taken the initiative, I took the first step and entered the first house and started the search operation. And lo! Huge quantity of Teak logs were found stored in all the places. I demanded from the house owner if he had any documents to prove that this timber was genuinely procured. He did not have any. Then I started physically pulling out the illegal timber. The staff by now had gathered courage and followed the suite. The timber was duly seized. Police was on guard.

A large number of local residents had also gathered there. Someone informed me that illegal Teak timber was also available in many more houses. Hence, I decided to continue the search and recovery operation. We conducted searches in almost all the houses till afternoon. Huge quantity of Teak timber had been recovered in the raid, much more than our

anticipation. One Lorry was not enough to carry all the recovered timber. I sent message to the Logging DFO for sending additional Lorries for organizing transport of the seized Teak timber, through a messenger.

By 3.30 pm, it had started raining and it rained heavily till evening. There was no possibility of organizing loading and transport of the seized timber as the fair-weather road from village to the BT road had become slushy & slippery. We decided to defer the operation till the next day and very reluctantly returned to Mahadevpur.

Next day, on 22nd of July 1985 early in the morning, we all reached the village Gangaram for resuming the operation. However, to our horror not even a single log of Teak was visible in the place where we had left those in the previous evening. We were puzzled and perplexed as there was no possibility of transport of the timber out of village in the vehicles because of heavy rains since previous evening through night. We carried out search once again in the houses in the village; nowhere timber logs could be seen. We looked for those logs in the outskirts of the village, in the hay-stacks, in the farmlands, everywhere but to no avail. We were disappointed and disheartened as the huge pile of Teak logs salvaged assiduously the previous day had apparently disappeared. At last, one of the staff reported that a Teak log was seen floating in the nearby village tank. This gave us the hint that the villagers had shifted all the logs in the previous night and dumped in the pond not caring for the rains. Our faces lit up with the prospects of getting the "lost" timber back.

We immediately plunged into action; mobilized staff and labour (Loading Labour of the GTD) who dived

into the pond waters and started finding and dragging Teak Logs one by one, and the “disappeared” logs started reappearing. This operation was carried out till the last piece of Teak log was recovered. We all had a sigh of relief. Approximately 3 Lorry Loads of Teak timber (approx. 10 Cmt.) had been retrieved. It was loaded into the lorries and transported to the Govt. Timber Depot at Mahadevpur. The operation had to be continued for 2 more days and every day the catch was same 3 Lorry Loads. Approximately 30 Cmt. of Teak Timber was salvaged in this operation of 4 days. Cases were booked against the Offenders – few known and few un-known. Credit was given to the Police personnel, who had accompanied the forest team.

Unfortunately, this raid did not have a happy ending. Later on I was told that few of the houses from where the Teak logs were recovered and seized, belonged to Naxalites/sympathizers of Naxalites belonging to a very volatile faction of the CPIML by name People’s War Group (PWG). They started enquiring as to who among the staff had given information to me, the DFO, which had led to the conduct of this raid. I was told that they had personally summoned some of the staff, who had participated in the raid, belonging to Mahadevpur & Bhopalpalli Ranges and interrogated them. They had also questioned the Police Party temporarily deployed at Koyyur. They seemed to have told that they had simply followed the orders of the SP; otherwise, they had nothing to do with this raid. They also got inputs from some of the villagers.

Unfortunately, all these enquiries & interrogations lead to fixing up the responsibility on one of the Dy. RO of Bhopalpalli Range posted at Koyyur Section, not very far from (v) Gangaram. He had become a scapegoat. Naxalites decided to teach him a lesson.

On the night of 24th July 1985, the Naxalite *Dalam* (Troupe) picked up the Dy. Range Officer from his Quarter, located on the road side, in the dead of night. They accused him of intimating the DFO about storage of huge quantity of Teak timber in (v) Gangaram. The Dy. RO kept denied the allegations and pleaded that it was false & not correct; he had no information about the timber in the village as it did not fall in his jurisdiction or in his Range, nor did he intimate the DFO. But, the Naxals did not listen to his pleas and continued to thrash him. Later on, I was told that he was taken to a stream nearby while beating him with belt, fists & legs. Then, he was half-buried up-to waist in a sandpit and thrashed very brutally. Afterwards, they left him bleeding and in a semi-conscious condition. He came out of the sand pit with great difficulty in pain and crawled back to his Quarters early in the morning. I was camping in Mahadevpur after completion of the raid, but did not have the slightest intimation or hint of this incident nor anyone in the Range came to know about it. The Dy. RO was so much terrified that he did not intimate about this torturous treatment to his FRO or any colleague or the subordinate.

The Dy. Range Officer appeared before me in the morning with bruises on his body, swollen eyes and face. He narrated the entire incident and pleaded with the folded hands not to inform SP, Collector or even the Conservator of Forests about this incident. He told me if Naxalites came to know about any such report, he would definitely be killed. I was angry as well as anguished. Having understood his condition and predicament I promised him that I would not make any report in this matter to anyone as requested by him. I assured him of all the help. Arranged for his medical treatment for speedy recovery; granted him leave and transferred him out of that place after some time.

This incident brought to light the trying circumstances under which our field staff had been and is operating. This also left a big question in my mind. Why had so much of destruction took place in a couple of days? Why our staff could not prevent it? Were they or were

they not in a position to prevent this destruction? I will deliberate upon these points later on.

(The author is former PCCF & HoFF, Telangana and can be reached on mobile at +91 6300030519 and e-mail at pareshvyas22@gmail.com)

First Hydrogen Fuel Cell Vehicle from Indian Business House. Designed and manufactured in India. TATA motors developed this in partnership with ISRO. Let us join in celebrating the proud moment. Forward this exciting news to all your friends please. 🌈



Tata Motors & ISRO reveals India's first hydrogen fuel cell bus in India. The Hydrogen Powered Starbus Fuel Cell bus is a zero-emission mass transport solution, for inter-city commute and has been developed in partnership with ISRO . Combining hydrogen gas and oxygen, the fuel cell produces electricity to power the electric motor, with water and heat as a by-product. This is the first time an Indian manufacturer has ventured in this direction

Protected Areas and Forest Rights Act: Who will bell the Cat?

**By
Dr. Arvind Kumar Jha**

India has a network of 981 Protected Areas (PAs) with 104 National Parks, 566 Wildlife Sanctuaries, 97 Conservation Reserves, and 214 Community Reserves spread over an area of 1,71,921 sq. kms which is approximately 5.03 per cent of its geographical area. The PAs have been managed as per area-specific management plans. The Wildlife Act provides legal frame work for the protection of wild animals, birds and plants in these areas with a view to ensure the ecological and environmental security of the country. As one of the acclaimed mega-diverse countries, India harbors nearly 7-8% of the recorded species of the world and its PAs are considered as the most secure addresses of our invaluable gene-pool sustained through strategies to minimize the impact of anthropogenic pressures.

Forest Rights Act: The scope in PAs

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 (Forest Rights Act, in short) was promulgated with the objective of recognizing individual as well as community forest rights in favour of Forest Dwelling Scheduled Tribes (FDSTs) and Other Traditional Forest Dwellers (OTFDs) and their communities and additionally make the right holders responsible and empowered for sustainable use, conservation of biodiversity and maintenance of ecological balance apart from strengthening conservation regime of forests, ensure livelihood and food security. The objective was laudable since while it primarily intended to benefit the above mentioned set of

people who depended on forests and forest lands for their bonafide livelihood needs, it also provided a scope for recognizing and vesting in their community the Forest Right (named as Community Forest Resource Right i.e. CFRR) to protect, regenerate or conserve or manage any community forest resource which they had been traditionally protecting and conserving for sustainable use provided they fulfilled the conditions mentioned in Section 3(1)(i) and 4(3). The community forest resource duly defined under the Act as the customary common forest land within the traditional or customary boundaries of the village could be any forest land including Protected Areas. FRA also provides for making National Parks and Sanctuaries as 'Critical Wildlife Habitats' wherein the recognized Forest Rights (FRs) may subsequently be modified or resettled albeit under conditions specified in the Section 4(2) of the Act. Further, it is mandated that the critical wildlife habitats from which rights holders are relocated for purposes of wildlife conservation cannot be subsequently diverted by the State Government or Central Government or any other entity for 'other uses'.

As per section 6 of the Act, in each case of Individual Forest Right (IFR) and Community Forest Right (CFR), the determination of and Title on Forest Right is mandated to specify it's 'nature' as well as 'extent'. Yet another point to be noted is the fact that as per Section 13 of the Act, its provisions are in addition to and not in derogation of the provisions of any other law for the time being in force.

Forest Rights Act Implementation:

The implementation of FRA, despite its Section 3(1) showing 13 major types of Forest Rights, has had primary focus from the very beginning on just two types. The FRs of self-cultivation and habitation gaining priority and predominance for obvious reasons, were followed by Community Forest Rights, specially under Section 3(1)(c), and then by Community Forest Resource Rights (CFRRs) at Section 3(1)(i) that gained currency post 2012.

While the Act was under implementation since 1st January 2008, the Ministry of Tribal Affairs, nodal agency for the country, Government of India issued various guidelines and went on in 2012 to amend the FR Rules 2008. The major tasks carried out through the amendment done in 2012 were changing the definition of 'bonafide livelihood needs' thereby expanding the domain of claimants to include even those who were anywhere above the earlier qualified sustenance level. It also expanded the definition of 'disposal of minor forest produce' to blur the erstwhile focus on the target population which were truly dependent on forests and forest lands for their bonafide livelihood needs. It waived off the statutory condition for eligibility of claimant communities by inserting the clause in the Form C (Annexure-I) of FR Rules 2012 indicating that presence of few Scheduled Tribes/Other Traditional forest Dwellers is sufficient to make the claim and thereby, in effect, invited ineligibles to join the bandwagon claiming the benefit of FRA. It modified the Rule 11(4) and introduced annexure-IV allowing the Gram Sabha in general to become the owner of the CFRR side-lining the deserving communities mandated as per the Act. Creating a pressure on the member secretary of DLC it mandated under Rule 12B (4) that in case where no community forest resource rights are

recognized in a village, the reasons for the same shall be recorded by the Secretary of the District Level Committee. It effectively equated the Gram Sabha comprised of heterogeneous people with 'community' for the purposes of this Act despite the fact that a 'community' should be identifiable as a homogeneous group from the perspective of the specific type of forest right that is being claimed for recognition and that too on the basis that it has traditionally been exercised by its members. By de facto recognition of Gram Sabha as community opened up the possibility of capturing of the FRs of such communities by Gram Sabhas wherein there exists internally an exploitative inter-relationship dominated by rural elite and powerful people. It introduced the unrealistic and untenable presumption that just a delineation of Community Forest Resource amounted to automatic recognition of experience of community in conservation and sustainable use thereby undermining the crucial requirement of experience of the community required under Sec.3(1) (i). Despite the growing importance of 'third eye' everywhere in the world, it reduced the evidentiary value of the satellite imagery and other uses of technology by indicating in Rule 12A (11) that they may supplement other form of evidence and shall not be treated as a replacement. In effect ineligible claimant's encroachments after 2006 were favoured due to difficulty imposed in verification of land use as on 13-12-2005. It reduced the quorum of Gram Sabha to half from the earlier requirement of two third. A number of guidelines were issued by MoTA from time to time for considering the rejected cases again and again but none on auditing allowed ones even on a sample basis. To quote some, MoTA's letters dated 12-9-2014, 10-4-2015, 15-6-2015, 27-7-2015, 5-2-2016, 16-6-2017, 29-6-2018, 20-2-2019 asked the States to re-view/ re-look/ verify/ re-

examine/ suo motu review/ re-consider the rejected cases. A notable point is also the fact that the guidelines for recognition of CFRs are still under preparation by a committee constituted by MoTA with strength of nineteen members having just one serving forest officer and no lawyer. The message given through all the above has been loud and clear so far as field bureaucracy as also public is concerned.

From the Field:

With the background detailed above, the quality of decision making on the ground is quite as expected. Majority of the granted cases suffer from one or the other serious irregularity indicated herein. Claims for IFR are pouring in and getting decided by taking the benefit of lowered evidentiary value of satellite imagery based evidences, the condition of 'self-cultivation' mentioned in 3(1)(a) ignored, CFRRs are recognized in favour of Gram Sabhas and despite non-fulfilment of conditions mentioned in 3(1)(i) and 4(3), absence and/or non-specificity of 'extent' (indicated as whatever is available, whatever is used, Grazing for all cattle that existetc.) in claim as well as title documents pertaining to CFRs are quite prevalent, CFRs are getting recognized in favour of Gram Sabhas, there is confusion due to the fact that the Rule 4(1)(f) is not shown as specifically related to only those cases which are recognized with forest rights under 3(1)(i), there is non-application of mind in deciding about recognition of the four types of forest rights indicated under 3(1)(i) to appropriately experienced claimant communities, inability to distinguish 'Decision by majority' vs. 'Decision on merits' of claims is visible as a consequence of targets before the DLCs. Any serious concern for conservation of forest resource

which is the base on which the edifice of system of exercise of forest rights has to survive and sustain is nowhere to be seen.

A strong sense of immunity prevails all over due to the fact that only rejected cases are scrutinized. This in fact promotes recognition of ineligible cases because otherwise questions are asked and reasons are to be recorded. The cases that are allowed are presumed by the Government as perfectly in order and never looked into. The hard reality that any recognition of FRs in violation of FRA automatically results in violation of the Forest Conservation Act 1980 and depending on the area's legal status; in the violations of the Indian Forest Act 1927 and Rules there under, Wildlife Protection Act 1972, and also the orders of Hon. Supreme Court in regard to PAs; seemingly has no effect on any of the erring authorities/decision makers.

Examples in PAs:

The situation outlined above is prevalent in all areas and, although the cases of CFRR inside PAs have started late, the cases there also suffer from similar problems. The areas earmarked specifically for wildlife have started facing the onslaught of ill effects of illegal recognitions by the authorities. Though many cases exist today, only two cases of CFRR are quoted here, each of which has been allowed by District Level Committees (DLCs) violating the relevant sections of the FRA and rules there under. In Dhamtari district in Chhattisgad, CFRR has been recognized in the core area of tiger reserve (5,544 ha) by the DLC in which the conditions of Sections 3(1)(i) and 4(3), prima facie, are not fulfilled. The Title document for Lendezari village in Navegaon Nagzira sanctuary is signed by DLC's official members and mentions that the forest right claimants are 'OTFD'. The Asst. Conservator of Forests had recorded his

dissent and recommended rejection of claim on the ground of area being inside Sanctuary. The DLC has allowed all CFRs including CFRR under Section 3(1) (i) in favour of Gram Panchayat, Lendezari and later on it has been modified and recognized in favour of group of villagers on an area of 1930.55 acre. There is no quantification of 'extent' of other CFRs where the title document just mentions that it has been allowed 'As per claim'.

Charity beyond law is Cruelty to Others:

Implementation of FRA in general and especially in recognition of CFRs and CFRRs is far from satisfactory when viewed from the perspective provided by the preamble of the Act. The concern becomes still more serious when one considers that fact that the severely impacted entity is the resource-based itself viz. the forests on which the life and future of every citizen and even that of future generations in addition to the livelihoods of the FDSTs and OTFDs depend. Making the choice between providing short term benefits to a constituency in electoral democracy and long term sustenance of such invaluable resource for one and

all is definitely difficult and the most apparent indicators of slipping into populist modes and yielding to pressures of elites and powerful are not difficult to find. The task has been carried out through amendment to the FR Rules done in 2012 and various guidelines thereafter by Ministry of Tribal Affairs (MoTA), Government of India. The quality of implementation in the field has suffered and is causing immense harm to the forest resources of the country. Now the last abode of wildlife i.e. PAs are the target. There is a strong tendency prevailing to use FRA to somehow outsource Government's primary responsibility of conserving the forests, related natural resources and eco-services which was being managed for the benefit of all people of this country. The outsourcing is being done to the lakhs of villages, though by violating FRA itself. The flywheel effect has gained strength. A 'Salva Judum' folly in policing system could perhaps be corrected fast but how about bruised and damaged natural system and their management options that get created by mass scale misuse of a well-intentioned statutory instrument? The moot point once again is 'Who will bell the cat'. ●

*“Every individual matter.
Every individual has a role to play.
Every individual makes a difference.”*

Intergovernmental Panel on Climate Change Report

By

B. K. Singh

United Nations inter-governmental panel on climate change (IPCC) in a report on 9th August 2021 projected average global temperature to reach 1.5 degree Celsius in next 20 years at the present rate of warming. World can save itself from disasters only by cutting down the emissions and leaders must make the commitments unequivocally. During industrializations from 1870 onwards, the average global temperature has already risen by 1.1 degree Celsius in 2020 on account of cumulative accumulation of CO₂ in the atmosphere. The report further adds that there is nearly linear relationship between cumulative CO₂ emissions and global warming. It says that each 1000 Giga ton CO₂ is likely to cause .45-degree Celsius increase in global temperature. We have reached 1.1-degree rise, the remaining .4 degree can be reached once 889 Giga ton of CO₂ equivalent is further added in the atmosphere. Present annual rate of global emission is 55 Giga tone of CO₂ equivalent and 16 years are enough to reach 1.5 degree rise in temperature.

A climate scientist Raghu Murtugudde, University of Maryland United States explained recent weather events in Uttarakhand, "What is unusual in the current scenario is the very warm temperature anomaly to the west of north India over Iran, Pakistan and Afghanistan. The Arabian heat pumps winds into the northern Arabian Sea and there has been strong wind along coast of Oman and going straight over Gujarat into Uttarakhand, which is increasing the chances of cloudbursts." Floods, landslides, glacial lake bursts, excess rainfall, excess snowfall, and unseasonal rains would increase if climate change were not mitigated. IMD has defined cloudburst as

an event when 100 mm of rains is received in an hour over 20 to 30 Sq. km area.

Countries are still debating among themselves as to how and when the emissions of greenhouse gases (GHG) are cut to restrict rise in temperature to 1.5^o Celsius over and above the temperature of pre industrial era. While Paris climate accord is still to be implemented by member countries, we are expecting drastic steps of shutting down fossil fuel-based economy and propelling the green energy as soon as possible. Glasgow meeting in November 2021 raises our hope.

The impact of global warming has been ruining our lives and livelihoods. As if COVID was not enough, tourism in Konkan, Himachal Pradesh, Uttarakhand and northern West Bengal are severely disrupted by rains and landslides, and many tourists were forced to cancel their travel plans and hotel bookings.

While Europe, India and central China were in flood, USA, Greece, Turkey and Siberia reeled under wild fire. A month earlier western Canada and north western USA was the centre of massive heat waves. Temperature in Vancouver reached 42^o Celsius and people suffered in homes built in woods, not meant for such hot conditions. Air conditioners and fans were inadequate and people draped themselves in cold towels to cool down. Nearly 100 senior people died in Vancouver because of heat wave. 200 km away, city of Lytton broke all Canadian records ever, with temperature reaching 49.6^o Celsius. This followed wild fire engulfing the city reducing almost everything to ashes. All studies have pointed that heating of the planet is the reason for extreme weather conditions.

Heads of states of G7 nations at Carbis bay meeting in United Kingdom have reiterated to cut GHG emissions by 45% of 2010 level by 2030 and further to become net zero by mid-century. However, China has announced to peak its emissions by 2030 and net zero by 2060. The warming of land and oceans are causing unprecedented cloudbursts, heat waves and wildfires; world leaders should exert pressure on China and bring the country on board. They have also faced recent cloudburst when more than 600 mm of rainfall was received in three days inundating Zhengzhou where 300 people perished and roads and subway turned into flowing rivers damaging properties extensively.

However, US climate envoy John Kerry has called on China to increase the speed and depth of its efforts to cut emissions. He added that the temperature has already gone up to 1.1°C and promises made during and since Paris accord, would still see the temperature increase by 2.5 to 3°C. He was critical of Indonesia, Brazil and other countries still building new coal fired power stations and are illegally cutting down the rain forests and thus damaging the lungs of the world and destroying irreplaceable biodiversity.

However, wildfire in 1.5 million ha forests in Siberia, 1.3 million ha in California and .5 million ha in Greece and Turkey should be the cause of greater worry. Towns and cities were choked with smoke and GHG emissions from forest fire. Growing stock in the forests is the best and the cheapest carbon sink. We have released carbon in the atmosphere and also lost space for sequestration; we are hit by a double whammy. John Kerry must go round and ensure that forest fire across the globe is controlled. In Greece, coal fired power stations slated for retirement were brought back into service to shore up the national grid, under pressure due to widespread use of air-

conditioners for the relief from heat. We are in a vicious cycle as we are forced to burn additional fossil fuel to keep ourselves cool.

In energy and climate joint ministerial meeting of G20 nations in Napier, Italy our environment minister Bhupender Yadav called rich nations for lowering their per capita emissions to global average by 2030. India emits 7% of global emissions and has per capita emissions of about 2.47 tons of CO₂ equivalent as compared to global average of 6.45 tons of CO₂ equivalent. Minister added, "The momentum of climate action can only be accelerated when there is enough support through means of implementation including finance and technology". China, a country of 1.4 billion people emits 25% of global emissions and comparison of per capita emission will provide more leverage to them. US and EU (including UK) contribute 13% and 19% of global emissions respectively. To bring down global emission, all top polluters must be targeted and China cannot be allowed to go Scot free on the basis of population.

There are bottlenecks in transition to clean energy. Renewable technologies require more wiring as compared to fossil fuel-based power generation. Solar or wind power plants and electric cars require three to five times more copper as compared to fossil fuel-based generation. Aluminium is another metal vital for solar and other green energy projects. Forty percent of world's copper supply came from Peru and Chile and in both countries mining projects are slowed down. Also, sixty percent of world's Aluminium supply came from China, where production is brought down as part of campaign to reach carbon neutrality. Sharp rise in demand for metal like Copper, Aluminium etc for renewable energy projects pushes the prices upwards making projects more prohibitive. International cooperation is required on the issue of

raw materials and transfer of technology that can be flagged for Glasgow meeting.

In his Independence Day address to the nation from the Red Fort, Prime Minister Narendra Modi reiterated national programs to combat global warming in the light of latest report from United Nation's Inter Governmental Panel on Climate change (IPCC). India has already installed 100 Giga Watt (GW) renewable energy capacities and is on track to complete 175 GW by 2022 and 450 GW by 2030. The commitment of Indian Railways to be net zero by 2030 has been hailed by Prime Minister.

India is the only nation among G20 which progressed rapidly to meet climate goals. Other G20 nations account for nearly 80% GHG emissions are not on track to meet Paris agreement and Australia, US and Canada are falling short of their targets.

Our nationally determined contributions (NDC) to achieve under Paris agreement by 2030 are to increase total cumulative Power production from renewable sources to 40% of requirement, lowering the emission intensity by one third of 2005 level and creating additional carbon sink of 2.5 to 3 Giga tons of CO₂ equivalent annually through manmade tree cover over 26-million-hectare degraded areas.

Bio fuel production is also ramped up and country has fixed a target of 20% blending of ethanol in petrol by 2024. Long distance gas pipeline projects like the one along Malabar Coast up to Mangalore, and the pipelines from Ankleshwar, Haldia to cater the energy requirements of northern states etc will help reducing carbon footprints considerably. The energy supply for domestic and industrial requirements connected to the pipelines will additionally reduce footprints as we will save carbon emissions in transport.

Prime Minister, in his 15th August address informed

countrymen that India spends Rs 12 lakh crores annually on importing energy. As we celebrate 75 years of independence, we have to ensure that India becomes *Atmanirbhar* Bharat in energy production too. Green hydrogen production and exports would lead India towards a clean energy transition. "Green Hydrogen is the future of the World. Today I announce the setting up of the national hydrogen Mission. We have to make India global hub for green hydrogen production and export – this will not only help India to make a new progress in the field of energy self-reliance but will also become a new inspiration of clean energy transition all over the world. New opportunities from green growth to green jobs are opening up today for our start-ups and Youths", PM added.

Hydrogen generated entirely from renewable power sources is called green hydrogen. Electricity generated from renewable sources is utilized in electrolysis of water to split it into hydrogen and oxygen. Green hydrogen can be utilized for industries such as petroleum refining, aerospace applications and manufacturing of chemicals, steel and ammonia fertilizers.

IPCC report, sixth from the World authority on Climate Science since 1988, was published on 9th August recently, says that if GHG emissions continue at the same pace, global heating of 1.5 degree Celsius is likely to happen by 2040. Temperature rise will bring changes in planet's water cycle, as regions with high rainfall will face cloud bursts and arid regions will face more droughts. Prof Mike Meredith, lead author of the report said, "As atmosphere continues to heat up because of global heating, it can hold and transport more moisture – so at the largest scale we accept to see an acceleration of the hydrological cycle; stronger evaporation in tropics,

and more intense rainfall in the high latitudes and some equatorial regions. This will lead to more frequent rainfall events in already wet areas, and greater incidence and severity of flooding.” The regions of evaporation (tropical regions) will face increased drought.

Earlier between 1901 and 1971, sea level registered a rise of 1.3 mm per year is found to have been increased to 3.7 mm per year between 2006 and 2018. If GHG emissions continue at the same pace, before the end of the century the globe will register average temperature rise of 2 degrees Celsius and several of our coastal cities such as Kandla, Bhavnagar, Mumbai, Kochi, Chennai, Vishakhapatnam, and Paradip etc would go under water.

While the Indian peninsula is surrounded by Oceans, people residing on the coasts will face the threat of their lives and livelihood, the melting of Himalayan glaciers in the north will disrupt the lives of the people in hilly states as well as in northern plains of the country. Rivers originating from Himalayas are fed by these glaciers. Untimely flooding of the rivers and depletion of water flow in some seasons will impact agriculture adversely.

However, there is a big positive in the report. If further emissions of GHG gases are checked and all countries achieve net zero emission by 2050, global temperature rise will be within 1.5 degree Celsius, and humanity will be saved from disastrous consequences of frequent and destructive extreme weather events.

‘Emission gap report’ of UNEP suggests that GHG emission is annually growing by 1.4% since 2010. However, the increase was 2.6% in 2019 because of forest fires in Brazil, Australia and California, thus registering the highest GHG emission of 59.1 Giga-

ton of CO₂ equivalent. The report has ranked starting from highest polluter China, followed by USA, European Union & UK and India; each of these contributed 14.1, 6.6, 4.3 and 3.7 Giga-ton respectively. The year 2021 has also seen wildfire in 1.5 million ha in forests of Siberia, 1.3 million hectares in California’s forests, .5 million hectares in Greece, Turkey and Algeria, which will again add unprecedented growth of 2.6% in GHG emissions in 2021.

Joe Biden has committed to bring down the net emission to zero by mid of the century and so also his western allies. China contributes one fourth to global emissions, has committed to peak its emission by 2030 and net zero by 2060. John Kerry US climate envoy is going round the World to bring all countries including China on board. China has recently faced cloud burst where more than 600 mm of rainfall occurred in three days in Zhengzhou, Henan province and severe flooding took the life of 300 people and caused extensive damage to properties and infrastructures.

All eyes are set for Glasgow Climate summit in November 2021 (COP 26) and its president Alok Sharma, a British MP has also been moving round the World to persuade countries to commit record transition to clean energy-based economy and bring emissions of GHG to zero by mid-century. Sharma and John Kerry are battling for transfer of climate finance and affordable technology to developing nations as well. Extreme weather events have been causing sufficient disruption to economic growth of even major economies, countries have no option but to cut fossil fuel-based emissions and bring it to net Zero by 2050.

(B K Singh Former Principal Chief Conservator of Forests (Head of Forest Force) Karnataka)

Wildlife Laws - Where To

By

Dr Akula Kishan

The Wildlife laws consist of the following promulgated by the Government of India:

1. The Wildlife (Protection) Act, 1972
2. Wildlife (Transactions and Taxidermy) Rules, 1973
3. The Wildlife (Stock Declaration) Central Rules, 1973
4. The Wildlife (Protection) Licensing (Additional Matters for Consideration) Rules, 1983
5. The Wildlife (Protection) Rules, 1995
6. The Wildlife (Specified Plants –conditions for possession by Licence) Rules, 1995
7. The Wildlife (Specified Plants Stock Declaration) Central Rules, 1995
8. The national Board of Wildlife Rules, 2003
9. The Declaration of Wildlife Stock rules, 2003
10. The Recognition of Zoo Rules, 2009

Apart from the above, State Governments formed their own rules, and in the erstwhile State of Andhra Pradesh, the following rules were made:

1. The Wildlife (Protection) (Andhra Pradesh) Rules, 1974
2. The Andhra Pradesh Protected Areas (Possession of Arms) Rules, 1998

Background: Wild Birds Protection Act, 1887 was the first enactment in British India for protection of Wildlife whereas Wild Elephants Preservation Act, 1879 extended to certain provinces only. The Wild Birds Protection Act which prohibited the

possession or sale of certain specified birds during breeding season was applicable to Municipalities and Cantonments and not in other areas. There was no ban on killing of wild birds and animals, and to prevent indiscriminate killing of wild animals, Government of India passed 'Wild Birds and Animals Protection Act, 1912'.

The Act of 1912 prohibited killing or capturing of wild animals and birds and the Wildlife considered endangered was listed in the Schedules.

Wild Birds and Animals Protection Act, 1935 was issued as an amendment to Act of 1912. In the Schedule to the Act of 1935 large number of birds and animals were included for protection. The Act also provided for creation of sanctuary for protection and growth of wild animals and birds.

The Wildlife (Protection) Act, 1972 is a comprehensive legislation to provide for the protection of wild animals and birds apart from laying down the procedure for declaration of areas wildlife sanctuaries, National Parks etc.

The Act was amended in 1982, 1986, 1991, 1993, 2003 and 2006

National Tiger Conservation Authority (NTCA):

The creation of National Tiger Conservation Authority (NTCA) was through Wildlife Amendment Act, 2006 for specifically dealing with Tiger Conservation Plans in the Country.

NTCA has been fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening

tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees.

The 'Project Tiger' is a Centrally Sponsored Scheme (CSS) of the Ministry of Environment, Forests and Climate Change, providing funding support to tiger range States for in-situ conservation of tigers in designated tiger reserves, and has put the endangered tiger on an assured path of recovery by saving it from extinction, as revealed by the recent findings of the All-India tiger estimation using the refined methodology.

As per the data in the website of NTCA, the tiger mortality from the year 2012 to 2021 was 951.

Wildlife Crime Control Bureau (WCCB) The Government of India notified the constitution of the Tiger and Other Endangered Species Crime Control Bureau to be known as the Wildlife Crime Control Bureau vide Order No. S.O. 918 (E) dated 6th June 2007. It became operational in the year 2008.

WCCB is mandated to coordinate the actions by various officers, State Governments and other authorities in connection with the enforcement of the provisions of Wild Life Protection Act, 1972, either directly or through regional and border units set up by the Bureau. It therefore conducts Inter - Agency Coordination meetings at regular intervals.

There are few cases detected by the coordinated efforts.

Protected Areas in India

As per the data available in website of www.envis.nic.in, the protected areas in India area as follows:

	Number	Total area (sq.km)
National Parks	104	43,716
Wildlife Sanctuaries	566	1,22,420
Conservation reserves	97	4,483
Community Reserves	214	1,302
Protected Areas	981	1,71,921

Wildlife Institute of India (WII)

The Institute was set up by order of Government of India in their orders dated 22.05.1982, and presently the following departments and cells are functioning:

Departments

1. Animal Ecology & Conservation Biology
2. Eco-development Planning & Participatory Management
3. Endangered Species Management
4. Habitat Ecology
5. Landscape level Planning & Management
6. PA network, Wildlife Management and Conservation Education
7. Population management, capture & Rehabilitation
8. Wildlife Health Management

Cells

1. Wildlife forensic
2. Environment Impact Assessment (EIA)
3. Captive breeding & Zoo Management
4. Computer and GIS
5. Wildlife policy and Research
6. Audio Visual Unit & Wildlife Extension

The Institute is nodal agency in India for imparting training in wildlife management. But there is no specific department or cell exclusively to deal with Wildlife laws and procedures.

WHERE TO

The existing wildlife laws are being implemented with lack of logistical support and adopting proper legal procedures, Though, according to one estimate, there are about 20,000 cases occurring per year, the conviction rates are negligible. It indicates that the laws could not be properly enforced due to various reasons.

The following steps may be considered to improve the situation:

1. The Wildlife offence rules need to be formulated on lines of Wildlife Crime Investigation Manual already prepared and circulated by MoEFCC.
2. The other rules such as Protection Rules need to be amended
3. The Wildlife Institute of India should develop exclusive portal for guiding the field staff in registering offences, identification of the wild

animal, and the data base with case laws.

4. The activities of NTCA and WCCB must be expanded and information may be shared with States and in other portals
5. A simple mechanism may be developed by each State to receive complaints on line or other easily accessible modes
6. The wildlife habitat is shrinking due to loss of forest land under RoFR Act, Forest (Conservation) Act, 1980 etc. are taking away the habitat of wildlife. Protection of habitat and its improvement is equally important as compared to enforcement of laws.



*We may never be strong enough to be entirely
nonviolent in thought, word and deed.*

*But we must keep nonviolence as our goal
and make strong progress towards it.*

How India Became Synonymous with Koh-I-Noor & Other Diamonds!

By

Dr. B. Raghotham Rao Desai

"I am not tired writing about them as I experience my awe and love yet again for Koh-I-Noor. These diamonds in the possession of various individuals & countries are a delight to the senses whenever I think of them. Their sizes, coupled with their graceful presence often reminds me of their origin from my country and makes me proud – they being spread all over the world like open arms: sparkling yet gentle and enveloped with unmatched glory."

Preamble: Readers may recall the contents of my article "The 'Koh-I-Noor' (The Mountain of Light)" which appeared in VV of September, 2017 issue, wherein only a tangential reference was made (as it was not needed more there) in the 'Introduction' thus: "... except the probability of it being derived from the Golconda-mines (Telangana) at an uncertain date." Let us now try to know more about how the citadel of riches (Golconda) made India synonymous with not only the said very famous diamond but with equally important and world-famous other diamonds, during the Qutab Shahis' period (1512 – 1687 AD), with their flourishing maritime-trade.

The Qutab Shahi Sultanate of Golconda ruled over present-day Telangana, Andhra Pradesh and Tamil Nadu for 175 years, spread over 16th & 17th centuries, and were great patrons of art, while making Golconda the shorthand for a rich mine ---- security, privacy and an opening to the sea making it famous for its diamond trade. The diamonds were mined in the present-day Guntur district and the only way they

were made to traverse across the world was through the sea. At one point of time, not less than 30,000 mines sifted sand for diamonds ---- the trader being allowed to keep diamonds under one carat but everything bigger belonging to the king.

It is from here that some of the world's most famous diamonds ---- the Koh-I-Noor, the Daria-i-Noor, the Hope, the Orloff and the Great Table ---- were mined. The Golconda diamonds began their voyages to other shores from Machilipatnam port where foreign trade flourished under the Qutab Shahis, and being also a part of the spice route, the port was a stopover for those from the east coast going to Mecca ---- at one point 80% of the trade in Lisbon (Portugal) port being from Golconda.

The legendary Hope Diamond was produced from a 115 carat Golconda diamond bought by Tavernier, the famed French traveler & jewelers, in 17th century, which came to be known as the Tavernier Blue and was acquired by the King of France (Louis XIV) and subsequently all the 14 other diamonds (in exchange for 400 kgs of gold). Cut smaller, it yielded the French Blue, which became King Louis's necklace. This diamond was stolen during the French Revolution, acquired a curse, underwent recutting (with the largest section acquiring the name Hope) and finally ended in the USA ---- now in the Smithsonian Museum, Washington DC.

A list of the most famous diamonds from these mines is given below along with their status at present.

Some of the most famous diamonds from Golconda:

- (Pink) Daria-i-Noor (152 Carats) → in the Iranian Crown
- Dresden Green Diamond (41 Carats) → Dresden
- (Blue) Hope Diamond (67 Carats) → American Museum of Natural History
- Jacob Diamond (184.75 Carats) → RBI, Mumbai
- (Colorless) Koh-I-Noor Diamond (105.6 Carats) → British Crown, London
- Nassak Diamond (43.38 Carats) → American Edward J. Hanol
- Noor-ul-Ain Diamond (60 Carats) → National Treasury, Iran
- (Colorless) Orlov Diamond (189.62 Carats) → Kremlin, Moscow, Russia
- (White) Regent Diamond (140 Carats) → Louvre, Paris
- Sancy Diamond (55.23 Carats) → Louvre, Paris
- Shahlaham Diamond (88.7 Carats) → Kuwait
- Wittelsbach-Graff Diamond (31.06 Carats) → Qatar
- Shah Diamond (88.7 Carats) → Kremlin, Moscow, Russia
- Archduke Joseph Diamond (78.54 Carats) → Anonymous Buyer
- Beau Sancy Diamond (35 Carats) → Anonymous Buyer
- (Yellow) Florentine Diamond (137.27 Carats) → Lost
- Great Mogul Diamond (280 Carats) → Lost

- Nizam Diamond (340 Carats) → Lost
- Pigot Diamond (34.65 Carats) → Lost

Fact File:

The story of Golconda Sultans also begins with a sea voyage ---- the dynasty's founder (Quli Qutab-ul-Mulk) coming from Hormuz (Iran), with his uncle (Allah Quli) and a horse, escaping from Persia where his Turkoman Muslim tribe was being wiped out, in the year 1480 when the first independent Muslim state of Deccan (the Bahmani's) was having power with headquarters in Bidar. He impressed the ruler as a strong man by stamping out highway crime & fighting off a pirate, thus becoming a Governor. Once the Bahmani kingdom disintegrated, he declared independence and founded the rule of Qutab Shahis from Golconda.

Conclusion:

The Qutab Shahis adopted Deccani Urdu & Telugu, created the garden city of Hyderabad and wrote sensuous poetry ---- about dark-skinned women, the monsoon and even the Sheer Khurma, and also translated a sex manual into Persian ---- the fifth ruler of the dynasty (Mohammad Quli Qutab Shah) himself being a poet of great repute.

The sea and trade brought a new culture to the land, while bringing skirmishes too. However, symbols from the sea formed part of Qutab Shahis' hedonistic life (i.e., a life of pleasure and self-indulgence).

References:

1. The six voyages (1678) by Jean-Baptiste Tavernier.

Hyderabad:

The Rise and Fall of a Global Metropolis in Medieval India by Sarish Naniset. ●

Periyar National Park/Tiger Reserve - Thekkady

By
V. Santhaseela Babu

Periyar National Park (PNP) and Periyar Tiger Reserve (PTR) is located near Thekkady Town in the districts of Idukki and Pathanamthitta in Kerala. It is the perfect example of nature's bounty with great scenic beauty and rich Biodiversity. Periyar Tiger Reserve is a UNESCO World Heritage Site and is one of the most visited Protected Areas in India. PTR bagged the title of the "Best Managed Tiger Reserve" among the 50 Tiger Reserves in the country in terms of Management Effectiveness Assessment in 2018 by National Tiger Conservation Authority (NTCA). In this astounding location of Kerala, the Periyar National Park is considered as the most Protected Area for the Elephants and the Tigers. The Park is being adorned with a picturesque lake at the heart of the Sanctuary which is an artificial 100 years old lake at Thekkady and is basically known for its Wild Elephants and thickly established Western Ghats forests. During 1968-70 when we underwent our training in Southern Forest Rangers College at Coimbatore, we had the opportunity of visiting this Wildlife Sanctuary. While we were travelling in the Boats, we had the exciting experience of sighting herds of Elephants on the both sides of the lake. This is one of the most renowned National Parks in South India which is set high at the Western Ghats ranges. It is an Elephant Reserve and a Tiger Reserve. The Protected Area consists of 925 sq.km out of which the core zone of 305 sq.km was declared as the Periyar National Park in 1982. The Park is a home of Rare, Endemic, and Endangered Flora and Fauna and is a major Watershed of Periyar and the Pamba rivers. The Park is located in the Cardamom Hills and Pandalam Hills of the south Western Ghats along the border with Tamil Nadu. It is 4 km from Kumily, about

100 km East of Kottayam, 110 km West of Madurai and 120 km Southeast of Kochi. During 1934 the Maharaja of Travancore, Chithira Thirunal Balarama Varma declared the Forests around Periyar lake as a Private Reserve to stop the encroachment of areas for raising Tea plantations. This was the first move in Kerala towards the preservation of Wildlife and Biodiversity. This was named as Nellikkampatty Reserve. In 1950 this was declared as a Wildlife Sanctuary.

Periyar Tiger Reserve is administratively under the control of the Kerala Forest Department. (KFD) which is a Law Enforcement Agency in the forests for the State of Kerala and is one of the few oldest and important administrative organs of the State with its Headquarters at Thiruvananthapuram. The department is involved with the Protection and Conservation of Flora and Fauna in their Natural Habitats and involved in conserving an area of 10,336 sq.km of forests forming 29.101% of the total Geographical area of the State.

The boundaries of the park are as follows:

- **North:** The boundary commences from the point nearest to the Medaganam in the interstate boundary up to Vellimalai.
- **East:** Thence the boundary follows the interstate boundary from Vellimalai to Kallimalai Peak (1615 M)
- **South:** Thence the boundary follows along the main ridge to Chokkampettymalai Peak (1805 M). Thence along the main ridge to Udumalai (1594 M) (the same boundary which divides Ranni Forest Division and existing Periyar Tiger Reserve).

- **West:** Thence the boundary proceeds due north along the main ridge dividing Periyar Tiger Reserve and Ranni Forest Division to Manikamalai and thence along the ridge to Sundaramalai (1813 M) from Sundaramalai the boundary runs along the main ridge to Mangaladevi top (1737 M), and thence to Pachimalai top (1805 M) from Puchimalai top the boundary follows the Nallah in itself bank, Nallah coming from Mannarkavala and then proceed along Cherakottai river till it joins the Periyar lake between Pandaravara-malai and Poupara.

The Periyar and Pamba Rivers originate in the forests of the Reserve. The other prominent peaks within the park are Pachayarmala, Vellimala, Sunderamala, Chokkampetti mala and Karimala. The topography consists of steep and rolling hills which are thickly wooded. The Sanctuary surrounds Periyar Lake, a reservoir measuring 31 sq.km, which was formed, when the Mullaperiyar Dam, was constructed in 1895. The reservoir and the Periyar River meander around the contours of the wooded hills, providing a permanent source of water for the local Wildlife.

The temperature varies depending upon the altitude and it ranges between 15°C in December and January and 31°C in April and May. Annual precipitation is between 2000 and 3000 mm, about two-thirds occurring during the Southwest monsoon between June to September. Much of the rest occurs during the Northeast monsoon between October and December. Summers are warm with some precipitation in April and winters are cold.

The following are the chronological events that took place in the history of Periyar National Park.

- 1895 – Construction of the Mullaperiyar Dam
- 1899 – Formation of the Periyar Lake Reserve

1933 – S.C.H. Robinson was made the first Game Warden

1934 – Formation of Nellikkampatty Game Sanctuary

1950 – Consolidation of Periyar as a Wildlife Sanctuary

1978 – Declaration of Periyar as a Tiger Reserve

1982 – Preliminary notification of the core area as a National Park

1991 – Brought under Project Elephant

1996 – India Eco-development Project launched

2001 – Divided into Periyar East and Periyar West (Reorganization of PTR)

2004 – Formation of Periyar Foundation

2007 – 148 sq.km of the Goodrical Range added to the Reserve.

2011 – The management of Periyar Tiger Reserve has been assessed as “**Very Good**” by the National Tiger Conservation Authority and the Union Ministry of Environment and Forests.

2012 - An additional 148 sq.km of evergreen forest at Ponnambalamedu added to the Reserve.

Situated within the confines of the Western Ghats in the southern Indian state of Kerala, Periyar National Park and Tiger Reserve is one of the most captivating Wildlife Parks in the world. Elephant in Periyar is another major attraction. In 1895, the British undertook Water Resource Management Plans for the area and started work on a Dam and an Artificial Lake under the auspices of Col. J. Pennycuik. The picturesque Lake in the heart of the Sanctuary was originally 26 sq.km but now spans an area of 55 sq.km. This perennial source of water, which initially led to the submersion of large tracts of Forest land, slowly attracted wild animals. It eventually

resulted in the adjoining Forests being granted Protection by the Maharaja of Travancore. Post-1975 Periyar finds itself in the enviable position of being a National Park as well as a Protected Tiger Reserve. Periyar (also known as Thekkady) is a Park where one can witness playful Elephants, whose population is currently around 800. Elephants in Periyar make excellent Wildlife watching. The population of Tigers is also increasing appreciably. The terrain ranges from hilly to flat Grassland areas at the edges of the Lakes.

Flora: The Park is a home for Tropical Evergreen and Moist Deciduous Forests, Grasslands, stands of Eucalyptus, and Lake and River Ecosystems. There are many hundreds of flowering plant Taxa, including about 171 species of Grass and 140 species of Orchids. The Grasses occur in the open Grasslands found on the edges of the water body where fire resistant vegetation grows and dense Grasses like Elephant Grass are found. This is the common dining hall for various Herbivores. The Forests contain Deciduous and Semi Evergreen trees like Teak, Rosewood, Terminalia's, Sandalwood, Jacaranda, Mangoes, Jamun, Banyan, Sacred Fig, Plumerias, Royal Poinciana, Kino tree, Bamboos and the only South Indian Conifer, *Nageian wallichiana*. The medicinal Gloriosa Lily grows in the park. The Endemic Flora includes *Habenaria periyarensis* and *Syzygium periyarensis*. The Park is surrounded by agricultural regions, especially plantations of Tea, Cardamom and Coffee.

Fauna: Mammals: There are 35 species of Mammals recorded in the park, including many threatened species. It is an important Tiger and Elephant Reserve. A total of 40 Bengal Tigers were counted across 925 sq.km of the park in 2017. It is valuable for Asian Elephant and also for a few of White Tigers found here. Other Mammals include the Gaur, Sambar, Wild Pig, Indian Giant

Squirrel, Travancore Flying Squirrel, Jungle Cat, Dhole, Sloth Bear, Lion-tailed Macaque, Nilgiris Langur, Gee's Golden Langur, Common Langur, Salim Ali's Fruit Bat, Stripe-necked Mongoose, and Nilgiris Marten, Mouse Deer, Barking Deer, and Bonnet Macaque. Periyar is also being considered as the habitat of the elusive Nilgiris Thar, which can rarely be seen but commends its presence.

Birds: About 266 species of Birds can be seen in the park, including Migrants. Endemic Birds include the Malabar Grey Hornbill, Nilgiris Wood Pigeon, Blue-winged Parakeet, Nilgiris Flycatcher, Crimson-backed Sunbird, and Black-necked Stork. A four-day survey was conducted in December 2016, organised under the aegis of the Periyar Tiger Reserve (PTR) and found the presence of 13 new Bird and 16 Butterfly species that were undetected earlier. The newly found Bird species included Eurasian Woodcock (*Scolopax rusticola*), Steppe Gull (*Larus fuscus barbensis*), Grey-necked Bunting (*Emberiza bruniceps*) and Paddyfield Warbler (*Acrocephalus agricola*) etc.

Reptiles: There are 45 species of Reptiles- 30 Snakes, 13 Lizards, and two Turtles. Snakes include the King Cobra, Malabar Pit Viper, and Striped Coral Snake.

Amphibians: Amphibians in the Park include Caecilians, Frogs, and Toads. Species include the Malabar Gliding Frog, Asian Toad, Fungoid Frog, and Bicolored Frog.

Fish: There are about 40 species of Fish in the local lakes and rivers which include the Periyar Trout, Periyar Latia, Periyar Barb, Channa Barb, and Travancore Loach.

ECO SYSTEM VALUATION: It is estimated that the Periyar Tiger Reserve (PTR) provides flow benefits worth 17.6 billion Rupees (1.90 lakh per Hectare) annually. Important Ecosystem services included

Contd.. on page No.35

We produce black - But our views are Green



Cultivation near Reclaimed Dump



Settling pond / Summer storage tank



Eco-Friendly Park



Award in recognition of eco-friendly measures

- Pollution control and Soil Conservation Measures.
- About 5.50 crore saplings were planted in Singareni spread over area.
- Artificial forest covers to OC Dumps.
- Avenue plantation in colonies and roads.
- Eco-friendly parks developed in colonies.
- Sand manufactured from OB.
- STP/ ETP at all Colonies / Establishments.
- Efforts of Singareni were rewarded by State and National level awards.



Colonies surrounded by greenery



Reclaimed OB Dump

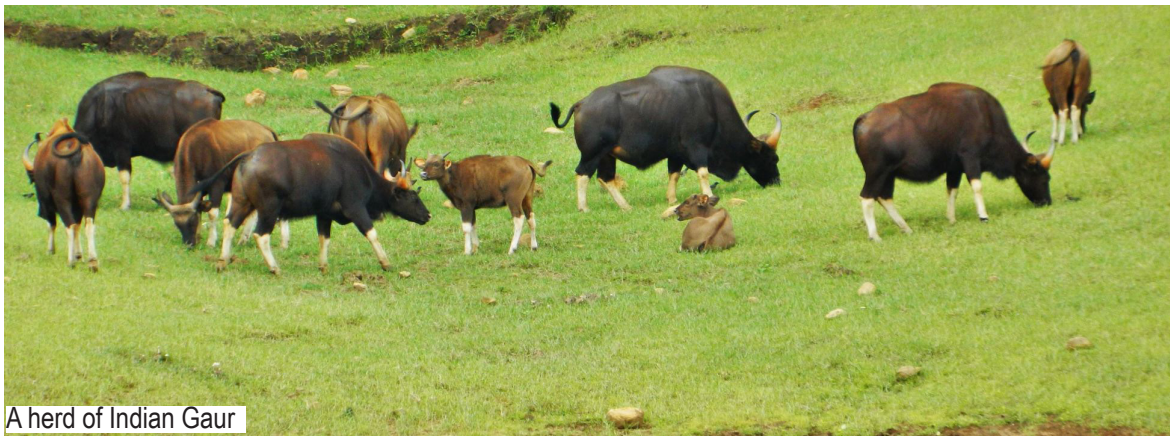


THE SINGARENI COLLIERIES COMPANY LIMITED

(A Government Company)



Forest Beat Officer's Convocation at Dulapally



A herd of Indian Gaur



Elephants of Periyar Tiger Reserve



Nilgiris Langurs of Periyar



Royal Bengal Tiger of Periyar



Seizure and Booking of Indian roofed Turtle case. (*Kachugatecta*)



Indian roofed Turtle. (*Kachugatecta*)



- ◆ 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**

Continuation from page No. 30

Gene-pool Protection (Rs. 7.86 billion), Water Provisioning to districts of Tamil Nadu (Rs. 4.05 billion), Habitat and Refugia for Wildlife (Rs. 3.55 billion), Employment Generation for local communities (Rs. 25 million), Water Purification services to nearby towns and districts (Rs. 483 million) and Recreation Value (425 million).

Community Based Ecotourism Program: The following Community Based Eco-Tourism Programs are available for the Tourists visiting the PTR which are arranged by the Kerala Forest Department.

i.) Nature Walk-Green Walk - Short Day Trek: It is an interpretive Sandal protection trekking program offering excellent opportunity for watching Birds, Butterflies and other Wildlife through a range of habitats during the 4-5 km. 2 ½ hours walk. These programs are offered between 7 am to 3 pm in different Nature Trails inside the Park. A maximum of 6 persons can go for trekking at a time along each Trail accompanied by a trained Tribal Guide. It is a program where one can feel Nature's whispers and her sighs.

ii.) Bamboo Rafting - Full Day Trekking & Rafting: This is a dawn-to-dusk range Hiking and Rafting program through some of the richest Forest tracts of Periyar Tiger Reserve. Starting at 8 am from the boat landing, a Mosaic of habitats will be traversed before the party gets into rafts made of Bamboos. The Forests are rich in Bird life and arboreal animals like Giant Squirrel and Nilgiris Langur. Rafting lasts for about three hours and one gets a panoramic view of Forest-clad hills reflected on the lake. Animals like Elephant, Gaur and Sāmbhar are sighted keeping close to the edges of the lake. The team hitchhikes back to the boat landing by about 5 pm. An Armed Guard and 4 Guides will accompany a maximum of 15 Tourists. Tea, Snacks and Packed Lunch will be served enroute. This package is an excellent

program for semi-serious Nature lovers to feel the beauty of Nature.

iii.) Periyar Tiger Trail - 2 Nights Camping & Trekking Program: In the Tiger Trail, Nature lovers are in the hands of a Team of Guides hardy and dependable who know the Forest and its ways intimately. They were once Poachers who have been transformed into the Protectors of the Forest and now part of the Protection Force of PTR. This is an adventurous camping and Trekking program of one-night – two-days and two-nights – three-day duration. The team consists of a maximum of 6 Visitors, 5 Guides and one Forest official.

iv.) Border Hiking – Thondiyyar --Border Hiking – Brandipara --Full Day Hard Trekking: These are two different day-long range Hiking programs along the borders of Periyar Tiger Reserve. The route passes through undulating terrains and altitudinal ranges of 900m. to 1300m where the trekkers can have the glimpse of the lofty Escarpments bordering the Park, Watersheds and the vast stretches of Cumbam Valley below. Gaur, Sloth Bear, Elephants are often sighted apart from Birds and Butterflies. A maximum of 12 Tourists can take part in the program in 2 different groups. The Trekkers along with two Guides and an Armed Forest Guard participate in the program which starts at 8 am and ends in the evening.

v.) Jungle Scout - Forest Check Post --- Jungle Scout - Bamboo Grove --Night Trek: These are 2 different regular Night Patrolling Programs in the fringes of the Eco-Development Zone of the Tiger Reserve in the company of Armed Guards between 7 pm and 4 am (7pm-10, 10-1am, 1-4am). This program injects excitement into the experience while keeping smugglers at bay. One really feels himself like a Cop protecting the precious Forest wealth. Of course, these best suit younger visitors fit and disciplined enough to walk in the silence of the night.

vi.) Pugmark Trail-- Self-Guided Trek: This is a self-guided Trek at Periyar Tiger Reserve for exploring the beauty of Nature through a Self-guided Soft Trekking. In this program the Tourists will be guided by a number of Bio-diversity themes, pictures of Birds carved out in stone, Tree species name boards etc. The Trekking starts from entrance gate and ends up near the Boat landing area.

vii.) Bamboo Grove -- Bamboo Cottages: An Eco-lodge for experiential learning run exclusively by a Forest Department initiative to support local communities. The fifteen Bamboo Huts with hygienic and modern furnishings are placed between Bamboo Thickets. The ambience of Bamboo Grove provides an opportunity to listen to the whistling of Bamboo culms, chirping of Birds and the flow of small Rivulets emerging out from the swamps of surrounding Periyar meadows.

viii.) Boating -- Boating At Periyar Lake: Periyar Tiger Reserve offers 1 ½ hrs Boating trips at the Lake near the Sanctuary. A herd of Elephants or a group of Sambar Deer are common sights near the Lake. The Tourists may be able to spot herds of Gaur and Wild Boars in the Grasslands adjacent to the shores. A variety of Avian Fauna such as Darters, Egrets and Kingfishers can be seen resting on dead tree trunks that stick out over the lake. During the Boat ride, there is also a high probability of observing the antics of the Smooth Indian Otter.

Boating Timings:

Morning: 7:30 am: 9:30 am: 11:15 am.

Afternoon: 01:45 pm: 03:30 pm.

ix.) Jungle Camp -- Tented Stay: Located in Vallakadavu. 15 Tents are being operated by PETS EDC. Two adults can stay in a Tent. Tourist who avails package can opt for Safari, Trekking and Boating at Periyar Lake. Package includes all Meals, Trekking, Gavi Safari & Boating at Thekkady

By availing any of these communities based eco-tourism programs, the Tourists will be directly helping in the empowerment of Forest dependent communities which will in turn reduce their Forest dependence and help in the conservation of the park and the Tigers. Hence the Tourists are also contributing towards conservation of Periyar Tiger Reserve.

Best Time to Visit Periyar National Park: Winter season lasts from October to March and is cool and pleasant for visiting the Park. Visit of the National Park and viewing Elephants in Periyar make the entire experience unforgettable. The months of March and April constitute the driest part of the year, because of which the animals spend a lot of time near the lake. Even the Tiger may be spotted approaching the waters. Animals may be seen from Motorboats on the Lake or from Watchtowers.

How To Reach Periyar National Park Kerala:

The Park is well connected by Bus service from the State Capital of Thiruvananthapuram (271 km) as well as the cities of Cochin (200 km), Kottayam (117 km), and Madurai (140 km). The nearest major Rail Junction is Kottayam. The nearest Airports are Cochin (200 km) and Madurai (140 km).

Contact Details:

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www.periyartigerreserve.org/

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e-mail: vssbabu@gmail.com.) **Source: Internet**

and www.periyartigerreserve.org

Mankind's Association with the HORSES

By

Dr. B. Raghotham Rao Desai

Introduction: A. One of William Shakespeare's most famous horse-based quotes (a good example of iambic pentameter) comes from his play 'King Richard III', after the King loses his horse in the battle. Act V happens to be the last one in the lengthy drama and Scene IV happens to be the very last. The Bard of Avon makes a mention the following way:

Act V

Scene IV – Another Part of the Field

Enter NORFOLK (i.e., Duke of Norfolk), **and Forces**; to him **CATESBY** (i.e., Sir William Catesby), the King's loyal councilor offers:

Cates. Rescue, my Lord of Norfolk! rescue, rescue!

The king enacts more wonders than a man,

Daring an opposite to every danger,

His horse is slain, and all on foot he fights,

Seeking for Richmond in the throat of death.

Rescue, fair lord, or else the day is lost!

Enter King RICHARD

K. Rich. A horse! a horse! My kingdom for a horse!

Cates. Withdraw, my lord: I'll help you to a horse.

K. Rich. Slave! I have set my life upon a cast,

And I will stand the hazard of the die.

I think there be six Richmond's in the field;

Five have I slain to-day, instead of him –

A horse! a horse! My kingdom for a horse! [Exeunt.

B)

A.) Again, Shakespeare (1564 – 1616) makes a mention of the horse in his drama "Much Ado About Nothing" as **Beatrice** (niece to Leonato, Governor of Messina) throws insults in **Benedick's** direction ---- he being a young Lord of Padua ---- when he says, "Well, you are a rare parrot-teacher" (meaning that she babbled nonstop like a parrot. Beatrice's response is "A bird of my tongue is better than a beast of yours..." to which Benedick replies "**I would, my horse had the speed of your tongue and so good a continuer**".

Act I

Scene I – Before Leon Ato's House

Benedick. Well, you are a rare parrot-teacher

Beat. A bird of my tongue is better than a beast of yours.

Bene. I would, my horse had the speed of your tongue and so good a continuer. But keep your way o' God's name, I have done.

Beat. *You always end with a jade's trick:* I know you of old.

(Benedick means to say ***"I wish my horse were as fast as your tongue, and could go on and on in the same way and was as tireless. But have it your way, for God's sake. I'm done"***. To which Beatrice's response was: "You always end with a jade's trick!" A jade is an ill-conditioned horse, so a jade's trick is what you would expect from such a creature ---- that it drops out of a race before the finish!!)

Mankind's Association:

Having played a significant role in the evolution and progress of mankind for thousands of years, the horse gets mention in the epics of **Ramayana (Treta Yuga)** and **Mahabharata (Dvapara Yuga)**. As the respective rulers perform **"Aswamedha Yagas"**. Horses played similar roles in the ancient Arab world, Europe, China, Mongolia etc. in many a reference in their ancient texts.

And in our mythology, we have a **horse-headed avatar ("Hayavadana") of Lord Vishnu** who is purported to have saved the sacred Vedas from the demons & restored them to Lord Brahma. The genuineness of the restored work is unquestionable because it was mediated through a horse ---- an authoritative source after all! Another example we have of horse-headed celestial musician of great repute **Tumburu** (who asked Shiva to grant him a horse-face, immortality, liberty to travel the universe, skill in music and singing), the best among the Gandharvas as a musician and singer to perform in the courts of gods Kubera and Indra as well as sing praises of God Vishnu.

Proverbs being our legacy, the horses have contributed in no small measure to it. **"Don't look a gift horse in the mouth"** (meaning don't find fault with a received gift) is a proverb attributed to Heywood since 400 AD.

"Don't put the cart before the horse" (is a classic example of what is preposterous ---- a back to front imagery ---- meaning what should come first is placed second) and **"Don't shut the stable door after the horse has bolted"** (which simply means that it is futile to take precautions when the damage has already been done). These two proverbs are found to be in vague since 1390 AD.

"Straight from the horse's mouth" (simply meaning getting credible information from authoritative sources attached to a racehorse before racing ---- an "insider information" so to say). **"If wishes were horses, beggars would ride"** (a nursery rhyme, suggesting that if only wishing could make things happen, even the destitute would then have all that they desire for). These proverbs date back to 1628 AD.

"Don't change horses midstream" (meaning it is far from wise to change your leader or your basic position midway through a campaign or a project), is a saying from Abraham Lincoln's speech of 1864 AD.

Conclusion: have been paying a great compliment to the noble animal ever since the Scottish inventor James Watt (inventor of the steam engine) FRS, FRSE (1736 – 1819), who measured in 1776 the capability of a big horse (to pull the load on its back) and called it **"Horsepower"**. He was a mechanical engineer and chemist, who improved on Thomas Newcomen's 1712 steam engine with his Watt steam engine which was fundamental to the changes brought by the Industrial revolution in both his native Great Britain and the rest of the world. ●

Swami in Forest Land

By
M. Ram Mohan

One evening Beat Officer of Incherla came to Office and told that a self-styled Swami settled in forest area saying that he is said to be *Kalanaga maharshi* arrived from Himalayas. The Beat Officer expressed his inability to move Swami out of the forest land as he was facing staunch opposition from the local villagers and particularly from the people thronging the place for performing Pooja. The area occupied is a prime land located in the Venkatapur-II forest block in Mulugu Range abutting the National High way.

After a few days, during Beat Inspection I visited the area and found a man in thirties, body smeared with *vibhoodhi* and wearing *Rudrakshas* with *trishul* in hand. On interaction, he said that he was *Kalanaga Maharshi* and *Nagadevatha*, Snake God, was residing at that place by showing a nearby termite mound and further said the God has made this particular place his abode. However, he was counseled and told to vacate the land as it was part of the forest land and occupying the forest land is an offence as per the law and it is against the *Dharma* as well. As the issue is considered to be sensitive, he was given time to leave the place without booking case against or resorting to forceful eviction of the land by the forest officials.

Few days of time elapsed. But there was no relenting on part of Swami and no signs of him leaving the place. Instead, on one day a '*kuteeram*', a thatched cottage, was established overnight a *Shivaling* was put inside making the things further complicated. The number of the people visiting the place for performing Pooja and getting blessings of Swami, were increasing as the time passed by. *Annadanam*

programs were being conducted. There appeared a conspiracy of encroaching forest land in the guise of religious belief. The same was appeared in the vernaculars also.

The 'sermon' to the Swami and his followers fell on deaf ears. Moreover, the Sarpanch of the village and some village elders, at the behest of Swami, approached the forest authorities and submitted a memorandum in support of the Swami for earmarking forest land for religious purpose by saying that the God Kalanga reincarnated at that place. They were informed in writing that the place occupied is forest land and any non-forestry activity attracts the provisions of TS Forest Act and the Forest (Conservation) Act-1980 and counseled to vacate the place without giving scope for tussle.

Vexed with the issue, on one fine day, Forest officials tried to evict Swami from the place, but in vain due to strong opposition from the people, especially women devotees visiting the place. As the situation was poised to be worsened, the officials withdrew themselves from the place. The issue was appraised to the higher officials. The situation was closely monitored for a few days. But there had been mounting pressure on forest officials as the number of people thronging the place was increasing and it was feared that the situation aggravates and the land becomes irretrievable.

After a few days, it was planned to evict Swami and remove the structure present in the forest land and the Police help was sought. But, assessing the situation after visiting the place, the local Police

hesitated to extend cooperation citing the reason that the issue may snowball into law-and-order problem. Bringing the issue to the higher ups in the Police department did not yield any fruitful results. Higher officials of the Forest and Police departments visited the place to know the ground reality.

Assessing the situation very closely, when the so-called Swami was away, a raid involving all the staff members, though some of them were reluctant to participate, was conducted during night time discreetly. By using machinery, the hut was dismantled and the *Shivaling* present was brought to the Range Office. Before and during the operation, the staff members were to be sensitized to perceive the issue of eviction as foiling malicious attempt of grabbing forest land but not hurting religious sentiments of anyone and motivated towards to protect the precious forest land duty-bound. The operation lasted for about 3 to 4 hours.

The Police was informed about the happenings anticipating repercussion from the devotees and the people associated with Swami the next day and following few days. Meanwhile, some religious outfits issued statements stating that the removal of *Kuteeram* hurt their religious feelings and they were going to resort to rallies, dharna, etc., venting their anguish. But no such things happened and fortunately, no untoward incident occurred in this regard. Of course, the foresters who participated in eviction drive were cursed severely for doing the 'sinful' job. The situation was monitored for a few days. The operation became successful and a master plan of grabbing forest land in the guise of

religious activity was thwarted. A detailed report was submitted describing the events in the issue. The field officers heaved sigh of relief. One of the higher officials remarked that the issue was very sensitive which otherwise would have very serious consequences.

The Sarpanch visited the Office and requested to return the *Shivaling* and Naga statue confessing that it was their fault to choose forest land for the purpose. Further, he revealed that it was decided to establish the *Kuteer* outside the forest land for which the forest officials readily agreed to. A few months passed, but no people came forward to take back the Ling, etc. In the meantime, some god-fearing people in the department were passing comments saying that our forest officials committed 'sin' by removing and bringing the *Shivaling* and keeping it in the Office premises does not augur well and they suffer the consequences. The field officers were bullied to return the *Shivaling* to the devotees or to the temple lest they will be punished. Meanwhile, it came to know that the Swami again established a *Kuteeram*, but this time in another village in adjacent district. The Sarpanch of that village approached the forest officials for the Shivalinga and the request was conceded. After confirming that the new established *Kuteeram* is located outside the Forest area, the *Shivaling*, etc., was handed over to the Sarpanch and other village elders putting an end to a very sensitive and agonizing issue.

P.S.: It came to light that some of the forest officials visited Swami before removal of *Kuteeram* for blessings and performed Poojas. ●

I cannot do everything, but I can do something.

Forestry Education In The State – Then And Now

By
K.B.R. Reddy

INTRODUCTION:

In the Nizam's State of Hyderabad, Forest Wing was a part of the Revenue Department. After it was separated from the Revenue Administration, the Forest Department became an independent entity. In the formative stage, none of the personnel including the Head of the Department had any knowledge of Forestry. After a number of years, the department was organized. Head of the department was known as *Nazim Janglath*, assisted by *Naib Nazim Janglath* (in charge of Circle) and *Madadgar Nazim Janglath* (in charge of division). The back-bone of the forest administration was known as *Ameen Janglath* assisted by *Naib Ameen*, *Sehradar* and *Chowkidar*. They had specified jurisdictions of Range, Section and Beat respectively. It was felt that the subordinate staff as well as the superiors must be given special training.

The first school of forestry for subordinate staff was established at Nizamabad; it was then moved to Mahbubabad and finally to Yellandu. The training center at Yellandu was known as School of Forestry. At the commencement of the school at Yellandu, the medium of instruction was Urdu as the official language of the state was Urdu.

When the State of Andhra was formed bifurcating the Madras State, a Forest School was established at Sudikonda in East Godavari district for training Forest Guards. After reorganization of states, when the State of Andhra Pradesh was formed, this school was merged in 1969 with the Yellandu School. The Yellandu School of Forestry catered to the need of training forest personnel of both the regions of

Andhra and Telangana. It was closed in the year 1987 and the training center is shifted to a place called Dulapally near Hyderabad.

The State Institute of Forestry Training (SIFT) was established in 1987 at Dulapally and it was renamed as Andhra Pradesh Forest Academy in January 2001. Subsequently due to bifurcation of the State, it is further rechristened as Telangana State Forest Academy with effect from June 2, 2014. The Academy is functioning as a Centre of Excellence at national level for training the personnel of Forest Department in the science of forestry. The Academy also imparts training to representatives of NGOs and Vana Samrakshana Samithi's (VSS) on various aspects of forestry and allied subjects. The Academy provides customized training services to personnel from other States like, Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, Karnataka, Assam, Tripura etc. on forestry and Geo-informatics related topics and natural resource management. National level Workshops and training programmes including one-week compulsory training courses for IFS officers are also organized regularly in the Academy.

CENTRE FOR FOREST AND NATURAL RESOURCES MANAGEMENT STUDIES (CEFNARM)

Under the orders of the Government in G.O. Ms. No. 65 EFS & T (For-II) Department dated 27.05.2008, an autonomous body viz. The Centre for Forest and Natural Resource Management (CEFNARM) was established at the Forest Academy, Dulapally, Hyderabad by registering as a society under the A.P. Societies Act, 2001. It is a non-profit society and its

bye laws mandate utilization of the available infrastructure as well as infrastructure to be created, at the Forest Academy, Dulapally.

The main purpose of creating CEFNARM is to provide flexibility in the operations and provide academic services to other departments within the state and also to other states.

FACILITIES AT THE TELANGANA STATE FOREST ACADEMY: The academy has good infrastructure with three hostels with dining halls, for about 180 trainees, matching to that capacity. Training Centre has four spacious class rooms in place. The training Centre was inaugurated on June 25, 2016. An executive hostel with 38 deluxe rooms with twin beds and spacious A/C conference hall is available for conducting national/international workshops.

An Administrative Block (Main Building), 4 quarters for Deputy Directors, 4 quarters for Range Officers and 20 class IV Employees are available on its 75 hectares campus. An in-door multipurpose stadium with 400 seating capacity, outdoor stadium, playgrounds, Gym-room provide support services.

The Academy has modern class room facilities for effective training management. There is one Computer-lab with 40 thin and LAN facility.

HUMAN RESOURCES: The academy is headed by an officer of the rank of Addl PCCF as Director and has a sanctioned strength of one Addl. Director of the rank of C.F., one Joint Director of Dy. C.F.'s rank, 20 Dy. Directors of the rank of Dy. C. F. / A.C.F. of State Forest Service as Dy. Directors and Faculty Members including 5 Range Officers and 2 Section Officers. Presently Smt. Uma Rani Dy. R.O. is working against the sanctioned strength of FSO.

Apart from these faculty members, senior forest officers and retired forest officers, subject experts in

various fields, are invited from time to time to take up sessions mostly for the refresher course.

ACTIVITIES OF THE ACADEMY: The Academy offers two types of training programmes - induction training and refresher courses.

INDUCTION TRAINING: (I) FOREST RANGE OFFICERS TRAINING: A course of Forest Range Officers Training for duration of 18 months is started on November 16, 2020. The VII Batch of training comprised of 16 Range Officers recruited in the States of Madhya Pradesh, Jammu & Kashmir, Himachal Pradesh, Nagaland, Tamil Nadu and Chhattisgarh. The trainees are presently on Study Tour of North India. The tour commenced on September 5, 2021 and will end up on October 7, 2021. The course will last till May 15, 2022.

Another Batch of 18-month induction course is due to commence from September 13, 2021 as proposed by the Director of Forest Education and it will end on March 12, 2023. The VIII Batch of Range Officers course comprises of 41 candidates; 14 from West Bengal, 26 from Uttar Pradesh and 1 from Karnataka.

The expenditure on the induction course of Forest Range Officers is funded by the Director Forest Education.

(II). FOREST SECTION OFFICERS TRAINING: Six-month Induction training programme for the 20th Batch of Forest Section Officers with a strength of 28 was started on July 14, 2021 and their convocation is fixed on December 13, 2021.

(III). FOREST BEAT OFFICERS TRAINING: An induction program of six months is organized for Beat Officers. The 29th Batch of FBOs consisting of 38 candidates was started on January 27, 2021. But due to pandemic situation, the course was postponed

and rescheduled and is completed on September 09, 2021. Another Batch of 60 FBOs will be started on September 15, 2021.

REFRESHERS COURSE: Sometimes, the department feels that the officers in service need to undergo a refresher course. Whenever a requisition comes to the Academy, a course is designed and with the cooperation of the subject specialists the course is organized for the requisite duration.

GENERAL: During the course of training, in addition to class room lectures, field visits, field work, special lectures by senior officers and subject experts, educational tours, practical sessions with focus on management and extension activities are arranged. The trainees are required to take up Project work on field level management challenges, which is the first of its kind initiative in the country. They have seminar presentation, weapon training, weekly feedback etc. to make the training more effective and purposeful.

SPECIAL TRAININGS: Since 2013, special training on personality development, computer applications, accounts and office procedure etc. are being organized for ministerial staff as well, based on the requirement in the field, in addition to the executive staff. For the executive staff, training is being organized both on-campus and off-campus on various topics like strategies for effective forest protection, modern nursery techniques, natural resource management, silvicultural practices, successful prosecution and securing exemplary and deterrent punishments in forest and wildlife offences. With a view to cover a greater number of field staff, the Academy is organizing at least two off-campus at division level every month.

The training programs are organized by the Academy with the funds available under CAMPA and Afforestation.

Details of year-wise training programs conducted are illustrated in the following table:

ABSTRACT
REFRESHERS COURSES CONDUCTED DURING
2010-21 (April 2010 to Sep -2021)

Sl. No.	Year	No. of Programs	Total Participants
1	2010-11	71	2088
2	2011-12	95	3479
3	2012-13	95	3343
4	2013-14	100	3549
5	2014-15	113	5054
6	2015-16	100	4607
7	2016-17	130	8886
8	2017-18	52	1564
9	2018-19	60	2245
10	2019-20 (Online mode)	70	3346
11	2020-21 as on 08.09.2021 (Online mode)	12	2117

Children and Forest Education (CAFÉ):

To sensitize the school children and people about forest conservation, wildlife preservation and protection of environment, the Academy organizes three types of sensitization programs i.e., Nature Study Camps, Eco-Sensitization meets and back to nature Road shows.

During the year 2019-20, 130 Schools participated in the program and 11496 students visited the campus.

Due to pandemic situation programs are not organized in the succeeding year. ●

Wisdom Quote by Tun M

"I would advise people not to rest when they grow old because if you rest, you will soon become very weak and incapable, and may become senile. Be active after you reach retirement age.

It is the same as your muscles. If you don't use your muscles and lie down all the time, the muscles cannot even carry your weight. You cannot stand, you cannot walk.

The brain is the same. If you don't use your brain, you don't think, you don't read, you don't write, the brain regresses, and you become senile. So, always be active."

Tun Mahathir

LENaghazInspires



Good as Gold !

ROLE OF WILDLIFERS

By
B. M. T. Rajeev*

All the Foresters in India are generally recognized as the serving Wildlife's in the field of wildlife conservation and management because of their service in the department of forests, environment and ecology and their access to the training in the field of forestry and wildlife immediately after selection and appointment as executives. Whereas in the western countries the Wildlife's are generally biologists who possess degrees and training in wildlife biology and management. There is always a difference in the mind setup of a forester cum wildlife manager and a wildlife biologist cum wildlife manager. However, the concept of Indian wildlife management is dedicated to wildlife in the Protected Areas (PAs) and as a part and parcel of the Forestry in the other wings of the FEE (Forest, Environment and Ecology) since wildlife is found in all the forests as well as in off the forests. Wildlife management is complex and interrelated to many sciences like biology, zoo-geography, physiography, ecology, climate, forestry and socio-economic conditions of the society of the region where wildlife has to be managed. Therefore, it is necessary for the entire forest force in India to be a wild lifer- a man of interest in wildlife to become a successful wildlife manager or a wild lifer in his service. To develop interest in wildlife he should have a good knowledge on the following key issues concerning wildlife by leaving the mindset that-one can manage wildlife with the book-Wildlife (Protection) Act & Rules in hand.

- 1) He should study and have full knowledge on the life and attributions of all important fauna or animals of his protected area/ forests/ state/ country i.e., species, their life span, habits,

breeding, habitat requirements (food, water & shelter), threat to their survival and other problems for them to gain interest in observing them to take appropriate right actions to conserve them in right time.

- 2) Habitat types of the protected areas/forests/ Districts/States/Country.
- 3) Social, economic and political set up of the civilization around the protected areas/forests /district/State.
- 4) Chronic problems of the protected areas/ forests/district/State.
- 5) General knowledge on wildlife.

The general knowledge/information on wildlife is not available in a book or in a course or in a degree. It has to be gained from many sources with interest on wildlife...some from books and literatures; some from documentaries/TVs/films; some by listening to experts and some from listening to field staff / experienced retired wild lifers/tribals and finally from observations in the field with reference to the knowledge gained from all the sources to cross checkto have command over the subject-wildlife.

Wildlife includes both the wild flora/fauna but for the purpose of wildlife conservation wild fauna are considered only as wildlife as there are other wings of science /departments to deal with other life forms eg; Forestry, Horticulture, Agriculture, Fisheries, Animal husbandry, etc.

The mindset of the man on wildlife: The modern man has a system of valuing everything in nature in terms of money/importance for him; and he has not left the

faunal species which are part of the ecosystems like him from valuation; if any species of animals not found to be of no use/value as per him, it is considered to be useless. Whereas every animal in nature has its own role to play fixed by nature from time immemorial; it cannot be considered as useless because the man is yet to know or identify its usefulness. Thus, every animal on earth-on the ground, inside the ground, in the water and in the air or arboreal or in the stomach of another animal has its own roles to play in nature and it has its right to survive in nature and it has to be allowed to survive.

The man has scientifically/logically identified many benefits, uses and usefulness of the wild animals and classified as follows basing on their usefulness for him/nature etc. and many of their usefulness / identity are yet to be identified in nature; yet some have extinct or some are being extinct before their identification is the irony of the modern world.

The benefits or merits or utility values of the wild animals are many and they have to be enumerated for the information of the public to draw their attention for the conservation of the wildlife. These values of the wildlife are the very important plus points to be known for the wild lifers and they should be very vocal to speak on these values to the people and specially to the students like teachers or religious or political party missionaries to popularize the wildlife conservation to gain their cooperation in the management wildlife in PAs or forests or elsewhere in their jurisdiction.

The wildlife's in India or elsewhere are workaholic & dump and shy to speak on wildlife-the reasons for the problems in wildlife management. The wild lifers should practice to talk to the public to convince them about role of wildlife in nature and their importance

for the good of humanity. All Foresters and PA managers should be well versed with the values of the wildlife to be a good wild lifer.

Every organism- living being has its own and definite role in nature. The role of each species in nature is considered its merits/advantages in addition to aesthetic and utility values to man but acts of some animals cause pinch for human beings such are called as demerits/problems due to wildlife. It is very essential to list the positive and negative aspects of wild animals to understand the intricacies in the field of wildlife management. Some of the enumerated merits and demerits are as follows:

1. Merits or positive values of the wildlife: Positive aspects of wildlife are many and are very interesting and attractive to human society.

1. Aesthetic value: Wild animals are colorful in nature and bring joy to the people when sighted in wilderness or nature. There is no parallel for the joy that one gets with sighting of any animal in its abode in the midst of the wilderness.

2. Tourism value: Wild animals attract more people to see, observe and enjoy their beauty in wildlife tourism because of their wilderness in nature blended with the forests and ecosystem of their habitats. Wild animals are the ambassadors of tourism in their own way for many regions/states/countries; wildlife tourism is an economy in many African countries

3. Recreation value: Wild animals have high recreation value because of their beauty and variety in stature/color to observe and enjoy in nature and also as game (only in some countries). They provide unlimited scope for man's hobby in sighting, studying, learning, photographing, painting and writing. Eg. Many rich people take the above hobbies as a

profession and finally end up as good naturalists or photographers or writers or painters.

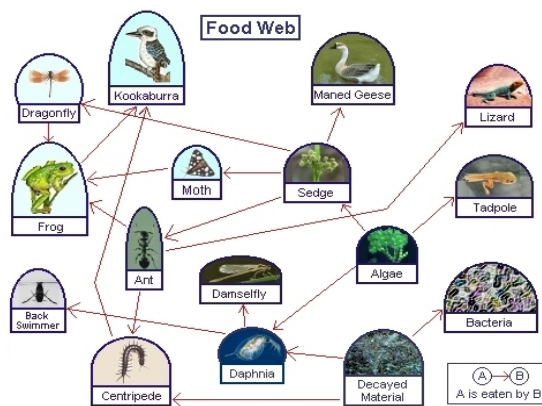
4. Inspiration value; Wildlife inspires many people to work tirelessly like ants, bees and to be alert like birds and love/care/cuddle their offspring like mammals and inspire them to paint and write on them- poems and articles on their life, their behaviors in nature.

5. Role in pollination of flora; Major role in pollination of flora is played by the invertebrates, birds and some animals thus helping in the process of cross pollination of species of flora to maintain their diversity in nature. The bees and butterflies & other insects play a major role in pollination of the agriculture and horticultural crops and in enhancing the yield. Now, there are threats for the bees due to spraying of pesticides to crops and the presence of high frequency towers of the mobile phones and the internet communications-EMF (Electro Magnetic Fields) which disturb the ability of the bees in work and in returning to their beehives-affecting their population which may affect farming in future.

6. Role in dispersal of seeds: The vertebrate animals play a very crucial role in dispersal of seeds and also in pretreatment of seeds of many floral species and helps in their germination (Birds' and animals' food habits helps in pollination of flowers, dispersal and pretreatment of seeds.

7. Value as Food: Most of the animals form food among themselves in the *food web or food chain* and they are also nutritious food for humans. E.g.: The carnivores' food is animals and they prey on herbivores and other animals for food. The Fishes, oysters, ungulates, many mammals, birds and reptiles form prey in the food chain of predators and the man. The food-chain among wild animals controls

their population in balance and maintains the health of nature-by filtering the sick, infirm and aged animals. Hence it is necessary to allow all forms of wildlife to survive in the interest of allowing the food-chain to sustain in nature.



8. Value as medium of Research: The animals form the means for research for the scientific findings in the field of medicine, invention of devices, genetic materials and for zoological science etc.

- Medicines-** Most medicines for diseases of the human being are tried on the animals to begin with on primates, monkeys, rabbits, rats etc. in laboratories. eg. Common long nosed armadillo (*Dasypus novemcinctus*) is used in research against leprosy and it is the only animal susceptible for this disease. The bear's gall-bladder bile for kidney disease and elephant-for thrombosis disease etc. DNA analysis etc. Leeches in treatment of gangrene.
- Development of devices-** Many devices are invented based on the natural ability of the animals in sparking during night, floating in air/water, diving in air/water, ability to see in the dark etc. e g. Night viewing capacity of many animals, glowing fireflies, glowing eyes of cats

against lights in the dark, glowing sea angler fish, glowing body of scorpions etc. are the sources for research and development of night viewing devices, night glowing substances etc. (e.g. Fluorescence used in night glowing coats of the traffic police, night viewing devices etc.).

9. Value in Development of Science & Technology:

Wildlife is the major source of study and research in the field of zoological science and allied field of animal husbandry for the benefit of mankind. The wild animals are also the sources for research and development in the field of aviation- birds and navigation-fish and in development of warfare-technologies.

Some animals were pioneer in the art of technology to the man in the fields of.....spinning-weaver birds, tailoring-tailor bird, construction of barrages for impounding and diversion of water in the rivers-beavers, Art of living in caves- bears/wolves, building houses (nests) for comforts-birds, Underground granary-rodents, etc.

10. As genetic materials: Wild animals are the genetic sources for the animals reared by the human being for bovines and ungulates in our cattle husbandry for selective cross breeding, in fisheries and also for pets etc.

11. Value in scavenging the nature: Wild animals play a very important role in scavenging and maintaining the hygiene of nature; without the scavenging animals the nature would not have been kept clean and healthy from time immemorial. Some animals, birds, reptiles, fishes, and invertebrates feed on the dead animals and clean nature as scavengers. But, the population of the scavenging animals is dwindling due to many reasons forcing the man to attend to the job of keeping his habitats clean.

12. Control of diseases to plants and animals:

The food-chain or food habits of some of the animals, birds, reptiles and fishes in feeding on the lower order animals, insects, moths and worms control the diseases from the diseased animals to animals, pests to the crops and plants and thus help the man indirectly to be free from the problems of diseases. In spite of it man uses insecticides to keep the crops free from pests and affects the lives of these animals.

13. Improvement of the fertility of the soil:

The role of wild animals in improving the fertility of the soil is incredible. The dung, droppings and fecal matter of all wild animals and their dead bodies form manure to the soil. In the course of their life activities some burrow the soil, some dig the soil, some eat the soil, some wallow in the soil, some trample the parts of green vegetation in the course of feeding to the ground and leave it to decompose and thus enrich the soil fertility.

14. Indicators of ecosystem:

Many wild animals are the indicators of the health and wealth of flora and fauna of an ecosystem. E.g.: Tiger is the indicator species of a very wealthy Forest- with full of vegetation and many from of wild animals; Black buck- an indicator species of a dry, arid and open ecosystem; Snow bear- an indicator species of north polar snow sea ecosystem; Penguins- South polar snow region or ice laden sea ecosystem. Great Indian Bustard-an indicator of open grasslands in arid/desert.

15. Indicators of natural disasters:

Wild animals have natural intuition and intrinsic sense in them to take safety steps of dispersal by sensing natural disasters in advance like earthquakes, tsunami and cyclones. e.g. Very rarely death of animals is seen in nature during the above natural disasters except in Zoos and among reared cattle.

16. Wild animals as role models: Animals are natural role models in many characters for man to learn and follow in life.

* *Love, affection and care* of the nursing mother-animal with her offspring e.g.: All mammals and birds in nursing and caring for their offspring.

Attachment to one mate in life time: many animals especially birds show the fidelity of attachment to one mate throughout their life. e.g.: wolf, crows, penguins, vultures etc.

Social in living; many species of wild animals are social in nature, they live in group, herds, flocks and schools to move together, eat together and even sleep together to have defense against the attackers/enemies for safety and happiness., e.g.: elephants, Bisons, lions, ungulates/antlers, wolf, wild dogs, birds and fishes etc.

mourning the death of the kith and kin: Animals mourn the death of the kith and kin by weeping and also by leaving food and some die too. e.g.; elephants stand silent and morn for hours and even for days; crow leave the food and even die if the partner dies

Boldness and velour Many animals are known for boldness and velour e.g., Tiger and male lion are known for velour to take on the enemy as a challenge. Bull elephants, bull of many species of mammals take on the enemy as a challenge and fight out to save the family or group that it heads.

17. Source of domestication: Wild animals are the only source for domestication of different species of animals for the use of man e.g.: different spp. of cats, pigeons, ostriches, rabbits, poultry etc.

18. Source for display/ working: Wild animals are the only source for capture for display in zoos and

circuses for entertainment and study. e.g., elephants, lions, tigers, bears, leopards, birds, reptiles and monkeys. And elephants for timber logging, patrolling in forests and in safari tourism, Yak- draught animals in higher Himalaya. But wild animals display in India is banned except in the zoos.

19. Ecological values: Every organism has its interactive role in an ecosystem and it is unique in its own way. It is impossible to understand the function of an individual species in nature and it is impossible to predict the long-term consequences which may result from their disappearance. Thus, wildlife is indispensable in terms of ecological value. Every species of wildlife has a definite role in nature and its protection is the duty of the man in the interest of him in nature for which all the available natural forests have to be saved and protected from the axe, encroachment and fires.

20. Economic value: Many wild animals have economic values as game except in India, trophies, hides, horns, ivory, hairs, bones, musk, fur, feather etc. and display (butterflies), honey-bee, silk-silk worm, lac-lac insect, lime-shell, ivory-elephants etc. but with the threat of extinction of many spp. of animals, the economic values in the markets have been banned except which are collected without harming the animals e.g., Pea-cock feathers, honey, fallen antlers of the deer outside the PAs etc. in India and the trade in wild animals parts is subjected for the rules of CITES (Convention on International Trade in Endangered Species of Wild Fauna & Flora) in the member countries.

21. Medicinal values: Many wild animals are the basis for many medicines. Tiger parts and its meat and even blood top the list of demands in oriental

medicines of Southeast Asia and China. Rhino's horn, musk deer's musk, venoms of snakes, leeches and honey, etc., are the basis for some medicines but, the products of the threatened animals like tiger & big cats, elephants, bear & rhinos are banned in India and some other countries.

22. Savior of the forests: Wildlife is the only reason for modern man to have restrictions on his exploration and exploitation of natural resources like forests and mines to meet his ever-increasing greed for comforts/wealth. In India, 20 % of the total forests are left inviolate for the conservation of wildlife; otherwise, all forests would have been left open for biotic interference

II. Demerits/Negative values: Man-wild animal conflicts are the major negative values of wildlife before the present rural society which are weighing against them in conservation and management issues. The negative values are as below.

1. Accidents: Man was living by hunting the animals from the day he invented the fire-till then he was living on fruits, tubers & vegetative leaves etc. With the man's habit of hunting animals, they developed fear with the sight of man for a long time; so, they try to escape by seeing him. But the larger animals try to defend themselves by attacking the human resulting in injury or loss of human life. E.g.: Elephants, tiger, leopard, bear, crocodiles, attack on humans causing injury or death.

2. Crop raiding: Wild animals' habitats/ forests have been doled out for farming or encroached upon for farming/ housing/ projects etc. causing shrinkage of their habitats. During the shortage of fodder in the forests or scarcity for water/dearth of area for mating etc. wild animals go out in the routes of their old habitats and enter the agricultural lands and

depredate the crops of man thinking as it its fodder and cause crop damage. E.g.: Elephants, wild boars and other herbivores do crop damage and birds also cause crop damage.

3. Preying on domestic cattle: The larger carnivores' prey on domestic cattle in the forests or in the fringe forests or raid the cattle sheds and cause loss to human property E.g.: Tiger, lion, leopard, wolf and wild dogs' prey on domestic cattle and cause loss to man.

4. Invasion of human habitations: Many animals, birds and reptiles invade the human habitation i.e. The houses, cattle sheds and crop fields cause scare and trauma to the people in addition to lifting of cattle and poultry and crop damage e.g. Elephants, leopards, tigers, cobras, birds, etc.

5. Transmission of diseases: Birds carry diseases from one place to other places and transmit diseases to crops, cattle and to the man. e.g., The bats & some birds cause flue/Zika, Covid, Encephalitis; monkeys- KFD of Malnad,

6. Poisonous biting: Many poisonous snakes' bite to humans and cattle are deadly and scary.

Conclusion:

The popular state governments are compensating liberally for all the losses to the public due to activities of the wildlife. Huge funds are being spent to control the depredation of wild animals into farm lands for creation of barriers between farm lands and the PAs/ wildlife habitats along the boundary.

It is a proven fact, from the 3rd quarter of 20th century that the wildlife Protected Areas are the only "Sanctum Sanctorum" of the flora and fauna in India where the interference, disturbance and destruction

Contd... on page No. 57

ARTHRITIS -OSTEOARTHRITIS (D.J.D.)

By

Dr N.V. Jayanth Babu

(Continued from last month)

PLANTS USED FOR RELIEVING PAIN THROUGH HOT WATER HERBAL BATH

The following plants provide immediate relief from all types of body pains like back pain, Knee pain and also muscular pain resulted from out of physical exertion. This medicated herbal bath is preferred in

the evening at the end of the day, with maximum bearable hot water containing the infusions of the indicated plants. This is very much effective by which, a person can get immense relief from all types pains without using harmful pain killers. Hence this herbal bath can be had once or twice in a week by using any one of the indicated plants.

TABLE NO. 3

1	<i>Vitex negundo</i> Verbenaceae vaavili	Leaves	1 kg	About 20 lits. Of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief.
2	<i>Bambusa arundinaceae</i> / <i>Dendrocalamus strictus</i> . poaceae	Leaves	1 kg	About 20 lits. Of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief.
3	<i>Azadirachta indica</i> Meliaceae. Neem	Leaves	1 kg.	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief
4	<i>Eucalyptus</i> sps Myrtaceae	Leaves	1 kg	About 20 lits. of water is to be boiled by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief
5	<i>Abutilon indicum</i> Malvaceae Tuthuru benda. Bala	Leaves	0.5 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 500 grams of leaves and hot water bath is taken to get immediate relief
6	<i>Senna occidentalis</i> Caesalpiniaceae Kasinda	Leaves	0.5 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 500 grams of leaves and hot water bath is taken to get immediate relief
7	<i>Dodonaea viscosa</i> Sapindaceae Bandedu	Leaves	1 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and hot water bath is taken to get immediate relief
8	<i>Achyranthus aspera</i> Malvaceae Vuttareni	Whole plant	1 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and hot water bath is taken to get immediate relief

9	<i>Hibiscus planifolius</i> Malvaceae Konda pratti	Leaves	1 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief
10	<i>Clearodendron phlomidus</i> Verbenaceae Takkali	Whole plant	1 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and hot water bath is taken to get immediate relief
11	<i>Cardiospermum helicacabum</i> Sapindaceae. Vekkudu teega	Whole plant	0.5 kg	About 20 lits. of water is to be boiled in a vessel by mixing 500 grams of green leaves and hot water bath is taken to get immediate relief

SPECIAL DIET BEING GIVEN FOR BONES AND JOINTS

Special diet being prescribed for strong & healthy bones, quick healing bone fractures, tear in tendons, Arthritis, rejuvenation of synovial glands and for development of cartilage.

This diet chart prescribed by the native doctors / local vaidyas incidentally contain the essentially required components like calcium, phosphorus, zinc, potassium, all the vitamins, mineral salts, omega 3 fatty acids etc., useful for strength & health of bone marrow, bone joints, cartilage development, as well for immunity development,

- 1. *Setaria italic* / Fox millets. Family. Poaceae, Local name: *Korralu* and
- 2. *Triticum dicoccum* /wheat. Family. Poaceae, Local name: *Godhumalu*, *Godhumalu* and *korralu* are made in to *Rawa* (broken in to small pieces), cooked and eaten daily in place of Rice / pulka.
- 3. *Eleusine coracana* / Finger millet. Family: Poaceae, Local name: Ragi. Ragi seeds powder is cooked with water to make Jawa/ soup, to be consumed with curds.
- 4. *Sorghum bicolor* /Great millet, Family: Poaceae. Local name: Jonna. Jonna seeds

powder is used to prepare Rotis and eaten along with *Palak/Bhendi* curry daily.

- 5. *Vigna mungo* /Black gram, Family: Fabaceae. Local name: *Minumulu*. Seeds are soaked in water, grinded into paste and Vadas are prepared and consumed daily. or seeds are to fried in ghee, powdered, mixed with cow ghee and jiggery powder made into round balls called 'Sunni vundalu' (each weighing about 20 grams) and eaten daily.
- 6. *Sesamum indicum* /Gingelly seed, Family: Pedaliaceae, Local name: *Nuvvulu*. *Nuvvulu* seeds are to be powdered and to be mixed with pure jaggery made in to a balls *nuvvula laddu* and eaten daily.
- 7. Country chicken eggs 2 nos. are to be consumed / swallowed in raw along with 10 to 20 grams of jaggery daily.
- 8. *Abelmoschus esculanthus* /Ladies finger. Family: Malvaceae, Local name: *Bhendi* is to be consumed daily.
- 9. *Piper betel* / betel leaves, Family: Piperaceae. Local name: *Tamala paku*- to be mixed along with adequate shell lime paste consumed as "paan" daily.
- 10. *Annona squamosa* / Custard apple, Family: Anonaceae. Local name: *Seethaphal*.

- 11. *Annona reticulata* / Family: Anonaceae. Local name: *Ramaphal*.
- 12. *Psidium gua java* / Guava, Family: Myrtaceae
- 13. *Musa paradisiaca* / Banana, Family: Musaceae. Fruits are to be taken before meal
- 14. *Phoenix dactylifera* / Date palm, Family: Arecaceae, Local name; khajoor- fruits are eaten daily.
- 15. *Citrus sinensis* / Batevia, Family: Rutaceae, Local name: Bathhai, Fruit juice is to be consumed daily.
- 16. *Citrus lanatus* / Indian squash melon. Family: Cucurbitaceae, Puchhakaya, Juice of fruit pulp along with seeds is to be consumed daily.
- 17. *Lycopersicon esculentum* / Tomato, Family: Solanaceae. local name: Tomato
- 18. *Spinacia oleracea* / spinach, Family: Chenopodiaceae. Leaves are made into curry and taken.
- 19. *Daucas carota* / carrot, Family: Apiaceae
- 20. *Beeta vulgaris* / Beet root, Family: Chenopodiaceae
- ❖ The above four items from 17 to 20 each weighing 100 grms each are to be made into juice by adding adequate water and to be taken orally every day
- 21. *Moringa oleifera* / drumstick, Family: Moringaceae: Drumstick leaves +
- 22. *Cajanus cajan* / Red gram, Family: Fabacea. Toor Dal
- ❖ The above items 21&22 are to be cooked and fried, to prepare curry consumed along with Jowar roties. Intake of Rice and other curries are to be avoided completely. Optimum quantities of the above-mentioned qualitative food is to be taken.
- 23. *Cocus nucifera* / coconut, Family: Arecaceae. Coconut water is to be consumed profusely every day.
- 24. *Amaranthus viridis* / Thotakura / Family: Amaranthaceae, Thotakura - 100 grams of cleaned leaves, 20 grams of gingelly seed and 20 grams of pumpkin seeds are to be made into curry and consumed with jowar rotis
- 25. *Basella alba* / *Basella rubra*: Family: Basellaceae- Indian spinach, Bachhali kura- 100 grams of cleaned leaves, 20 grams of pumpkin seeds and 20 grams of gingelly seed are made into curry and to be consumed with jowar rotis.
- 26. *Withania somnifera*: Family – Solanaceae - Root powder 3 grams
- 27. *Tinospora cordifolia*: Family – Menispermaceae - Tippa teega- Root / shoot powder 3 grams
- 28. *Pueraria tuberosa*: Family - Fabaceae- Nela gummudu- Tuber powder 3 grams
- 29. *Asperagus racemosus*: Family- Liliaceae- Pilli tegalu / pillipeechara- Roots / tubers powder 3 grams
- 30. *Gomutra shilajit* / mommai 1 to 2 grams powder -
- 31. *Palmyrah jaggery*- Taati bellam 5 to 10 grams powder
- ❖ The above ingredients mentioned against serial nos. 26 to 31 are to be mixed thoroughly in dry condition, and to be divided into two parts. One part of such mixture is to be mixed preferably in a glass of cow milk and to be consumed orally in the morning. The other half like that, at bed time with milk for at least one month for --curing Arthritis, development of cartilage, strengthening bones & joints, development of resistance in the body and for toning up general health and strength.

THE BEST REMEDIAL MEASURES BEING ADVISED BY THE AUTHOR FOR OVERCOMING OSTEOARTHRITIS (O.A.)

For the benefit of the persons suffering from O.A., from stage 1 to 3, the author advises the following suggestions to be incorporated in their daily curriculum.

A) To strengthen the muscles around the suffering and painful joints by performing the relevant exercises on regular basis. Due to ageing, the muscle mass is naturally decreased. This loss of muscle is referred as SACROPENIA and this can be reversed by intake of proteins regularly, after performing regular resistance exercises. The most adaptable tissue in the human body is skeletal muscle. It is remarkably remodelled after performing continuous strength gaining and resistance exercises followed by intake of suitable diet.

B) For intake of foods on regular basis, containing collagen / Gelatine, Creatine, Amino Acids are to be planned. Foods containing rich in proteins like Eggs, chicken, sprouts of Beans, Green peas, green gram, Chick peas, Nuts, Lentils and foods rich in Vitamins, Calcium, Magnesium, Vitamin D, Zinc, Omega fatty acids are to be planned in the diet chart for regular intake.

C) External application of any of the pain-relieving oils, as indicated in the Table no. 2 may be chosen from the above table given in this paper, for its application on the painful joints and to massage gently till the oil thus applied on the painful joint is absorbed.

D) Hot water herbal bath is to be taken once or twice in a week by using the available plants as indicated in Table no. 3 mentioned in this paper.

E) Lack of sufficient rest may develop pain in the

joints, hence advised to take sufficient rest. To avoid standing and sitting positions as far as possible.

A) FOR STRENGTHENING MUSCLES AROUND THE PAINFUL JOINTS, EXERCISES

RECOMENDED:

WALKING: Walking is a must. Depending on condition of the body, one has to walk at least from 100 meters to 5 kms. After walking, warming up, stretching exercises or '*Surya namaskars*' are to be done.

Exercises like DIPS or PUSH-UPS ('*Dandemulu*'), 5 or 10 or 15 or 20 or 25 Nos. X 3 sets are to be done per day. Squatting or sit ups ('*Gunjeelu*'), 5 or 10 or 15 or 20 or 25 or 30 Nos. X 3 sets are to be done per day depending on the capability of individual. Abdomen exercises, neck exercise, breathing exercises and meditation are to be done regularly. This schedule covers almost all the joints in the body. Depending on the capability of individual, one may start with less number and to increase the repetitions gradually.

SWIMMING: Swimming is the best exercise for any type of Arthritis. If there is any possibility, swimming could be done regularly. In swimming, the body weight is evenly distributed in the water, without causing strain on joints.

THE MUSCLES AROUND THE KNEE JOINT: Knee muscles are 1. Quadriceps – A group of 4 muscles available on the front side of thigh and 2. Ham string muscles – a group of 3 muscles, available on the back of thigh and 3. Calf muscles- 2 nos viz., Gastrocnemius and the Soles. Totally, 9 large muscles work in group and act in co- ordination with each other for the movement of a knee joint. Some simple exercises are indicated that could be done even at home, keeping in view of senior citizens including women.

EXERCISES RECOMENDED FOR STRENGTHNING - KNEE JOINTS & HIP JOINTS

SIT UPS or SQUATTING ('Gunjeelu): To start with 5 or 10 or 15 or 20 or 25 sit ups X 3 sets per day depending on the capability of the individuals. Those, who cannot do full squats - Half squatting can also be done by sitting in a chair and by standing up. Some people can take a support for squatting, by holding with their hands a window grill, parapet wall pole or post if required.

Those who can, may go to a gym and do squatting with bearable and less weight - 10 reps. X 3 sets, followed by leg curls – 3 sets, Leg press, Thigh extensions and calf exercises – Each 3 sets every day.

Exercises to be done - by fixing a small sand bag of weight 1 kg each, around each ankle. (Sand / iron powder bags of 1 kg weight are available in sports stores).

Those who cannot even bear even 1 kg. of weight - can do exercises without weights.

For strengthening Quadriceps 4 nos. (Thigh muscles): you may sit on a table or Cot or Bench whose height is to be not less than one and half feet.

a) In the sitting posture - raise the leg fixed with weight/ and stretch it to be straight. Keep the leg like that for 5 seconds. Slowly lower the leg down. Repeat this for 10 to 25 times X 3 sets for each leg x both the legs.

b) You may lie/lay down on a mat or bed with the sand pouches tied to the both the ankles. Fold or bend the knee completely and stretch it to unfold. Likewise, to be done for 10 to 25 times (or repetitions.) X 3 sets X for 2 legs. c) Another exercise - To lift the leg tied with weight, upwards perpendicular to the body, without bending the knee joint and slowly to

lower the leg to rest it on mat / bed. Like that, to be done for 10 to 25 times x 3sets x for both the legs.

d) For strengthening Hamstring muscles 3 nos. (Back thigh muscles): To stand on floor and to hold any support with hands. Bend the leg (tied with weight) or fold the knee backwards to the maximum, unfold the leg to make it straight and to stand on the ground. Repeat this for 10 to 25 times X 3 sets X for 2 legs. These exercises are for strengthening knee joints mainly and also are useful for strengthening hip joints.

Another exercise - In the standing position, holding with hands the same support, both legs tied with weights, standing on left leg, stretch and move the right leg sideways, away from the body line, without bending the knee, to bring the leg to the original position. This is called abduction movement. In the same way you may move your leg inside the body line as much as you can. This is called adduction movement. Repeat Abduction and Adduction movements for about 15 times x 3 sets for each leg. To be done for both legs. This exercise is useful for Abductor, Adductor muscles and for strengthening hip joints.

e) For strengthening calf muscles: To remove weights and to stand on your heels on any door frame or 1st step of stair case. Raise the body on both heels upwards and lower the body down without bending knees by holding support with your hands. Leg press and calf exercise in the gym are helpful for strengthening thigh muscles and calf muscles. Each exercise is to be done like that for 10 times / repetitions X 3 sets per day. These exercises are meant not only for strengthening knee joints but also for strengthening Hip / Pelvic joints. ●

(To be continued)

Wildlife Offences Detected

By
K. B. R. Reddy

TURTLES CASE: On reliable information, the Range Officer of Anti-Poaching Squad Party Sri Ramesh, accompanied by FBO Sri Sitaramulu, proceeded to Nehru Nagar in Ramanthapur area on 31.07.2021 at about 3.00 p.m. and searched the premises of house bearing No. 3-8-24/2 belonging to Smt. Alla Anitha W/o the late Ashok Reddy. She had two tenants in a portion of the premises Viz. Shiv Balak and Rahul Kashyap. On further search, the two men were found in possession of 330 live turtles, listed in Schedule I Part II of the Wildlife Protection Act.

The turtles are identified as: Indian Tent Turtle (*Kachuga tecta tecta*) – 154 Nos; and Indian roof turtle (*Pangshura tecta*) 176 Nos; Total 330. The two persons failed to produce any authority for possession of the turtles. They were seized under a *panchanama* from the possession of the following two accused persons viz

- (1). Shiv Balak S/o Babulal aged about 29, R/o Bakhtiyar Nagar, Lucknow, U.P. and
- (2). Rahul Kashyap S/o late Siya Ram, R/o Bakhtiyar Nagar, Lucknow, U.P; Both temporarily residing in Hyderabad as stated above.

On enquiry it was disclosed that Shiv Balak caught/collected the turtles in Gomti River and brought all the 330 live turtles from Lucknow to Hyderabad by train. They are looking up for prospective buyers. It is further revealed that Aquariums, Pet Owners, Pet Stores are their customers. The whole-sale price is fixed at Rs. 400 per pair and Retail price is about Rs. 800 to 1000 per pair. They admitted that they got into this trade for making quick buck. The accused are arrested and produced before the Court of III

Metropolitan Magistrate, Cyberabad for judicial custody.

A case is registered by the Beat Officer Smt. M.B. Preethi Puja vide P.O.R. No. 5 of BK.7/20-21 dated 31.07.2021. With the permission of the court, the turtles are given over to the custody of the Nehru Zoological Park. The case is under investigation by FRO Sri Srinivas Reddy.

Sri M. Raja Ramana Reddy, D.F.O. Vig. II, Office of the Prl. CCF supervised the "operation". In view of the fact that the present racket busted in the city has inter-state ramification, he wrote to the Prl. CCF and Chief Wildlife Warden, giving all details, to take up the matter with the Wildlife Crime Control Bureau;

All the rescued turtles are airlifted on Sunday 19.09.2021 from Hyderabad to Lucknow through a joint effort of the U.P. Forest Department and Turtle Survival Alliance.

Source: Input from officers.

K.B.R

RED SAND BOA CASE: Sand Boa is a non-venomous snake belonging to *Boidae* family, found in many places of India like Maharashtra, Madhya Pradesh, Telangana, Andhra Pradesh, Tamil Nadu etc. It is known as two 'headed snakes. The family of *Boidae* is listed in Schedule IV of the Wildlife Protection Act, 1972. There are various myths and rumours surrounding the snake. It is used for black magic, making medicines, cosmetics and therefore it has lately attracted lot of attention. There is belief that it will bring immense luck and wealth to the persons who possess it. The price is decided by its weight. The market price of a single sand boa is ranging from lakhs to crores of rupees. Illegal trade

in sand boa may make the rare snake extinct. Because of the high price in the market, there are rackets of illegal trade operating in the country.

Credible information about one such racket is received by Sri D. Sudhakar Reddy, DFO Vig-I of the Prl. CCF's office. He started working on it relentlessly lasting more than a month. At last, he got a link-man by name Rohit R/o Hyderabad and tactfully he won his confidence by disguising himself as a decoy. He acquired a new mobile phone for conversing with Rohit. Sudhakar Reddy without disclosing his identity expressed his desire to buy one sand boa snake. On that Rohit promised to help him in securing a snake of red boa for him. Two attempts were made but without success. Finally on September 14, 2021, a deal was struck for purchase of one sand boa at a cost of Rs. 70.00 lakh. Sudhakar Reddy used, as before, decoy technique. He was sure that the plan is going to click. He formed two parties: one with the staff of vigilance and Anti-Poaching Squad; and another with the FRO, Keesara with his staff, in two vehicles. The first place of meeting with Rohit was

fixed at ECIL. Then they proceeded to Nagaram village to the residence of one Anjaneya Prasad, where they met two more persons viz., Venkat Ramana and Sridhar. Venkat Ramana disclosed that they have found the snake near Ghatkesar. According to the pre-plan, signals were sent to the two parties and they rushed to the scene. After the parties arrived and when the house was searched, they found the snake. The snake together with a car, a two-wheeler and four mobile phones were seized and the culprits were arrested since they had no authority to possess the snake. The snake weighed 4.5 kgs. The news was widely reported in the press on September 17, 2021. All the four accused persons are produced before the Court of Judicial Firs Class Magistrate at Medchal and they were released on bail. This is a rare case where the DFO and the staff skillfully laid the trap using the modern methods of information technology and succeeded in nabbing the culprits. Further investigation of the case is in progress.

Source: Input from D.S.R.

K.B.R

Continuation from page No. 50

of wildlife by man is limited. India can shy off some tension in maintaining biodiversity and gene-pool for posterity through conservation of the wildlife. Hence, the importance for the better conservation, protection and management practices of wildlife in India since 1972.

The Protected Areas seldom deals with forestry aspects. *The management is limited only for conservation and management of wildlife and their habitat and the affairs of threatened species of flora. But, the past experience in wildlife management in PAs over 5 decades throws many challenges to the management due to attainment of climatic climax/*

secondary climax by the vegetation- static stage with grey vegetation throwing the PAs habitats prone for fires, degradation and invasion by the exotic weeds like Lantana, Parthenium and Eupatorium with less or no natural regeneration of tree spp. This situation is forcing the management to take up habitat management to improve the carrying capacity of the PAs in the deciduous regions. e.g., Bandipur, Nagarahole, BRT Hills and Mudumalai TRs

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News and Notes

Nipah Virus: Officials in India are racing to contain a virus outbreak that has claimed the life of a 12-year-old boy and is deadlier than COVID-19 — the Nipah virus.

The boy was taken to the hospital last week in the southern Kerala state with a high-grade fever and suspected brain inflammation. After blood tests, he was diagnosed with the Nipah virus and died Sunday.

Officials are using contact tracing, quarantine and hospitalization on the 188 people who have come into contact with the preteen to prevent a widespread outbreak, CBS reported.

“This is one of those viruses we really need to pay attention to,” John Lednicky, a research professor at the University of Florida’s Environmental and Global Health department, told USA TODAY.

The re-emergence of the Nipah virus is compounding a problem in the nation already grappling with the effects of COVID-19, with over 30,000 new COVID cases reported on Monday.

What is the Nipah virus? The Nipah virus was first discovered in Malaysia and Singapore in 1999 after multiple pigs and people became sick, according to the Centre for Disease Control and Prevention.

So far, the only recorded outbreaks have occurred in Asia. It’s classified as a zoonotic virus that initially spreads from animals to people. It can also be transmitted through contaminated food and directly between people. The Nipah virus is not related to COVID-19, but may have the same originating source — bats. The host of the virus is fruit bats, also known as flying foxes because of their large size.

Lednicky said pigs are highly susceptible to the virus and can come in contact with it through fruit material the bats have been consuming.

‘Don’t let me die’: Inside a COVID-19 unit in Florida’s capital city amid a surge in cases ‘Keeping a very close eye on it’: What we know about the mu variant. Other domestic animals like horses, goats, sheep, cats and dogs can become infected, according to the CDC. Unsuspecting humans may also come into contact with contaminated fruit and become infected. “There’s probably an underestimate of people who have been infected with the virus due to people not being properly diagnosed,” Lednicky said.

What are the signs and symptoms? Symptoms of the Nipah virus vary from asymptomatic to acute respiratory infection and — at its worst — encephalitis, a swelling of active tissue in the brain that can be fatal, according to the World Health Organization. Infected people can experience sore throat, fever, headaches and muscle pains. If the infection progresses, dizziness and altered consciousness could be signs of encephalitis. The start of symptoms ranges from 4 to 14 days after exposure and there are currently no vaccines available to treat the virus. “There’s no good treatment for it,” Lednicky said. “They put you in the hospital, but there’s really nothing much else they can do for you.”

WHO reports that 40% to 75% of Nipah cases are fatal compared to COVID-19 fatality rate of around 2%?

CONVOCATION OF 29TH BATCH OF FBO TRAINEES AT T.S. F.A.; The Convocation of the 29th Batch Induction Training Programme of Forest Beat

Officers was held on September 9, 2021 at the precincts of the Telangana State Forest Academy, Dulapally. The programme started with ceremonial parade with participation of 27 Forest Section Officer Trainees and 38 Forest Beat Officers Trainees who pass out on the day. They all assembled in the Auditorium after the parade. At the commencement of the meeting, all the invitees paid floral tributes to the photo of Sri Kaloji Narayan Rao, a great scholar and staunch leader of Telangana. It was followed by prayer by Smt. Uma Rani, Dy. R. O. Sri Ram Mohan compered the proceedings. Sri R.M. Dobriyal, IFS and Sri K. Buchi Ram Reddy, IFS (Rtd) were the special invitees. Smt. Sangeetha, Smt Siva Jyoti representing the faculty and administrative staff are present. Sri P.V. Raja Rao, IFS, was over all in charge supervising the arrangements.

Smt. A. Santhi Kumari, IAS, Special Chief Secretary to Government, EFS & T Department was the Chief Guest, while Smt. R. Sobha, IFS, the Prl. CCF (HoFF) of Telangana State presided over the function. Out of the 38 Beat Officers who passed out, 13 are postgraduates and 25 are graduates and that includes 11 girls. Among all the students Ms. Archana from Nizamabad division is adjudged as the best all-rounder. She scored first rank in 8 subjects. Smt. Santi Kumari in her message to the outgoing trainees said that the Government is giving lot of importance to forest protection and improvement of greenery. She exhorted the outgoing Beat Officers to work with dedication. Smt. Sobha felicitated with medals all those who did well in various subjects taught to them. All of them received Certificates of training. (Source: TS FA.) **K.B.R**

K.V.S. BABU MEMORIAL GOLD MEDAL PRESENTATION: Sri Raja Rao, IFS, Secretary, CEFNARM, invited guests for the ceremony of

presentation of Gold Medal held on Sept. 9, 2021 in the Auditorium of the TS Forest Academy. Earlier, the photo of the late K.V.S. Babu was garlanded. Smt. J. Vasntha, Dy. C.F. red out the life details of Sri Babu.

Sri Ch. Srinivasa Rao, Forest Range Officer of Kothagudem Circle is selected this year for the award of the KVS Babu Memorial Gold Medal for his exceptionally good work and outstandingly performance of his duties. Smt. J. Vasantha, Joint Secretary, CEFNARM red out the citation. Smt. A. Santhi Kumari, IAS presented the gold medal to Sri Ch. Srinivasa Rao with a citation and cash award of Rs. 15,000/- (Source: TS FA. **KBR**)

FOREST MARTYRS DAY: In 1730, on this day the 11th September, 363 Bishnoi's, tribes' people from Khejarli village, in Marwar Region of Rajasthan, were massacred when they objected to felling Khejri trees, ordered by the Ruler. The Maharaja wanted after felling the trees to build a new palace in the area. At the end of the massacre, the Maharaja Abhay Singh, in repentance, declared that no trees shall be cut and no animals be killed in the land of Bishnoi's.

The Government of India in the Ministry of Environment and Forest directed that September 11 be observed as *Van Shaheed Divas* every year to commemorate the sacrifice the Bishnoi's made in guarding the trees. It is also the day when we remember the brave hearts that got killed while performing their sacred duty of protecting the forest and the wildlife.

On this day we cannot help but remember the Dy. C. F. Sri P. Srinivas who was brutally beheaded by the Brigand Veerappan on November 10, 1991 in Karnataka State Forest. In the State of Telangana too, there is a similar killing of FRO Sri R. Gangaiah who was mercilessly killed by throwing chilli powder

in the eyes and using axes and lathis when he tried to prevent encroachment on the forest land of Kamareddy district. In the State, 21 forest officers laid their lives while performing their duty.

On September 11, 2021 the Commemorative National Forest Martyrs Day was observed at the Forest Martyrs Pylon of the Nehru Zoological Park. The function for the solemn occasion was well organized by the Curator Smt. V.V.L. Subhadra Devi with the cooperation of her staff. The Hon'ble Forest Minister Sri A. Indra Karan Reddy and the Chairman of the TS Forest Development Corporation Sri V. Pratap Reddy, Smt. Shanti Kumari, Special Chief Secretary, Smt. R. Sobha, Prl. CCF and other senior officers and retired officers offered floral tributes and placed wreaths at the Pylon in honour of forest officials who laid down their lives in protecting forests and dumb denizens living in the forest.

The Covid 19 Pandemic has restricted citizens to their homes but a few officers in service and a few retired officers participated in the solemn ceremony. The forest minister said that Forest Martyrs who laid down their lives performing their duty would always be remembered.

Earlier on the occasion, the Vigilance DFO Sri Sudhakar Reddy read out the names of the martyrs with details of their sacrifice. A posse of police was in attendance and the function came to a close when the Bugler blew the last post. (Source: Internet & TS FD, K.B.R)

Surprising! This tree act like human beings, you will be surprised knowing about it: Tickling is act that makes everyone laugh. When someone does tickle, something unusual happens to our body and we feel strange discomfort. You must have seen human beings tickling each other but have you ever seen a tree tickling? You will not believe this but this is true.

We are talking about a story of tree you today which start tickling when someone touches it. If the trunk of this tree is cared well then it grizzles and starts laughing.

This tree has become internet sensation on the social media. It is located in the forest of Kaladhungi, Uttarakhand. It is believed that whosoever touches or moves their finger on trunk of this tree, its branches start to shiver. ●

*“Another world is not only possible,
but she is also on her way.
On a quiet day,
I can hear her breathing.”*

LEGAL NOTES

1. M. Srinivasa Reddy, I.F.S Vs. State of Maharashtra and another

It is well known that Smt. Deepali RFO committed Suicide on 25.03.2021 for the harsh treatment meted out to her by her boss Vinod Shiva Kumar, the Deputy C. F. The information regarding the death by suicide was made to the police by her husband. Based on the complaint, police station officer registered FIR in which Shiva Kumar and the petitioner Srinivasa Reddy were made Accused under section 306 IPC. Both the officers were placed under suspension.

It is argued on behalf of the petitioner that there was no legal basis what so ever to implicate the petitioner. The whole case is based upon the suicide note left by the RFO. According to sections 33,43,107,108 and 306, IPC, it is necessary for abetting a crime there should be instigation and there should be one more person in the conspiracy. It was further argued that on a plain reading of the FIR and perusal of material, it would appear that there was no legal basis to accuse the petitioner. In support of the petitioner's plea, rulings of several courts were cited. The petitioner who was the Additional Principal CCF and Field Director of Melghat Wildlife Sanctuary was not the immediate superior of the deceased. The petitioner was stationed at Amaravati and he was required to conduct field visits now and then.

The Additional Public Prosecutor opposed the contention of the counsel of the petitioner. It was argued that the late RFO complained to the petitioner but he has not taken any action.

The court heard the arguments of the parties at length and went through the material placed on record. The court also perused the papers of investigation in the case. The FIR indicates that there is a reference by the deceased to the petitioner in the suicide note of the late RFO that no action was taken by him in spite of making a complaint against the Dy. C.F. She mentioned about the harassment by the Deputy Conservator and also that he threatened the RFO that he would see that she is placed under suspension.

From the aforesaid facts it is evident that mere allegation of harassment of the deceased by her immediate superior would not be sufficient to find fault with the petitioner. From a perusal of the suicide note, it is not fair to proceed against the petitioner. There is hardly any material to indicate abetment and for that matter any illegal omission by the petitioner. Thus, seen from any angle the court found no material what so ever to attract the provisions of section 306 of the IPC. In the result the court in exercise of its inherent powers under section 482 Cr. P. C., quashed the FIR. The order of the High Court in CrI. W. P. No. 343 of 2021 was pronounced by a Division Bench comprising Sri. A.S Chandurkar & G.A Sanap, JJ. on 13.08.2021. **K.B.R**

2. Smt. Sunita J. Mahesh Bhagwat, IFS and others Vs. Mohd. Sirajuddin and others

Aggrieved by the judgment dated 30.07.2021 by Single Judge, convicting and sentencing the appellants and five others to six months simple imprisonment and fine of Rs.2,000/- each, in Contempt Case No. 1779 of 2015,

the appellant herein and five others including two IAS Officers, one IFS Officer and two senior officers of the state government have filed Contempt Appeal Nos. 14 to 19 of 2021.

The appeals are heard by a Division Bench comprising The Hon'ble Chief Justice Smt. Hima Kohli and The Hon'ble Sri Justice B. Vijay Sen Reddy on 16.08.2021. It is alleged by the petitioners in the contempt petition that the appellants have disobeyed the orders in W.P. No.9526 of 2009 dated 14.12.2009 and therefore they have filed the contempt petition.

The order of the High Court dated 14.12.2009 in W.P. No. 9526 of 2009 relates to a matter of forest reservation. Summarily stated the order is to finalize the acquisition of the land in Sy. Nos. 222/1 to 222/20 of Maheshwaram village for converting them into reserved forest within a period of six months from the date of receipt of the order.

The truth of the matter is that the Forest Settlement Officer, who is concerned with the court order, decided the case within six months; that is on 23.04.2010 and 06.06.2010 as directed by the court by passing an order whereby the claim petition was rejected. The substance of the order is on two grounds: firstly, the land claimed is a 'poramboke' land it is a land belonging to the Government; and secondly, that the claimants are already held as surplus land –holders under the Agricultural Land Ceiling Act. The respondents assert that they are not in receipt of such an order. It is contended on behalf of the Government that for effecting service of the order, the claimant/ petitioners were not found in the village. The DB held that if the respondents feel that they have any subsisting right in the subject land it is for them to seek appropriate legal course.

As for the contempt case is concerned it was held that the contempt petition is highly belated, and it is not maintainable in the light of Section 20 of the Contempt of Courts Act. In the result the contempt appeals are allowed and the impugned order dated 30.07.2021 is quashed and set aside. However, liberty is granted to the respondents to seek appropriate legal course, if aggrieved by the orders dated 23.04. 2010 and 03.06.2010 of the F.S.O or on the basis of any further cause of action that may have arisen in their favour, in accordance with law. (Source: Original Judgment KBR)

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If Undelivered, Please return to : Editor : VANA PREMI, Office of the Principal Chief
Conservator of Forests, Aranya Bhavan, 5th Floor, Room No. 514, Saifabad, Hyd - 500 004, T.S.

Date of Publication: 26-8-2021 Total Pages: 64 Date of Despatch: 4th or 5th of Every Month.

Printed & Published by **Qamar Mohd. Khan** on behalf of **Association of Retired Forest Officers**,
Printed at **Venu Graphics**, D.No.2-1-392/1/6, Fever Hospital Signal, Nallakunta, Hyderabad-500044 and
Published from Room No. 514, 5th Floor, Aranya Bhavan, Hyderabad-500004. Editor: **Qamar Mohd. Khan**.
RNI Regd. No. Teleng/2000/2185. | Email ID: qamar_asima@yahoo.com. | Phone No. 9849233624