India Wilds®

Newsletter

Vol 14. Issue I Jan-Mar 2022 ISSN 2394 - 6946

Inside this issue:

Cover Page Photograph:

Dhole by Sabyasachi Patra

Indiscriminate Tree Plantations: Ecosystem Vandalism

Every kid is taught in school that chlorophyll in the leaves take carbon dioxide from the air and converts into energy and release oxygen. Trees release moisture into the air and that also leads to rainfall. The roots of trees help bind the soil and as a result prevent soil from being eroded. Also, the direct benefit of fruits, flowers and timber as well as for fuel wood makes tree plantation capture the imagination of people as a good deed. The way our school and college curriculum has been designed; students don't learn more than these few lines about the beneficial impact of trees. No wonder, Officers in India as well as in many other countries are by and large ecological illiterates. So, when tasked with creating India's response for affirmative action on Climate Change, our bureaucrats have fallen back to what they leant in school ie. on tree plantation.

India has decided that it would undertake tree plantations in 13 major river basin, spread over a humongous 4,68,222 square kilometer area. The river basins selected for tree plantations are Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna and Cauvery. The Government officials believe these tree plantations in such a large area will help meet India's commitment to fight climate change as tree plantations over such a large area should help in sequestering enough carbon dioxide from the air. The Environment ministry officials believe that over a 10 year period such large scale plantations would be result in 50.21 million tonnes of carbon sequestration. They have even further extrapolated to 74.76 million tonnes in 20 years. In this numbers game, the forest cover is expected to be-

come 1813.52 km2, an increase of 80.85 km2.

The premise on the surface appears very simple. The projected numbers make the current administrators and Government happy as India can now show that it is taking action to fulfil its climate change mitigation obligations as agreed upon in the Paris Agreement. However, the devil lies in the details.

There are some serious problems that our Government officials and the consultants who are making the project plans are not aware off. Ecology is not just a numbers game. When you plant a tree, it is a micro-ecosystem in itself. There are lots of complex ecological relationships at play in forests between plants, trees, birds, bees, reptiles, animals, soil, water and air and numerous organisms from microscopic in size to huge herbivores and carnivores.

Traditionally the river basins had a different riparian ecosystem. The ignorant hand of man has resulted in the decimation of the same. Many of the trees and bushes, reeds and creepers have been simply cut off. As a result the river banks are often devoid of any vegetation. In those river banks roots of trees used to help stabilize the banks. However, indiscriminate planting of trees would completely change the landscape.

People don't understand the difference between fallow land and river flood plains. The flood plains are there for a reason. When there is more water, the flood plains by design are supposed to get submerged. Unfortunately, these days indiscriminate construction is being done in the floodplains. This results in flooding of those concrete structures during rains and floods. The mindless concretization also results in putting pressure on the river to alter its course and as a result villages and human habitations at other places get submerged. Instead of concretising in the name of river front development, if there is only tree plantations without creating any concrete structures, which appears really impossible due to the current thought process of people, then the trees can grow and will go underwater whenever there is flood. Nature will take its own course.

However, even for planting of trees, one needs to know which species to plant. Monoculture doesn't help due to the lack of ecological relationships between species. Historically it is seen that tree planters don't understand that only native species should be planted. Exotic species are not beneficial for our landscape. Even though exotic species can adapt to a particular place, they take a serious toll on the environment. They outcompete native vegetation and also have a huge financial impact on us.

When you plant non-native species in the river basins, the riparian ecosystems are altered. The habitat of the existing species of flora and fauna in the river basins would be destroyed.

Some of the species can become locally extinct.

To alleviate this concern Government has to employ qualified scientists to survey and analyse the terrain and specify the species that need to be planted in each area. However, when they do this, scientists who understand ecology will report back that simply there is not much land available for plantations.

In most of the river basins, there are existing encroachments and concrete structures that needs to be cleared. In river basins that are not impacted by sand mining or illegal mining for minerals, and don't have much anthropogenic pressures, nature would have already taken care of it. In fact, any landscape from where man retreats for sufficient length of time, nature reclaims it. Even concrete structures start getting overgrown by native trees.

In many reported cases, native forests have been illegally clear felled to make way for plantations. When an area is branded as plantations, later on vested interests will come back again and again to harvest it for timber. The carbon sequestration potential of mature hard growth trees are much better than saplings. So, when river basins are cleared up to make way for plantations, there would in fact be net addition to carbon emissions.

When existing forests are clear felled to make way for plantations, immediately there is a loss in moisture which used to earlier get emitted from the forests due to evapotranspiration. Without this the microclimate of the area changes. The species composition of the areas change from species adapted to wet climate to ones that thrive on dry climate.

Recent studies have shown that climate change is having an important impact on the loss of tropical forests in India. A study by University of Reading ("***Determining the Role of Climate Change in India's past forest loss***; Haughan *et al.*, March 2022, Global Change Biology) found that there were far greater forest losses due to rapidly changing climate. Reduction in precipitation was seen to have the strongest effect on increasing the forest loss. It concluded that "understanding the different regional and seasonal relationships between climatic conditions and forest distributions will be key to effective protection of the country's remaining forests as climate change accelerates." In view of this the Government has to be ultra careful to avoid past practices of clear-felling forests to make way for tree plantations. Except for people involved in the projects making money, not much would be achieved if the officials continue to implement the way they have done plantations in the past.

Land use change is the leading cause of forest declines worldwide (Choe & Thorne, 2017; "***Integrating climate change and land use impacts to explore forest conservation policy***; Forests, 8(9), 321). Even though the present proposal of tree plantation is not officially land use change, it would be pertinent to mention that the way these kinds of projects are executed the impact is similar. Too often the concept of beauty ingrained in the minds of Government officials and project proponents is far removed from ecology. In India as well as in many places worldwide, the term River front development is synonymous with urban parks where concrete walkways, benches, toilet facilities, cement steps and roads are constructed. To make it look green imported grass is planted to create lawns, and exotic flowering plants are planted to beautify it. In fact, we see similar things in forest offices. What is good for Nature may not match the traditional sense of aesthetics of the ecologically illiterate officials.

The existing river basin tree plantation idea is like handing over knife to a person who has never seen a knife and asking him to operate on an ailing patient. The outcome of such a misadventure is easier to predict.

We have constructed way too many dams in our rivers. Our Government never did a river basin level study of the environment impact assessment of constructing dams. As a result, most of our rivers don't have the minimum ecological flow to sustain life. There is huge environmental impact due to the mindless dams and hydro-power projects. To start with, Government should start dismantling some of the old dams where the power generation capacity has gone down, and where water carrying capacity has gone down due to siltation. The cost of solar has become so cheap, we can start dismantling some of

these dams. In USA, they have started dismantling old dams and allowing their rivers to flow free and unmanaged. Once that happens, nature will start taking its own course. Just leave the river basins wild and unmanaged and native vegetation will start growing.

Wherever, exotic Lantana, Prosopis and other such weeds have propped up, only such lands should be taken up for uprooting of the weeds and plantation of native vegetation. Else, these mindless tree plantation projects in the river basins can cause more harm to our nature than good.

Article -

Probable First Record of Indian Roofed Turtle (*Pangshura tecta*, Gray 1831) from Freshwater Inland Wetland, Gujarat, India

By Hiren J. Chaudhari and Hiren B. Soni

P.G. Department of Environmental Science & Technology (EST),

Institute of Science & Technology for Advanced Studies & Research (ISTAR),

Vallabh Vidyanagar – 388 120 (Gujarat) India

Corresponding Author: hirenkumarjc@gmail.com

INTRODUCTION

Globally, 326 tortoise and freshwater turtle species occur in seven defined world geographical regions, such as North America, Central America, South America, Mediterranean, Sub-Saharan Africa, Asia, and Australia **(Buhlmann *et al.*, 2009).** Asia is the primary region for 77 species of Tortoise and freshwater turtles of four families *viz.* Platysternidae (1), Trionychinae (16), Geoemydidae (53), Testudinidae (7) of Testudines Order **(Buhlmann *et al.*, 2009).** The family Geoemydidae comprises of highly endangered species of Southeast Asia **(Baruah, 2016).** India has one of the most diverse turtle fauna with 28 species, ranked among top five countries in terms of turtle conservation in Asia and the world **(Buhlmann, 2009). Moll (1987)** has reported *P. tecta*, which is moderately common on along the banks of Narmada River of Gujarat. The previously published literature mainly focuses on the breeding of the Indian Roofed Turtle in captivity from Gujarat **(Vyas, 2001)**.

***Pangshura tecta* (Gray, 1831)**

The genus *Pangshura* comprises of small-sized turtles. India hosts six species of *Pangshura* genus. *P. dhongoka, P. kachuga, P. smithi, P. sylhetensis, P. tecta, and P.* Tentoria **(Tikader, 1985).** The Indian Roofed Turtle (*Pangshura tecta*,Gray, 1831) is the freshwater turtle belonging to the family Geoemydidae of the order---------- Testudines. *P. tecta* is one of the 17 freshwater turtle species found in India **(Tikader, 1985).** It is one of the poorly known Indian turtles **(Vyas, 2001)**. The entire population of this species is under abiotic and biotic constraints, and is rapidly decreasing in the wild **(Vyas, 2001).**

DISTRIBUTION

This species has been reported from India, Pakistan, Nepal, and Bangladesh **(Das, 1995)**. It has a wide range in northern India, in the drainages of the Indus, the Ganges, the Brahmaputra and the Sind river systems of India and Pakistan **(Smith, 1930)**. In the previous study **(Basumatary, 2013)**, *P. tecta* was observed very rarely in Brahmaputra as well as Diffolu river in Kaziranga NP, Assam. It is also found in the Pleistocene deposits of Shiwalik Hills in the fossil form **(Tilak and Sinha, 1984)**. They have also reported the occurrence of the same species in the Terai region of Uttar Pradesh, India. **Hall (1980)** has recorded the species along the Nepal-Bihar border. *P. tecta* has also been reported in larger freshwater bodies of Gujarat e.g. Narmada River, Gujarat **(ZSI, 2000)**. **Moll (1987)** found it to be moderately common among all

other reported specie of turtles from various biotic provinces of India.

HABITAT

Slow-moving rivers and stagnant water bodies like ponds, puddles, tanks, roadside ditches, and nullahs are habitat to this omnivorous species (*P. tecta*). Basking on banks, logs, or aquatic vegetation is common for this species. The species is generally observed to avoid locations that have been disturbed by humans. During the winter, the female individual of the species lays 4-10 eggs each per clutch on sandy banks. It feeds on aquatic plants **(Ahmed, 2010).** Generally, the species is found in freshwater rivers and stagnant water bodies. However, it is also found occasionally in salt-water habitats **(Hossain, 1995). Das (1991)** has also published one record of Indian Roofed Turtle from the estuarine environment of Sundarbans delta. Its occurrence in saltwater might be due to devastating cyclone in Sundarbans or the decreasing salinity of Arbesi river, West Bengal.

IDENTIFICATION

P. tecta can be distinguished by the presence of a distinct "roof" at the topmost part of the shell. Identification marks includes fine yellow longitudinal stripes on the neck, red or orange crescent marking near eyes. Carapace is elevated with flat sides and a strong median keel. The head is moderately small, pointed, and shorter than the orbit. The hexagonal neural plates are short-sided in front. The plastron is united with carapace by sutures. The axillary and inguinal buttresses are extensively developed, extending nearly to the neural plates, the former connected with the first rib. The fourth vertebral shield is elongated, much longer than broad and much longer than the third one. It has more or less flattened limbs with webbed digits, and forelimbs bear five claws having yellow spots in line. Top of the head is covered with smooth skin. Males are the smaller of the sexes and possess a comparatively longer tail that is thicker at the base. Males of the species possess white bands on top of the tails, while females possess yellow bands. In addition, male carapaces are darker and the irises are red as opposed to the paler carapaces and pink irises of the females.

THREATS

In the Indian State of Uttar Pradesh, certain tribal communities settled in the Terai region were found to practise a huge turtle kill, putting the creature's existence in danger **(Tilak and Sinha, 1984)**.

CONSERVATION STATUS

The Indian Roofed Turtle is Protected under WPA 1972 and placed in Schedule-I **(Ahmed, 2010)**. International Union for Conservation of Nature (IUCN) has declared as Vulnerable species **(Ahmed, 2010).** It is also included in appendix I of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which is list of species that are the most endangered among CITES-listed animals and plants **(Ahmed, 2010).**This is a relatively widespread species but local consumption reported. Population is also regarded as in a declining trend **(Ahmed, 2010).**

SITE DESCRIPTION

Kanewal Community Reservoir (KCR) is an internationally important wetland, listed in Directory of Asian Wetlands

(Scott, 1989); designated as a 'Wetland of National Importance', and a proposed community reserve of Gujarat State, India. It is located between 22° 35' N latitude and 72° 36' E longitude at an altitude between 14 to 15 m above the mean sea level, covering an area of 1500 ha. It is situated nearly 60 kms from Anand, the Milk Capital of India; falls under 4-B Gujarat Rajwara region of Central Gujarat **(Rodgers and Panwar, 1988)**. It lies in a natural depression; surrounded by embankment with a circumference of about 15 km and comprises of three islands, inhabited by fisherman community. It is having Dry tropical monsoon climate with an average annual rainfall of about 800 mm concentrated mainly in July, August and September.

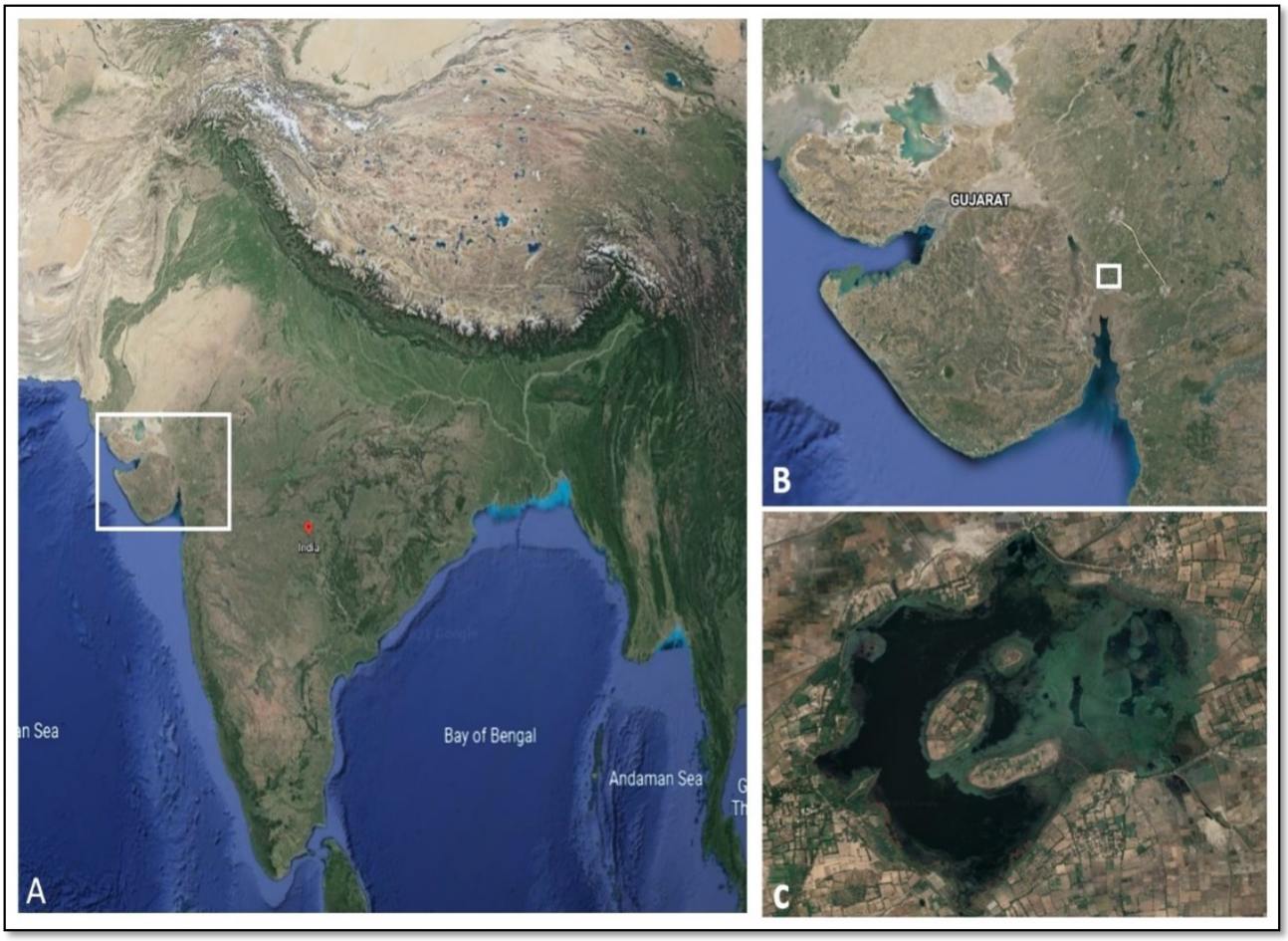

Figure 1. Map showing Location of Study Site (KCR)

OBSERVATION

On 19th September, 2021, at around 9:40 am, we observed one individual of Indian Roofed Turtle under the fishing boat in shallow clear water at Kanewal Community Reserve (KCR), (22.462701 N, 72.513422 E), a freshwater reservoir managed by Gujarat Water Supply and Sewerage Board (GWSSB). As the individual was a bit inactive, we picked it up in our hands, and snapped few photographs for confirmation of its identity. Later on, the individual was released back safely in its natural aquatic habitat, not to be harmed by natural or anthropogenic stress. After referring standard published literature **(Tikader and Sharma, 1985; Daniel, 2002)**, the species was identified as Indian Roofed Turtle (*Pangshura tecta*, Gray, 1831). The species is aquatic and inhabits freshwater bodies with plenty of aquatic vegetation. It is a less active species and comparatively a poor swimmer **(Tikader, 1985).** The abundant aquatic plant species such as *Marselia quadrifo-*

lia, Hydrilla verticillata, Nelumbo nucifera and plenteous beds of *Typha angustata* creates a suitable habitat for the Indian Roofed Turtle.

SIGNIFICANCE OF THE RECORD

Figure 2. Pangshura tecta (Gray, 1831) at Kanewal Community Reservoir (KCR)

In the past, some researchers have worked only on the breeding of the Indian Roofed Turtle in its captivity in Gujarat **(Vyas, 2001)**. In addition, previous published literature did not reveal the occurrence of this species in its natural habitat in Gujarat since last 32 years. Therefore, as there is lack of any such published record on the occurrence of the Indian Roofed Turtle (*P. tecta*) in its natural aquatic habitat in Gujarat, the findings of the observed species may be treated as '*Unusual or Infrequent Occurrence*' or '*Probable First Record*' in Gujarat, India.

REFERENCES

Ahmed, M.F. and Das, A. (2010). Tortoises and Turtles of Northeast India: Saving them from Extinction! Survey, Assessment of Present Status and Conservation of Tortoises and Freshwater Turtles in Northeast India. Technical Report, Aaranyak, Guwahati, India. 86 pp.

Ahmed, M.F., Praschag, P. and Singh, S. (2021). *Pangshura tecta*. The IUCN Red List of Threatened Species 2021:e.T46370A3005714. https://dx.doi.org/10.2305/IUCN.UK.2021

Baruah, C., Devi, P. and Sharma, D.K. (2016). Comparative morphometry and biogeography of the freshwater turtles of genus *Pangshura* (Testudines: Geoemydidae: *Pangshura*). *International Journal of Pure and Applied Zoology*. 4: 107-123.

Basumatary, R. (2013). The turtle fauna of Kaziranga National Park, Assam, India with notes on natural history and conservation status. *Herpetology Notes*. 6: 59-72.

Buhlmann, K.A., Akre, T.S., Iverson, J.B., Karapatakis, D., Mittermeier, R.A., Georges, A. and Gibbons, J.W. (2009). A global analysis of tortoise and freshwater turtle distributions with identification of priority conservation areas. *Chelonian Conservation and Biology*. 8 (2): 116-149.

CITES (2020). Official Website of CITES. Available at: https://cites. org/eng/app/appendices.php

Daniel, J.C. (2002). *The Book of Indian Reptiles*. Bombay Natural History Society, Bombay, 141 pp. (ISBN: 0195660994)

Das, I. (1991). *Record of the Indian roofed turtle Kachuga tecta (Gray) from estuarine environment. Records of the Zoological Survey of India*. 88 (3 & 4). pp. 357-359. (ISSN: 0375-1511)

Fritz, U. and Havas, P. (2007). Checklist of Chelonians of the World. *Vertebrate Zoology, Museum fűr Tierkunde Dresden, 1864-5755*, 57 (2): 149-368.

Hossain, M.L. and Sarker, S.U. (1995). Reproductive biology of Indian roofed turtle, *Kachuga tecta* in Bangladesh. *J. Chelonian Conservation and Biology*. 1 (3): 226-227.

Moll, E.O. (1987). Survey of the freshwater turtles of India. Part II: The genus *Kachuga*. *J. Bombay Nat. Hist. Soc*. 84 (1): 7 -25.

Rodgers, W.A. and *Panwar*, S.H. (1988). *Biogeographical Classification of India*. New Forest, Dehra Dun, India.

Scott, D.A. (1989). *Directory of Asian Wetlands*, International Council for Bird Preservation, International Waterfowl Research Bureau, WWF International, Gland (IUCN), 1181 pp. (ISBN: 2-88032-984-1)

Tikader, B.K. and Sharma, R.C. (1985). *Handbook Indian Testudines*. Zoological Survey of India.156 pp.

Tilak, R., Sinha, N.K. and Ray, P. (1990). On new record of distribution and association of a North Indian Roofed Turtle, *Kachuga tecta* (Gray) (Reptilia: Testudines: Emydidae) and Freshwater Leech, *Ozobranchus shipleyi* Harding (Hirudinea: Ichthyobdellidae) in Uttar Pradesh Terai. *Records of the Zoological Survey of India*. 87 (4): 273-275.

Vyas, R. and Patel, B.H. (1993). Captive breeding of the Indian Roofed Terrapin, *Kachuga tecta* (Gray). *J. Bombay Nat. Hist. Soc*. 90 (1): 109-112.

Article -

Changes observed during a decade long love affair with Chilika

By Mrs.Shakti Bishnoi - Photos by AS Bishnoi

For the last one decade, we have been visiting Chilika lake to participate in the annual bird census. As we continue coming back year after year, we can't help but notice the change in flora and fauna in Chilka lake and its surrounding areas where birds census is conducted. And that tempers the pleasure of being in the beautiful lake with the lovely winged creatures. Our heart is tinged with sadness due to the changes that we witness and goads us to raise awareness. Lest we fail in our duty in helping save a wonderful ecosystem that too thousands of years to get created.

Largest Brackish Water Lake:

Chilika Lake, the largest brackish water lagoon of Asia is recognised as one of the most important wetlands in the World and is one of the 42 Ramsar sites in India. Chilika is home to a huge number and species of birds. Visitors are charmed by a spectacular display of myriad hues of colours from over 160 species in the peak season between November and February.

Chilika which is well known for its beauty has nearly a dozen islands, some of them inhabited and a bird sanctuary called Nalabana located inside it. Chilika is nourished by rainfed rivers as well as have openings to the sea so that the there are various salinity levels and different kinds of flora and fauna coexisting in this complex ecosystem. As a result Chilika has a unique biodiversity that supports around 200,000 fishermen living on its banks.

Unfortunately Chilika is steadily losing its rich repertoire of fishes, crabs and other aquatic resources due to large-scale deforestation that has resulted in six new breaches on the 50-km long natural sand embankment. Previously, the lake had two natural mouths at Bali-Harichandi and Arakhakuda which allowed limited volume of saline water into the lake, making it unique and ideal for biodiversity.

Today Chilika lake is facing existential threat because of increasing human interferences, including large-scale cutting down of natural forests that guard the lake against high tidal inundation. Though severe ecological degradation has been observed here over time, not much attention has been given to it at the local, national and international levels. Normally, forest degradation, human interference such as market orientation and changing international scene are portrayed as the main causes for such degradation. However, like many wetland situations all over the world, Chilika lake is also subjected to a multiplicity of pressures and impacts, ranging from local to global in geographical scales, impacting over short to very long periods.

From newbies to becoming like duck in water

Many of us have strong emotional attachment to wetlands: memories of learning to swim in a pond, boating with a loved one on a lake or looking through binoculars at congregations of migratory birds on a cold winter morning. Wetlands are usually associated with happier times in our lives. This is probably what drives us to create artificial ones in our increasingly unfriendly urban habitats.

Beside their obvious recreational and aesthetic value, wetlands are an important life support system for a myriad species including us humans. Peering through their calm surfaces, one understands why life evolved from water. So, when an opportunity presents itself to be part of bird census in Asia's largest brackish water lake, the result was a foregone conclusion. During our first bird census, we obviously had to be completely focused on acquiring bird identification skills, differentiating between native and migratory birds, understanding their habits, bird counting techniques among other things. There was nervousness as we don't want to be found lacking in the field. On the other hand, tt was also a huge responsibility. So we tried to memorise names of every winter visitor while remaining awake till 3 am for the next morning coveted mission.

A two hours presentation on migratory birds showed me a mirror in which I saw how humans reacts when they miss a flight due to bad weather, technical failure, natural calamity or pandemic.

I pictured a bird roosting in freezing Siberia, making plans to fly to their winter home in India, as they don’t recognise hu-

man created boundaries to be a barrier in their journey. The weather should just be conducive to take off for thousands of kms journey. Global warming because of humans has made the migration a deadly affair for the birds. Arctic tern migrates 9000 kms from pole to pole. bar-tailed godwit flies nonstop 12200kms every year. Demoiselle crane flies over mt. Everest.

We studied all night as it was big responsibility and we didn't want to go unprepared. Next day I was in Dr Balachandran' group and my husband went to Ganjam with another experienced group leader. We were absorbing the practical training like sponge and with eyes wide open clicked pictures of beautiful birds in our mind. With Dr Bala, census was so much more than bird count, we got down in the shallow waters of clear Chilka lake after bird count was done and monitored the habitat. Dr Bala's keen scientific eyes were looking for all the details for the safety of birds. The clear cold and sometimes warm water full of water plants swaying inside brushing against our legs was tickling our nerves, and I giggled with joy. Dr bala has been very kind to everyone he met in the two days event and shared his knowledge joyfully with whoever asked him a question.

The most interesting part of the census was all the teams were supposed to reach their assigned area and at exactly 9 am the birds in sight of your area were listed in a journal with timings. If a school of ducks happens to fly to any area, the team made a note of the number and recorded it in flew in column of the journal. Later at the submission time, the data was tallied and addition and subtraction of listed birds were done for accuracy.

Our census field trip got over by afternoon and we were all sun bathed when we returned in our boats and others in vehicles later in the evening as the sites were far away. Our first year bird census was full of amazement and knowledge of migratory

birds. We purchased a book on chilka birds to gain knowledge on the names and their habitat for our next year census.

After 365 days preparation, we migrated like the birds to chilka lake for our second year bird census. This time it felt like home and we reached in the afternoon and organically started the parikrama of Chilka lake near our guest house looking for the migratory birds and resident birds. It was a real treat to our eyes after a yearlong wait. We even got ourselves binoculars and looked forward to the binoculars method of counting flying birds taught to us by Dr Bala the previous year. We knew the drill and went into our respective teams as told.

We started for our bird count the next day, but this time it was special as our knowledge was useful and we could name and count the birds barring few. I saw white bellied sea eagle pair and it was a memory to cherish forever. Amar was team leader for Ganjam and he did justice to his duties.

All went well as planned and we returned home joyfully with a hope of visiting next years to the bird' paradise.

Another year went by and our daughter was born and we took her along when she was few months short of two years. Dr Bala was cordial and all three of us went in his team. She was observing all the flying, swimming and perching birds on our way to the Nalabana. She spoke only when she was 4 and half years, so it was quiet time for all of us to watch her enjoy the bird count and not disturb the team. When after our day's hard work we opened our breakfast packets, we started having our veg food and Kanan saw few eggs kept in front of Dr. Bala as his meal. She carefully observed them and Dr bala offered her one egg without knowing we were vegetarians. Kanan took it and kept it in on the ground and sat close to it and kept watching it. Now we all knew what she was waiting for… a chick. We all smiled at her innocence and I picked up Kanan and Kanan picked up the egg. As we were watching the birds, Kanan heard a crackling and turned towards the direction the sound was coming. She saw Dr balachandran(the key figure of BNHS) peeling the eggshell, Kanan smiled and moved towards him to welcome the young chick. He took a bite and a two and kanan looked at the egg in her hands. She handed over the egg to Dr. Bala and came to me. I could understand how she must have felt as her hopes of an egg morphing into a chick was dashed.

The subsequent years were full of wonderful memories as we had Kanan as our new companion for bird census. First we would do our bird census and then move to manglajodi for another day treat to watch the migratory birds in wooden boats. As part of bird census team, we could never go to the Manglajodi area. To meet and greet the Painted snipe in Maglajodi was our annual added mission.

Not all is well with Chilika:

We have seen the landscape of Manglajodi changing over the years. We have witnessed how the fisherman and poachers turned into guides and protectors of the birds they hunted earlier for money. A beautiful mind changed the community. If livelihood is ensured, then most of the poaching areas can be protected with of course criminal punishment for wrongdoers to set an example so that no one repeats poaching of birds.

On our last bird census we noticed that the Odisha forest dept officer was not very cordial with Dr Bala and rest of us. He was trying to be authoritative and there was no room for selfless contributors. Of course it was suffocating to be in the meeting room for briefing but going for bird count next day was liberating. We were doing our assigned area census when we saw a red wattled lapwing hanging upside down in air. When we went closer we saw the cruel side of humans who tied transparent wires to kill the birds in flight and eat it. We rescued it and the bird did not revolt and calmly sat in our hands until we reached back. We borrowed *haldi* (turmeric) from kitchen and applied it to the wounded wing as all the forest officials were out in the field to complete bird census. It started moving on the banks of lake and looked comfortable.

A decade of bird census has changed us and made us better. Our daughter has grown with the stories of bird migrations, jungle adventures, and butterfly rearing. She is 8 years and enjoyed the childhood we wanted to give her.

We have realised that while we give our entire time and respect to the human guests at home and treating them equivalent to God, we completely forget that there are millions of birds who are also our *atithi* or guests every year. We completely miss even acknowledging the presence of our non-human guests; the migratory birds, the rivers flowing through to every place, the animals migration, the butterflies migration, the air flowing from one place to the other. The moment we realise this, perhaps we will strive to keep our environment pure to welcome the birds, butterflies, animals, rivers and air, the way we try to clean our house and make it shine when guests visit our home.

Destroying their habitat will in turn destroy the humans as we are part of the same ecosystem. Air, water, earth is a common inheritance. When we pollute the river flowing infront of our city, the air in our place or the soil on which we stand, the pollution impacts other humans and non-human species as well. What we improperly discard passes into our food chain and comes back to hit us.

Threats/Areas of Concern for Chilika

Over the years, the ecosystem of the lake encountered several problems and threats such as:

- Siltation due to littoral drift and sediments from the inland river systems
- Shrinkage of water surface area
- Choking of the inlet channel as well as shifting of the mouth connecting to the sea
- Decrease in salinity and fishery resources
- Proliferation of freshwater invasive species
- An overall loss of biodiversity with decline in productivity adversely affecting the livelihood of the community that depended on it
- Fights between fishermen and non-fishermen communities about fishing rights in the lake and consequent court cases

The rapid expansion of commercial aquaculture of prawn has contributed significantly to the decline of the lakes fisheries and bird population.

On top of these threats, is poaching. Bird poachers are still active in catching both resident as well as migratory birds for supplying to the many dhabas lined up on the side of the National Highway. Unrestrained poaching can wipe out entire populations and in some places have even resulted in birds avoiding the area. Hope, authorities can clamp down on this illegal poaching as well as take a holistic view in saving the unique ecosystem of Chilika so that man, bird and aquatic species can live in harmony.

Conservation News -

Preventing biodiversity loses due to invasive alien species

24th March, 2022

Alien species cause huge impact on the biodiversity. They outcompete native species and cause huge financial impact on our economy as well. This fact was acknowledged by the Minister of State for MoEF&CC Shri Ashwini Kumar Choubey while answering a question on the Rajya Sabha on 24th March, 2022. The Government of India reportedly maintains and updates its database of invasive alien species. According to Zoological Survey of India (ZSI), a total of 154 species of faunal communities including 56 species from terrestrial and freshwater ecosystem and 98 species of marine ecosystems are recorded from India as exotic/ invasive species.

The action plan of Government to prevent the reproduction and proliferation of invasive species includes strengthening of quarantine facilities at airport and seaport, strict compliance of IMO (International Maritime Organization) norms for ballast water disposal; evaluation on the impact assessment on the exotic species. Also this includes regulation of the introduction of exotic species for commercial venture; assessment of the growth rate, reproduction success, dispersal ability and tolerance during climatic stress of exotic species, status surveys on introduced /exotic/invasive species. No licenses are issued for cultivation of invasive alien species and no such information is collated in this Ministry.

Unfortunately, the ministry is completely oblivious to the exotic fishes released into the wild by various fisheries departments throughout the country. The Department of Fisheries, Government of Karnataka released 4 Lakhs exotic Common Carp Fingerlings into the Chakra reservoir on 24th March 2022, in presence of Additional Director of fisheries (Inland) Thippeswamy D and other officials. If the idea was to help the fishermen, then the fisheries department could have released any Indian fish instead of European fish. https://twitter.com/dof_kar/status/1507781014357098496

It would also be pertinent to mention that the Government of India is allowing import of exotic African Cheetah from Namibia to India. African Cheetah are a different species than the Asiatic Cheetah which has been extinct in India. Asiatic cheetahs are still found in small numbers in Iran. The project was earlier stuck down by the Supreme Court. However, with change in Government at the centre and change in chief justices, somehow a new order allowing import of exotic African cheetah has been allowed into India. Since it suits the project proponents, they even say that there is virtually no difference between African and Asiatic cheetah. Policy should not change simply because of commercial or other considerations. Since African cheetah which is an alien species is allowed to be imported into India, and uncontrolled release of exotic fishes continues in various parts of India by Government departments, it shows the Government is not serious about creating an viable foolproof action plan to prevent proliferation of invasive species.

Unusual rise in temperature due to climate change

24th March, 2022

Climate Change is a global collective action problem which has precipitated mainly due to historical, cumulative emissions by the developed countries arising from the disproportionate and excessive production and consumption. The advances in the science of climate change is periodically assessed by the Intergovernmental Panel on Climate Change (IPCC). The IPCC

Conservation News -

Sixth Assessment Working Group I report points to three major facts: First, that global average temperature has already risen by 1.07 degree C since pre-industrial times. Second, we only have a certain amount of carbon budget left before we reach the temperature limits of 1.5 degree C and 2 degree C mentioned in the Paris Agreement. And third, historical cumulative emissions are an important determinant of current climate change. Carbon budget is the cumulative amount of carbon dioxide emissions permitted since the pre-industrial era to keep the increase in global average temperature, over pre-industrial levels, within a certain limit. For 1.5 degree C warming, 83% of carbon budget is already taken up by historic cumulative emissions until 2019. So, for a temperature target of 1.5 degree C increase, there is only 500 Gt of carbon dioxide that the world can emit. Compared to what has been emitted thus far, this is quite small. While for 2 degree C, 65% is taken up by historic cumulative emissions and 35% remains for the whole world.

India with more than 17% of the global population has contributed only about 4% of the global cumulative greenhouse gas emissions between 1850 and 2019. India firmly believes in global cooperation to deal with the challenge of climate change through multilateral processes on the basis of the principles of equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC). Hence all countries must keep their emissions to their fair share of the global carbon budget and use it responsibly. At the same time, technological development is needed globally to move to a low-carbon development pathway while the excessive and unsustainable lifestyles of the developed countries must be immediately curbed and transformed. Simultaneously, development and adaptation is necessary to manage the impact of the climate change that is already taking place.

The Government is seized of the matter. Studies show that average temperature over India has warmed around 0.7°C during 1901-2018 and similar warming has been observed in the sea-surface temperature in the tropical Indian Ocean by 1°C for 1951-2015. The rise in temperature is gradual. The rise in extreme events is attributed to the complex earth system interactions due to global warming and regional anthropogenic influences.

Ministry of Earth Sciences (MoES) has the mandate to provide forecasts and early warnings. However, as an adaptive measure to minimize the effects of increasing temperatures, India Meteorological Department (IMD) in collaboration with local health departments have started heat action plan in many parts of the country to forewarn about the heat waves and also advising action to be taken during such occasions. Heat action plan became operational since 2013. National Disaster Management Authority (NDMA) and IMD are working with 23 states prone to high temperatures at present with respect to heat action plan.

The monitoring of glaciers is pursued by the Indian Space Research Organization (ISRO), Geological Survey of India (GSI), Ministry of Earth Sciences (MoES), Defence Geo informatics Research Establishment (DGRE), and also through various research projects sponsored by the Department of Science and Technology (DST). The latter also has an autonomous institution on Himalayan Geology, namely, the Wadia Institute of Himalayan Geology, Dehradun. The Central Water Commission (CWC) monitors 477 glacial lakes and water bodies in the Himalayan Region of the Indian river basin system, having an area of more than 50 hectares on a monthly basis in the monsoon season since 2011. Further, the National Disaster Management Authority has issued guidelines titled “Management of Glacial Lake Outburst Floods (GLOFs)” in October

Conservation News -

2020, which inter-alia includes a discussion on early warning systems.

The Government is implementing the National Action Plan on Climate Change (NAPCC), which is the overarching policy framework for climate action in India, covering mitigation, adaptation and generation of strategic knowledge on climate change. It comprises of national missions in the specific areas of solar energy, enhanced energy efficiency, water, agriculture, the Himalayan eco-system, sustainable habitat, green India and strategic knowledge on climate change. Further, 33 States/Union Territories have prepared State Action Plans on Climate Change (SAPCCs) consistent with the objectives of NAPCC. The Government is also implementing the National Adaptation Fund for Climate Change to support adaptation measures of States/UTs in areas that are particularly vulnerable to the adverse impacts of climate change. A number of other measures are taken, keeping in view the threat of climate change, by various departments, ministries and entities of the Government, as part of their regular mandated activities and responsibilities. These are periodically shared with all stakeholders and the world through India's National Communications and Biennial Update Reports submitted to the United Nations Framework Convention on Climate Change.

This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Rajya Sabha on 24th March 2022

Ban on single use plastics

21, March 2022

The Plastic Waste Management Rules (PWMR), 2016, provides the statutory framework for plastic waste management in an environmentally sound manner throughout the country. Thirty Four States/UTs have issued notifications/orders introducing regulations pertaining to complete or partial ban on plastic carry bags and/or identified single-use plastic items, over and above the Plastic Waste Management (PWM) Rules, 2016, as amended. The details are annexed.

The following steps have been taken to strengthen implementation of Plastic Waste Management Rules, 2016 and also to reduce the use of identified single use plastic items:

The States/UTs have been requested to constitute a Special Task Force under Chairpersonship of Chief Secretary/ Administrator for elimination of single use plastics and effective implementation of PWMR, 2016. Thirty two States/UTs have constituted the Special Task Force till date. A National Level Taskforce has also been constituted by the Ministry in this regard. The State /UT Governments and concerned Central Ministries/Departments have also been requested to developa comprehensive action plan and implement it in a time bound manner. Fourteen States/UTs and twelve central ministries have developed their comprehensive action plans.

The Ministry of Environment, Forest and Climate Change has notified the Guidelines on the Extended Producer Responsibility for plastic packaging vide Plastic Waste Management Amendment Rules, 2022, on 16th February, 2022. Directions

Conservation News -

have been issued to E-commerce companies, leading single use plastic sellers/users, and plastic raw material manufacturers with respect to phasing out of identified single use plastic items.

Additional Central Assistance is also provided to States and Union territories for solid waste management including plastic waste management, under Swachh Bharat Mission Urban (SBM (U)) and Swachh Bharat Mission Grameen. Single use plastic ban has been incorporated as an important component in Swachh Survekshan 2022, Star rating of Garbage Free Cities and as an entry condition for participating in Safaimitra Suraksha Challenge, to reduce plastic waste.

As per the Plastic Waste Management (PWM) Rules, 2016, there is complete ban on sachets using plastic material used for storing, packing or selling gutkha, tobacco and pan masala. Based on high littering potential and low utility, the Ministry has also notified the Plastic Waste Management Amendment Rules, 2021, on 12th August 2021, prohibiting manufacture, import, stocking, distribution, sale and use of the following identified single use plastic items, which have low utility and high littering potentialwith effect from the 1st July, 2022:

- ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration;
- plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.

Million Tons of E-Waste Generated in India

21st March 2022

Under the E-Waste (Management) Rules, 2016, twenty-one (21) types of electrical and electronic equipment (EEE) have been notified for fulfilling EPR obligations. These notified EEE, at the end of their life become E-Waste. The input data for estimation of generation of e-waste is available only from Financial Year (FY) 2017-2018 and only at national level. Information regarding national level e-waste generation for the financial year 2017-18, 2018-19 and 2019-20 is given in the table below:

S. No.	Financial Year	Generation (Tonnes)
1.	2017-2018	7,08,445
2.	2018-2019	7,71,215
3.	2019-2020	10,14,961.2

The import and export of hazardous and other wastes is regulated under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified by the Ministry. Government had banned import of e-waste in the country by listing e-waste in the Schedule VI (Basel No. A1180) of the said rules. The increase in generation of e-waste is due to increase in the sales of EEE in the Country in previous years.

Conservation News -

The Government already has a system in place to monitor EPR obligations related to Producers/Producer Responsibility Organisations (PROs) as per the E-Waste (Management) Rules, 2016. The existing EPR targets are as follows:
The rules provide for monitoring of EPR of E-Waste through CPCB, for which online portal has been developed in which target of each producer/PRO is duly assigned based on their production data of items as listed in Schedule-I of the

S.No.	Year	E-Waste collection Target (Weight)
(i)	2017-2018	10% of the quantity of waste generation as indicated in Extended Producer Responsibility Plan.
(ii)	2018-2019	20% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.
(iii)	2019-2020	30% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.
(iv)	2020-2021	40% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.
(v)	2021-2022	50% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.
(vi)	2022-2023	60% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.
(vii)	2023 onwards	70% of the quantity of waste generation as indicated in in Extended Producer Responsibility Plan.

Rules. Under the provisions of existing rules, penalty can be levied on defaulting producers/PROs and the obligation would have to be fulfilled even after the levy of penalty. The EPR targets were revised in financial year 2021-22 from 50% to 40% based on the representations received from the industry and in view of the pandemic.

Resolution on Plastic Pollution adopted at 5th UN Environment Assembly

Historic resolution on plastic pollution adopted by 175 countries

Addressing plastic pollution is recognized as a global environmental challenge. The resumed session of fifth United Nations Environment Assembly (UNEA 5.2) held from 28th February 2022 to 2nd March 2022 in Nairobi, considered three draft resolutions to address plastic pollution. One of the draft resolutions under consideration was that of India. The draft resolution submitted by India called for immediate collective voluntary action by countries.

India engaged constructively with all member states in UNEA 5.2 to develop consensus on the resolution for driving global action on plastic pollution by setting up of an intergovernmental negotiating committee for a new international legally binding treaty.

On the insistence of India, the principle of national circumstances and capability while taking actions to address plastic

Conservation News -

pollution was included in the text of the resolution to allow developing countries follow their development trajectories.

India also stood for not mandating the inter-governmental negotiating committee with development of targets, definitions, formats and methodologies, at this stage, pre-judging the outcome of deliberations of the Committee. The provision for immediate collective voluntary actions by the countries was also included to address plastic pollution on urgent and continual basis.

After long protracted negotiations, the principal objectives of India's draft resolution were sufficiently addressed in the resolution on "End plastic pollution: Towards an international legally binding instrument" adopted in the resumed fifth session of UNEA, which concluded on 2nd March 2022. The UNEA 5.2 will be remembered for agreeing for collective global action while respecting national circumstances and capabilities.

Under the resolution the Member States were called to continue and step up activities and adopt voluntary measures to combat plastic pollution, including measures related to sustainable consumption and production and, which may include circular economy approaches, and developing and implementing national action plans, while fostering international action and initiatives under respective national regulatory frameworks, and also on a voluntary basis to provide statistical information on environmentally sound management of plastic waste, as appropriate, taking into account their national circumstances.

The resolution requests the Executive Director to convene a forum in conjunction with the first session of intergovernmental negotiating committee, building upon existing initiatives, where appropriate, that is open to all stakeholders to exchange information and activities related to plastic pollution.

Unsustainable lifestyles of the developed nations putting the whole world at risk

16th February, 2022

India's Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav delivered a Special Address in the inaugural session of the 21st edition of the World Sustainable Development Summit 2022 on 16th Feb 2022. WSDS is the annual flagship event by The Energy and Resources Institute (TERI).

The Minister stressed that "to address global environmental challenges, including climate change, we must act now on the basis of agreed globally rules taking into account the principles of Equity and Common but Differentiated Responsibilities and Respective Capabilities. The Paris Agreement goals cannot be reached unless equity is implemented by all countries staying within their fair share of the global carbon budget. Our goal should be equitable sustainable development and equity in climate actions. Only then, 'climate justice' can be achieved".

He further added that approach to utilization of resources must be based on 'Mindful and Deliberate Utilization' and not 'Mindless and Destructive consumption'. The goal of L.I.F.E (Lifestyle for the Environment) that the Prime Minister of In-

Conservation News -

dia unveiled at COP 26 at Glasgow, should be adopted by the world to safeguard humanity and the planet. “Those who have contributed the most in taking the world in the wrong direction, must also make the maximum effort to come back to the path of sustainability”, said Shri Yadav.

Considering the critical need for saving the environment, the Minister underlined that while the industrial revolution has brought prosperity to countries, it has come at a huge cost to the environment. “Notwithstanding the adverse impacts of the pandemic on the economy, India has in fact enhanced its climate ambition. India is spearheading one of the most ambitious clean energy transitions in the world.

The Minister further stated that the inclusive and sustainable macro-economic development of India requires that both adaptation and mitigation objectives of the country are uniformly and equitably responded, within the larger goal of meeting our people’s aspirations and needs. Our latest Union budget has reaffirmed our determination to go down this path.

Concluding his address with the need for equity, he said that the “developed countries must respond on their part with due ambition and must meet both their promises – of reducing emissions drastically by changing their lifestyles and providing the developing countries with increased finance and technology support”.

There was a time when only the developed nations had unsustainable lifestyles. Today, even in India, we have lifestyles that are environmentally unsustainable. We have aped the disastrous development model of the west. Today our big cities are becoming bigger. The population density in our metro cities are at least 10 times India's population density. This causes huge demands on water and electricity depleting the ground water level, diverting water from dams at the cost of depriving the downstream people as well as running the river below its optimal ecological flow. It also harms the wildlife and leads to salinity ingress. The huge number of people in big cities leads to massive concretization and due to urban heat-island effect the cities have higher temperatures. This leads to higher demands for air conditioners and higher power consumption is the norm. Urban transportation is also a mess.

In this era of Climate Change, the impact of all our actions are not limited to our geography. The impact is seen everywhere. So it is important that the entire world has to work hand in hand. Unfortunately, the leaders of various countries are not able to show statesmanship. As a result, the world is going to face a full blown climate crisis soon.

Conservation and Protection of Mangroves

10th February, 2022

While answering a question in Rajya Sabha, Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change said that the Government has taken steps to protect sustain, conserve and augment forests in the country through promotional as well as regulatory measures. The promotional measures are being implemented through a Central Sector Scheme under National Coastal Mission Programme on ‘Conservation and Management of Mangroves and Coral Reefs’. Under this programme, annual Management Action Plan (MAP) for conservation and management of mangroves

Conservation News -

are formulated and implemented in all the coastal States and Union Territories.

Regulatory measures are implemented through Coastal Regulation Zone (CRZ) Notification (2019) under the Environment (Protection) Act, 1986; the Wild Life (Protection) Act, 1972; the Indian Forest Act, 1927; the Biological Diversity Act, 2002; and rules under these acts as amended from time to time.

As per information provided by the World Wide Fund for Nature, (WWF), India, the WWF India has enjoined citizens in nine states, which include Maharashtra, Goa, Gujarat, Andhra Pradesh, Tamil Nadu, Kerala, Odisha, West Bengal and Karnataka on mangrove conservation through the Magical Mangroves campaign. About 180 volunteers have committed their time towards being educated on mangrove conservation and to inspire more community members to do the same. Volunteers are equipped with a curated toolkit of presentations, videos, story books, and a mangroves app. in addition, the Magical Mangroves campaign has sensitized close to 15,600 citizens in India's coastal states through 220 webinars.

The Government under Centrally sponsored scheme for conservation & Management of Mangroves, extend assistance to Coastal State/UTs for implementation of action plans including survey and demarcation, alternation and supplementary livelihood, protection measures and education and awareness activities.

The Ministry piloted an Integrated Coastal Zone management Project in Coastal stretches of 3 states namely Gujarat, Odisha and West Bengal, with objective of Conservation and Protection of Coastal resources which included plantation of mangroves as one of the major activities.

In addition, State Government of Maharashtra has taken several proactive steps for conservation of Mangroves and a Mangrove Cell, dedicated for Mangrove conservation, has been establishment by the State Government. Further, Mangrove and Marine Biodiversity Conservation Foundation is also created for enhancing Mangrove cover and to promote research and livelihood activities under the Forest Department by the State Government.

Under the Scheme, conservation and management of mangroves in Vemband and Kannur regions in Kerala, casuarinas seedlings and mangrove associated species are distributed to public for planting in coastal areas.
The Forest Survey of India (FSI) assessed Mangrove Cover of the country in three density classes i.e. very Dense, Moderately Dense and Open Mangrove Cover on biennial basis and publishes the findings in the India State of Forest Report (ISFR). As per the ISFR 2021, the mangrove cover in the country has increased by 17 sq. km. in year 2021 as compared to the mangrove cover assessed in year 2019.

Environment Ministry says India not obliged to reduce Carbon Emissions

7th February, 2022

In this era of Climate Change each country needs to undertake reduction in their carbon emissions. However, given the fact that climate change is primarily induced by the hand of man and its impact has accelerated after the industrial revolution it is accepted that developed countries have to do more for their historical emissions. Given the complex negotiations differ-

Conservation News -

ent countries are supposed to do different things as per their Nationally Determined Contributions. India's Minister of State for Environment Ashwini Choubey while answering a question in Lok Sabha has said that India is not obliged to reduce carbon emissions.

As per the extant provisions under the United Nations Framework Convention on Climate Change (UNFCCC), its Kyoto protocol and the Paris Agreement (PA), India is not obliged to reduce carbon emissions or to set any target for the next five years to reduce emissions. Under the Paris Agreement, parties are required to communicate their Nationally Determined Contributions (NDCs) to combat climate change. These NDCs involve, inter-alia activities for reduction of greenhouse gases and also for building resilience to impacts of climate change. India has communicated its NDCs in 2015. These include, interalia, quantified targets to reduce the emissions intensity of Gross Domestic Product (GDP) by 33 to 35 percent by 2030 from 2005 level, to achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, and to create an additional carbon sink of 2.5 to 3 billion tonnes of CO2eq through additional forest and tree cover by 2030.

In the National Statement delivered at 26th session of the Conference of the Parties (COP26) held in Glasgow, United Kingdom, India has declared its goal to achieve net zero by 2070. This goal is to be achieved through periodic enhancement of NDCs and corresponding domestic climate actions towards low carbon transition, supported by climate finance and technology transfer under the UNFCCC and PA.

At COP26, as part of its overall approach, India emphasized the foundational principles of equity, and common but differentiated responsibilities and respective capabilities. It also highlighted the need for all countries to have equitable access to the global carbon budget, a finite global resource, for keeping temperature increase within the limits set by the Paris Agreement and that all countries must stay within their fair share of this global carbon budget while using it responsibly. India also called for climate justice in global climate action, and for the developed countries to undertake rapid reductions in emissions during the current decade, to reach net-zero much earlier than their announced dates, as they have used more than their fair share of the global carbon budget.

India emphasized that climate finance and the transfer of relevant technologies have become even more important for the implementation of climate action by developing countries. The ambition on climate finance by developed countries cannot remain at the level it was at the time the Paris Agreement was signed in 2015. It was emphasized that just as the UNFCCC tracks the progress made in climate mitigation, it should also track climate finance. Further, it was conveyed to the developed countries that India understands and shares the difficulties of all other developing countries, and hence raises its voice in solidarity with their cause.

India also reaffirmed that developing countries need those fossil fuel resources as are relevant to their national circumstances even while accelerating clean energy transition. At the same time, India reminded developed countries that to stay within the global carbon budget for the Paris Agreement temperature targets, they must work for the phaseout of all fossil fuels and not just single out coal.

Conservation News -

Apart from resolutely addressing climate change domestically, India has created and continues to nurture international initiatives such as the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI).

Cheetah Import

The Government of India is in the process of holding consultation meeting with African countries for bringing Cheetah. A total of 12-14 cheetahs are intended to be brought from South Africa/Namibia/Other African Countries over a period of five years as per the Action Plan. The such introduced cheetah would be fitted with Satellite/GSM-GPS-VHF radio-collars before their release in wild so as to enable monitoring remotely.The cheetah was declared extinct from India in 1952, currently there are no cheetah in any National Park or Wildlife Sanctuary in India.

About 12-14 wild cheetahs (8-10 males and 4-6 females) from various parks/reserves/areas that are ideal (reproductive age group that is genetically diverse, disease free, behaviorally sound-e.g. not overly imprinted to humans but tolerant, predator wary, capable of hunting wild prey, and socially tolerant of each other) for establishing a new cheetah population would be imported as required from South Africa/Namibia/Other African Countries, as a founder stock for five years initially and then as may be required by the program.

Cheetah is the only large carnivore to have become extinct in Independent India. There are no cheetah left in wild in India, therefore, to introduce them in India they have to be brought from abroad. Cheetah has been an integral part of Indian ecosystems, a major evolutionary force, and an important cultural heritage. Their restoration will likely result in better conservation of open forest, grassland, and scrub ecosystems for which they will serve as a flagship species.

Rs. 38.70 crore under the ongoing Centrally Sponsored Scheme of Project Tiger has been allocated to the cheetah introduction project for the years 2021-22 to 2025-26.
This information was given by Shri Ashwini Kumar Choubey, Minister of State, Ministry of Environment, Forest & Climate Change in Lok Sabha on 7th February, 2022.

The african cheetah is a different species than the Indian cheetah which became extinct. So the Government is going ahead with reintroduction of an exotic species. The Supreme Court had earlier banned its import. However, after several years with the change in Government and change in justices, the Government has managed to obtain a favorable order from the Supreme Court and is now going ahead with the African Cheetah import.

The Asian cheetah can still be found in Iran. However, their population is very low. The conservationists who were working on asiatic cheetahs in Iran were were jailed for suspicion of being foreign agents. Capturing and getting asian cheetahs from Iran is difficult. In the past there was proposal to clone asiatic cheetah however, that proposal didn't move ahead. Before that there were talks of shifting cheetahs from Iran but that country faced a regime change. However, if at all Asiatic Cheetah can be saved from extinction then there should be capture and gradual reintroduction into managed environments in India. Unfortunately, that is not expected to ever happen.

Conservation News -

Forest Officers need to be the voice of the voiceless and act as trustees not owners

Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav today said that the forest officers as the voice of the voiceless need to work with an approach that is earnestly humane and sensitive to the aspirations and needs of the local community. The Minister was virtually addressing the 64 Indian Forest Service(IFS) Probationer Trainees of the 2020 Batch being trained at Indira Gandhi National Forest Academy, Dehradun.

Addressing the young officers, Shri Yadav said that the country under the current national leadership is aspiring for transformative advancement on all fronts of development while simultaneously dealing with challenges and crisis on different environmental frontiers and their manifestations viz. climate change, land degradation, pollution and biodiversity loss, and hence their role in the present era becomes even more important in taking forward and practicing sustainable development.

The Environment Minister highlighted the commitments and targets for carbon sequestration, zero-carbon emission dateline, proportion of solar power and other environmentally efficient sources in energy mix, conservation of biodiversity, combating desertification and restoration of degraded land etc. and asked the officers to come forward with creative and innovative ideas to achieve them.

He reiterated, that as empowered, capable and competent workforce of the government system, the young IFS officers have also to be pro-actively Community-centric/Citizen oriented and facilitator in approach in dealing with the community in forest landscapes in their jurisdiction, and also other citizens.

This message was apt, as these days with the advent of social media, most of the forest officers are seen posting throughout the day photos, videos and messages and in many instances videos and photos completely unrelated to their job. There is a competition to show themselves in the wilderness areas and showcase their own photography. Researchers, Filmmakers, photographers complain that often jealous forest officers have ego tassels and don't allow permissions.
The probationers were also addressed by the Minister of State Shri Ashwini Kumar Choubey who said that there are many areas of interaction with the community residing in forest landscapes and other people, where an empathetic, responsive, facilitation approach has to be mainstay of the conduct and functional discharge of duties and this whole process requires utmost sincerity and citizen centric approach with a humane approach. The probationers were also given best wishes and words of wisdom by Secretary, Ministry of Environment, Forest and Climate Change, Ms. Leela Nandan and Shri C. P Goyal, DG (Forest) & Special Secretary, MoEFCC.

Equipment Discussions -

Canon launches Cinema EOS R5C 8k full frame camera

Canon has come out a cinema centric version of their EOS R5 mirrorless camera by launching the Canon Cinema EOS R5C which can shoot unlimited 8K raw video from a 35mm full frame sensor.

The Cinema EOS R5C retains the same 45 Megapixels still shooting capabilities. And it comes with 8K 50/60p shooting ability in various forms of Raw as well as XF-AVC and MP4 codecs. In its highest form, it can record DCI 8K in 50/60p in 12 bits Cinema Raw Light from the full frame sensor. This 8K in a small form factor is going to be a huge benefit for lot of people. It has a dedicated button to change from stills shooting to video.

We are immensely excited by this announcement as one can now shoot 8K in such a small package. For smaller budget films we can now afford dual 8K camera setups and more for consistency in matching footage without much struggle during post processing. We will bring a full field review of a production camera later.

Salient features of EOS R5C:

- Sensor: 35mm Full frame 45 Megapixel CMOS sensor
- Resolution: stills 45 Megapixels, DCI 8K video
- Processor: Digic X
- ISO: 100-51200, expandable to ISO 50 at the lower end and ISO 102400 at the top.
- Still burst shooting: 12 fps mechanical shutter, 20fps electronic shutter
- AF: Dual pixel CMOS readout from 100 % of still image area. With older lenses 80% of the vertical and 80% of horizontal area. AF is available with subject detection in high speed burst shooting mode even in full resolution. Subject

Equipment Discussions -

detection and tracking as R5 camera. Head and eye detection, animal detection, vehicle detection ability built-in. Auto-focus in very low light EV-6

- Video: Max 8K 60p internal video recording in raw mode. There are three different raw codecs HQ, ST and LT and all of those are in 12 bits. One can also shoot 8K in XF-AVC and mp4 in lower bit rates. XF-AVC codecs offer 10-bit 4:2:2 files in a .MXF wrapper. 4K video can be shot upto 120p and audio recording is possible even in high frame rate shooting.
- External video: 4:2:2 10 bit via HDMI. DCI 4K and UHD 4K upto 60p. With Atomos Ninja V+ recorder one can record 8K ProRes Raw.
- Dual card slot: one CFexpress and one SD UHS-II
- Time code: There is a time code terminal which can help sync with any time code generator from a mixer or another camera in multicamera shooting mode.
- Audio: Canon has changed the flash shoe to a multi-function shoe and with the optional TASCAM CA-XLR2D microphone adapter which is sold separately, one can plug in XLR microphones. This adaptor has its own batteries so that the camera battery won't be drained.
- LCD monitor: 3.2 inch vari-angle touchscreen LCD monitor similar to the R5 and other mirrorless and DSLR cameras. 5.76 million-dot viewfinder
- A new DC Coupler DR-E6C helps to provide the continuous power needed for shooting 8K 50/60p.
- Enhanced Image Stabilization: EOS R5C's image stabilization coordinates with the optical IS in the Canon's RF lenses when shooting XF-AVC or MP4 formats. However, this is not possible while shooting in raw.
- Gamma curve: Canon Log 3, HDR-HLG, HDR-PQ, Rec2020, Rec709

Weight: 770gms with battery and cards.

Price: $4499 US Dollars. India price will be updated after announcement.

B&H preorder Link:

https://www.bhphotovideo.com/c/product/1684244-REG/canon_5077c002_eos_r5_c_full_frame.html/BI/19990/KBID/13252

PRESS RELEASE

Ready for Anything: The Canon EOS R5 C True Hybrid, Full-Frame Mirrorless Camera Bridges Cinema EOS and EOS Technology

Ideal for a Wide Variety of Content Producers, Including YouTubers, Wedding, Indie and Documentary Filmmakers, Drone Operators and Multimedia Journalists

MELVILLE, NY, January 19, 2022 – Imagine having the best of both worlds at your fingertips. A Canon camera with equal parts video and still digital imaging power, all in one compact-and-lightweight package. Canon U.S.A., Inc., a leader in digital imaging solutions, is excited to announce the EOS R5 C Full-Frame Mirrorless Camera, a hybrid, RF-mount 8K camera that has something for everyone. The new camera showcases video formats and features from the company's award-

Equipment Discussions -

winning Cinema EOS line, alongside select still capabilities that have made the EOS R5 camera a popular and trusted choice among imaging professionals and enthusiasts alike [i].

"Imaging professionals are living in a multimedia world. Gone are the days of only needing to be sufficiently equipped and skilled at video or stills," said Tatsuro "Tony" Kano, Executive Vice President and General Manager of Canon U.S.A.'s Imaging Technologies & Communications Group. "The EOS R5 C squarely takes aim at providing end-users with a solution that can tackle all facets of the ever-demanding multimedia and content production landscape. Canon is confident this all-in-one solution can help improve the workflow for a variety of content creators."

Small, but Mighty

The EOS R5 C camera can record non-stop, uninterrupted 8K/60P[ii] thanks to an active cooling system. 8K video delivers outstanding definition and realism with four times the resolution of 4K video, enabling unprecedented capabilities in video expression and highly flexible workflows, such as 4K cropping from 8K footage.

The EOS R5 C camera can record High Frame Rate (HFR) video up to 120P at 4K resolution in 4:2:2 10-bit without cropping the sensor, an ideal option when shooting scenes full of fast-paced action or when the camera is paired with a gimbal or drone. Canon's renowned Dual Pixel CMOS AF is functional even in HFR shooting. Unlike some cameras where audio is not recorded during HFR shooting, the EOS R5 C camera can record .WAV audio as a separate file from video, virtually eliminating the need for separate audio recording.

The EOS R5 C is the first Canon camera to provide internal 8K (8192x4320) 60P Cinema RAW Light recording. Cinema RAW Light is a popular and valuable format found in other Canon Cinema EOS cameras such as the EOS C300 Mark III

Equipment Discussions -

and EOS C500 Mark II. This feature captures the full dynamic range of the sensor and provides video data with a cinematic look, optimized for advanced grading and HDR, in a more manageable file size than Cinema RAW. Cinema RAW Light now has three newly-developed modes, RAW HQ (high quality), RAW ST (standard quality), and RAW LT (light recording). All three modes are 12-bit regardless of frame rate. The EOS R5 C can also record 8K video in MP4 format, ideal for quicker delivery.

The EOS R5 C supports RAW output via HDMI for ProRes RAW recording with compatible a external recorder[iii]. When connecting the EOS R5 C with a supported external recorder, users can shoot in Apple ProRes RAW at up to 8K/30P. Proxy data can also be simultaneously recorded to an SD card in-camera, helping to provide efficient post-production operations.

Powerful Still Imaging Performance

With the flip of a switch, the EOS R5 C becomes a familiar force to be reckoned with as a still photography camera. At its core is Canon's 45-megapixel high resolution, high-speed full-frame CMOS sensor, paired with the equally impressive DIGIC X image processor that provides users an ISO range of 100-51200; expandable to 102400[iv]. Precise focus and lightning-fast speed are cornerstones of the EOS R5 C, featuring Dual Pixel CMOS AF II and high-speed continuous shooting of up to 12 frames-per-second (fps) in mechanical shutter mode and up to 20 fps in silent electronic shutter mode. This allows users to track and photograph split-second movements of even the most elusive subjects. With EOS iTR AF X and 1,053

Equipment Discussions -

Automatic AF zones, it is easier than ever to photograph people using Eye, Face and Head Detection AF, or intuitively track the whole body, face, or eye of cats, dogs, or birds with Animal Detection AF[v]. For those with the need for speed, the camera also offers vehicle subject detection to track cars and motorcycles accurately, especially in race-type environments. Connectivity like 5GHz and 2.4GHz Wi-Fi®[vi] and Bluetooth®[vii] connectivity is also included for the transfer of still images.

Additional Features of the Canon EOS R5 C Camera Include:

- Supports 8K HDR recording in Hybrid Log Gamma (HLG) and Perceptual Quantization (PQ) formats
- 4K and 2K oversampling with high-definition debayer algorithm that processes RGB data of the 8K sensor with less incidence of moiré, false colors, and noise
- XF-AVC codecs offer robust 10-bit 4:2:2 files in a .MXF wrapper for simple compatibility with non-linear editing systems (NLEs) and existing workflows
- Canon Log 3, which is found in many Canon cinema products, is available for a wider range of grading after shooting
- Coordinated image stabilization (with Canon lenses equipped with optical IS) helps to correct hand-shake and better anti-vibration performance than electronic IS alone
- Timecode terminal allowing for multi-camera shooting
- Canon's next-generation Multi-Function Shoe is compatible with a variety of accessories, such as an optional TASCAM CA-XLR2d-C XLR microphone adapter (sold separately) for up to 4-channel digital audio
- RF mount provides access to the expanding lineup of Canon RF lenses, as well as the full lineup of EF lenses (adapter required)
- Compatible with Canon's new RF 5.2mm 2.8 L Dual Fisheye lens allowing for stereoscopic 180° VR video capture
- 13 marked, assignable buttons allow for user-friendly customized operation
- Compact-and-lightweight at 1.7 lbs. (body only)
- 3.2-inch variable-angle LCD monitor and high-definition 5.76 million-dot viewfinder
- Dual card slots: one CFexpress and one SD UHS-II
- USB Video Class (UVC) connectivity, enabling out of the box use as a streaming video camera
- A new DC Coupler DR-E6C helps to provide the continuous power needed for the demands of shooting in Cinema RAW Light at high framerates

Pricing and Availability

The Canon EOS R5 C Full-Frame Mirrorless Camera is scheduled to be available March 2022 for an estimated retail price of **$4499.00.***

Equipment Discussions -

Canon announces 800mm and 1200mm supertelephoto lenses

Canon has announced RF 800mm f5.6 L IS USM and RF 1200mm f8 L IS USM supertelephoto lenses. These lenses are filled with Canon's latest technologies and the lens elements are coated with Airsphere and Super spectra coatings as well as have Fluorite and Super Ultra low dispersion elements. These lenses also come with a short and a long lens hood.

These super telephoto lenses are made with new material and hence weigh comparatively less than what a similar lens would weigh.

The RF 800mm f5.6 L IS USM lens costs weighs 3.1 kg. That makes it easy to handhold.

The RF 800mm f5.6 L IS USM lens costs $16,999.00 US Dollars. Given the INR vs dollars exchange rate, it is going to pinch a bit.

B&H Link: https://www.bhphotovideo.com/c/produ...990/KBID/13252

Availability date: May 2022

The minimum focus distance of 8.5 feet is great for shooting small subjects. If you are shooting birds then definitely this lens should be in your arsenal.

The RF 1200mm f8 L IS USM lens was not there in Canon's lineup in recent years. So it is a welcome move to introduce the 1200mm f8 lens, especially since most of the professional cameras these days are 35mm full frame. This lens would be of help for shooting distant subjects in wildlife, journalism, sports etc.

The RF 1200mm f8 L IS USM lens only weighs 3.4 kgs. The minimum focusing distance is 14.1 feet. Use it with a good tri-

Equipment Discussions -

pod as slight movement will have an exaggerated impact.

The lens is available for preorder in the regular dealers like B&H.

B&H: https://www.bhphotovideo.com/c/produ...990/KBID/13252

Overall it is an exciting time as new super telephoto lenses can further catapult the quality of photographers if they have decent photographic skills.

PRESS RELEASE

Go Long: Canon Introduces the RF800mm F5.6 L IS USM and RF1200mm F8 L IS USM Super-Telephoto Lenses

The Newest RF Lenses are Ideal for Outdoor Sports, Motor Sports, Wildlife Photography, Photo News Journalism, and More

MELVILLE, NY, February 23, 2022 – Canon U.S.A., Inc., a leader in digital imaging solutions, is excited to announce that the Canon RF lens family is growing by two, with the addition of the Canon RF800mm F5.6 L IS USM, and the longest focal length RF lens yet, the RF1200mm F8 L IS USM. Both super-telephoto fixed focal length lenses are quite light for their considerable abilities, and share many of the same features such as Super Spectra Coating (SSC) and Air Sphere Coating (ASC) to help minimize ghosting and flaring, compatibility with both the RF1.4x and RF2x extenders and a customizable electronic focusing ring with manual focus capability during Servo AF.

Additional features shared by both lenses include:

Two focus presets, with the ability to instantly switch between memorized focus distances

- Circular nine-bladed aperture providing photographers with exceptionally beautiful and soft blurred backgrounds and bokeh
- Renowned Canon L-Series durability and construction with dust and water resistance, plus fluorine coating on the front element for easy cleaning

Canon RF800mm F5.6L IS USM

The RF800mm F5.6 L IS USM weighs in at just 6.9 lbs and features a minimum focusing distance of 8.53ft/2.6 meters — maximum close-up magnification is a superb 0.34x, allowing wildlife image creators to fill the frame with small subjects, such as birds, at its minimum focusing distance. Optical image stabilization is up to 4.5 stops* of shake correction and includes three IS operation modes. When using the RF1.4x or RF2x extenders, users can experience enhanced effective focal lengths of 1,120mm and 1,600mm respectively.

Canon RF1200mm F8 L IS USM

The RF1200mm F8 L IS USM is the most powerful super-telephoto lens in the Canon RF lens line. It weighs in at 7.4 lbs — an outstandingly light figure for a super-tele lens of this type — and features a minimum focusing distance of 14.1ft/4.3m. Optical image stabilization is up to 4.0 stops* of shake correction and, similar to the RF800mm F5.6 L IS USM lens, in-

Equipment Discussions -

cludes three IS operation modes. When using the RF1.4x or RF2x extenders, users can experience enhanced focal lengths of 1,680mm and 2,400mm, respectively.

Pricing and Availability

The Canon RF800mm F5.6 L IS USM and Canon RF1200mm F8 L IS USM are both scheduled to be available in late May 2022 for an estimated retail price of $16,999.00 and $19,999.00, respectively**.

Natural History -

COUNTRY NOTEBOOK: Fond Recollections : M.Krishnan:- 20-12-1953

The Sunday Statesman (shared by Shri. Saktipada Panigrahi)

" BLACK birds, as a rule, are glossy. Look at the King-crow, the Racket-tailed Drongo, the Cock-koel and Robin - even the homely crows have a shine to their darkness, like a glace-kid shoe. Some black birds are even more fancy, the sheen of their plumage having a iridescence; the Hill-mynah's black is shot with flashes of purple and green, the little Sunbirds have a gem -like purple glow, and many other birds have a watchspring-blue gloss to their blackness.

But the cock Pied Bush-chat is not like that. Its black is shineless and gentlemanly, and sets off the patch of white in each wing and above the tail so neatly and brings out stubby little figure so trimly. Its mate is even more sober in attire, the colour of sun-baked, brown clay.

It is scrubby country, given to spiky, stony vistas framed by thorn-bush, that the Bush-chat likes best; and here it will often take up residence, with its mate, around one's home. So will many other birds, but I think that none of them can impart to a modest cottage set in a plot of wasteland and the same sense of cheer. I should know, having lived for years in such a dwell-ing.

For seven years, a pair of Pied Bush-chats lived close beside me, till I left. Each year they built their nest in the vicinity, in a cleft in the kitchen wall, in the roof of my goatshed, and once in the axle-hole of an enormous, handleless, stone roadroller that lay permanently unrolling on my wiry "lawn" - that brood, I remember, came to grief soon.

Robins, many Wagtails, Sparrows, Bulbuls, Sunbirds - all sorts of birds would come to the curious, low circular wall that enclosed my house or to the aloes and the few hardy bushes that I succeeded in cultivating.

But it was the Bush-chats that were the permanent residents and I was glad this was so; they were such quiet, self-assured and confiding tenants, unlike the giddy, fidgety visitors.

During summer and even during the cold weather (especially in December) the cock bush-chat would take its stance atop the terrace, or on a mast-like strip of plank from a packaging case that somehow came to adorn the roof of the goatshed, and sing his glad brief song - a loud clear rising whistle ending on a note of untamed sweetness.

Listening to it on a sultry afternoon, I have often felt convinced that there is more to birdsong than scientists know yet, and there are times when a bird sings merely because it can and feels like it.

I know that scientifically-minded people will shake their heads sadly over this little tribute to a lost friend; they will tell me that it is a projection of my own emotions, a sickly and unworthy sentimentality that is responsible for this note.

No matter. I knew these chats for years and they did not - and if science is the elimination of all feeling and perception and an unwillingness to believe what is not printed in a book, then I have no use for it."

- M. Krishnan

Wildlife Photography -

Tiger in morning Sunlight by Sabyasachi Patra

Tiger on Camera trap by Vipin Sharma

Wildlife Photography -

Rhino from Manas by Shyamala Kumar

Always Keep a Safe distance from wild animals by Jerin Dinesh

Wildlife Photography -

Tundra Bean Goose by Mrudul Godbole

Egret with a Catch by Mrudul Godbole

Wildlife Photography -

Mountain Imperial Pigeon by Samrat Sarkar

The patience for the flagrant bloom by Prajwal Ullal

Spare a Thought

Image of a dhole (Cuon alpinus) adorns the coverpage of IndiaWilds. This is first quarterly issue of IndiaWilds in 2022.

Dholes are much misunderstood predators. Once upon a time they were seen as simply feral dogs or wild dogs and were treated as vermin. Dholes chase and bite chunks out of their prey and soon the prey fall is worn and pulled down. Some describe this method of hunting as gory and repulsive. However, dholes hunt based on their body strengths and limitations. Hunters who used to call themselves as Sportsmen, despised dholes as they felt that deers become much more cautious when a pack of dholes are around. As a result, creeping in closer to get a good shot for the hunter becomes more difficult. No wonder hunters used to spread stories that pack of dholes indulge in wanton killing and hence need to be exterminated. Accordingly, the British authorities used to announce a bounty on the number of heads of these dholes that you produce before them. This continued for some time even after India gained its independence.

Today these whistling hunters have declined in range. Our forests have become fragmented and have turned into islands bound by human habitations. The connectivity between different forests have been lost. At times these dholes while crossing the roads get hit by speeding vehicles. A large pack of dholes thriving in our forests indicates a healthy ecosystem. We should strive to give them contiguous corridors to move between different forests so that their groups can move, splinter and repopulate different landscapes and help serve natures design of checks and balance of each species.

Touche.

I look forward to your inputs and support in preserving the last tracts of wilderness and wildlife of our beautiful country. For other interesting articles and images check - ***http://www.indiawilds.com/forums/*** To post in the IndiaWilds forums, you can register free of cost using your Full Name as user id at -

http://www.indiawilds.com/forums/register.php

If you are already a member of IndiaWilds and have forgotten you user id and/or password you can mail administrator@indiawilds.com

Regards,
Sabyasachi Patra

Profile | Contact | IndiaWilds Channel | Diary | Equipment reviews | Forums

Publisher's address: - **Plot No. 1, Akarpuri Colony,**
Near Vaithal Temple, Old Town,
Bhbuaneshwar, 751002
Odisha Mobile - +919910900446
