India Wilds®

Newsletter

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Inside this issue:

Save Chilika from Seaplane	2
Flood Fury: Will we learn from Kerala & Kodagu?	7
Book Review: On Jim Corbett't Trail & Other Stories from the Jungle by AJT	11
Conservation News	16
Equipment Discussions	24
Natural History	38
Wildlife Photography	40

Cover Page Photograph:

Flight of Ruddy shelducks in Chilika Lake
by Sabyasachi Patra

Save Chilika from Seaplane Project:

Development vs Conservation is a slogan which has often caused the death knell of many ecologically fragile lands because people immediately get convinced by the usage of the word develop as it connotes something good and better. Any infrastructure creation is seen as development, howsoever detrimental it might be to the place.

Some localities and villages fight against setting up wine shops. At times they succeed because those shops are seen as a social evil. Our brains are conditioned to believe that alcohol is bad. Else, that would have been seen as development.

There was a time when traveling by flight was seen as elitist. People used to wear their best/ only suit as the case may be to travel by air. Though the advent of cheap low cost airlines and in some cases their employees beating up passengers have removed the sheen from air travel a bit. Nevertheless, the very mention of setting up an aerodrome is seen as a positive sign. And when people hear that Seaplanes have to land at a place and facilities need to be created for that, they immediately take it as a positive sign.

Alas! Not many realise that setting up such a project in the biodiversity rich place like Chilika lake, which is a wetland of international importance and is recognized as a Ramsar site in 1981, is not “Development”. It is a retrograde step.

Chilika lake is no ordinary waterbody. It is spread over nearly 1100 square kilometers covering Ganjam, Khordha and Puri districts of Odisha. It is the largest brackish water lake in India and one of the top coastal lagoons in the world. It is brackish in nature and estuarine in character.

52 rivers and rivulets feed Chilika. Hence the size of the lake varies based on season, ranging from 900km to 1165 kms at its peak.

The Chilika lake has marine, brackish and freshwater ecosystems and it supports amazing bio-diversity. Due to the variety of habitats the relationships between the various species ie plants, birds, invertebrates, vertebrates etc is complex. Over 800 species of flora, fauna (vertebrates, invertebrates) as well as avian species are found. There are about 160 dolphins in the Chilika lake. The endangered species found in the lake also include a species of limbless skink which was accidentally discovered. And there is every chance that in such a vast area, there may be other species yet to be discovered if proper scientific investigations are permitted over a longer period of time.

Chilika also has a role in Odisha history. Between 1568 and 1733 AD Odisha was repeatedly attacked by muslim invaders. So Lord Jagannatha was for sometime hidden in Gurubai island and chadheihaga hill in Chilika. So the Chilika lake is also important to the people of Odisha from a religious-cultural angle.

Since time immemorial, Chilika lake is known for its beauty. There are many poems, stories and plays written on Chilika and has inspired many folklores. In one of the famous poems Ut-kalamani Gopabandhu Das while being taken to Berhampur Jail by a train was bowled over by the beauty of Chilika. So he exhorts the steam engine driven train to stop for a moment so that he can soak in the beauty of the lake.(In odia he writes “raha raha kshane baspiya sakata, dekhibi chilika charu chitrapata”). His poem has inspired many people and they in turn yearn

to see its beauty. Today, Chilika is an important spot for picnic and sightseeing and many tourists visit it to watch migratory birds in winter as well as to watch the dolphins.

It is estimated that in some years close to million migratory birds visit chilika in the winter. There is a very important role of these birds in shaping the ecosystem of chilika lake. Their guano deposited into the lake helps in nutrient recycling. The bird droppings from the ducks and geese have an estimated 33.8 tons of Nitrogen and 10.5 tons of Phosphorus and helps in the high biomass production of macrophytes and increases the fish productivity.

Birds feed on the vegetation and this help in pruning and maintaining the fresh sprouting of tender shoots and leaves. This fresh growth benefits the fish and invertebrates. Thinning of vegetation by the waterbirds also enables the free movement of fish in dense vegetation.

The complex relationship of these feathered beauties with the ecosystem of chilika results in higher fish productivity for the fishermen. An estimated 2 lakh fishermen depend on Chilika directly for their livelihoods. Along with other dependents and middle men and vendors, the multiplier effect of Chilika lake on the economy of Odisha is huge. If birds come in reduced numbers, then the impact on the fish will also be severed. So it is expected that no sane Government would try to mess up with this scenario.

Fishermen in Chilika

It should be pertinent to mention that In 1993 Chilika lake was included in the Earlier when Chilika lake The lake was included in the Montreux Record (Threatened list) in 1993 by Ramsar Secretariat due to the change in the ecological character of the lake ecosystem. However due to the successful efforts led by Chilika Development Authority (CDA), Chilika lake was removed from the Montreux Record in 2002 as the health of the ecosystem was restored back. So any important event concerning the health of Chilika should also be verified with the CDA. However, it seems one arm of the Government doesn't know what the other is doing. CDA has got not official information about such plans.

The Government has gone ahead and announced that it will allow Seaplane service in Chilika lake. Seaplanes are typically 8-9 seater planes which have a huge float underneath and hence can take off and land in water. To jog your memory, Sylvester Stallone and his bunch of mercenaries

use such planes in their series of Hollywood films titled “Expendables” where this bunch of mercenaries use such planes to land at some waterfront and fight and plunder (for a good cause) and rush back in time to flee using the seaplane.

The Seaplanes with a few such luxury tourists will now routinely land in Chilika. A layman may ask what is the need? The Bhubaneshwar airport is barely one and half hours drive. So what is the need for a seaplane service? Clearly it is not a need, but it is a case of have money, so I will have pleasure wherever I want. And perhaps it is a case of creating some opportunities for some industries.

Throughout the world, airports are worried about birds and the damage that a plane can suffer due to birdhits. Some airports are in news for not only spraying pesticides to kill insects so that birds are not around but also flying falcons to scare away birds and even bursting crackers etc to ensure that birds are not there. Slaughterhouses, dump yards etc are also removed so that birds are not seen around the airports. So why do you want to fly into millions of birds? That means the bird habitat will be so modified that birds will stop visiting the place to remove the fear of bird hits? The Government is yet to answer these questions.

No Environmental Impact Assessment has taken place. As such the way EIAs are conducted is a joke. So I am sure some agency can always come out with a report stating that seaplane service is fine. As such there are some people who are asking since the Chilika lake is so vast what is the problem in sacrificing a small part of it. The fact is it may appear as vast, however it is like asking whether a person can survive without an organ like fingers or hands or feet. People do survive. However, God hasn't designed us with all our organs and it makes for a healthy human being. Similarly, when you dismember an ecosystem by removing a part of it, the ecosystem will not be healthy at all. Our scientists are still trying to unravel the complex interdependencies of various species. So it would not be prudent to argue to destroy a part of a healthy ecosystem.

There is also an argument that not many people will use it. So why bother. Today the technology may be for smaller planes. It can always change. The damage can only increase over a period of time and not reduce. There would be many such operators in future operating from different areas in Chilika. No one knows what is in store in future.

Once the permission is given, the seaplane service operator will later come out of the argument that they have invested so much of money and hence it will be used for all kinds of events irrespective of the damage that it causes to the environment. This will become a permanent feature and it would be tough for Chilika to recover.

The problem is the Government is opening the floodgates and giving all kinds of permission. MoEF&CC, the ministry which is supposed to be the guardians of our environment and wildlife is behaving like a clearing house of projects. So don’t expect

that MoEF&CC will object to the seaplane project inside Chilika lake. So it is important for people to fight to save their natural and cultural heritage as well as livelihoods.

Please raise your voice to Save Chilika by writing to your local representatives as well as to Odisha's Chief Minister, Union Civil Aviation Minister, Union Environment minister as well as to the hon'ble Prime Minister of India. Also please don't forget to spread the word.

Write/tweet/email to:

Shri Narendra Modi
Ho'ble Prime Minister of India
Tweet: @narendramodi
And tweet to the PMO at @PMOIndia

Shri Naveen Pattnaik
Hon'ble Chief Minister of Odisha
Tweet: @Naveen_Odisha

Dr. Harsh Vardhan
Hon'ble Minister for Science & TEchnonology, Earth Sciences & MoEF&CC
@drharshvardhan

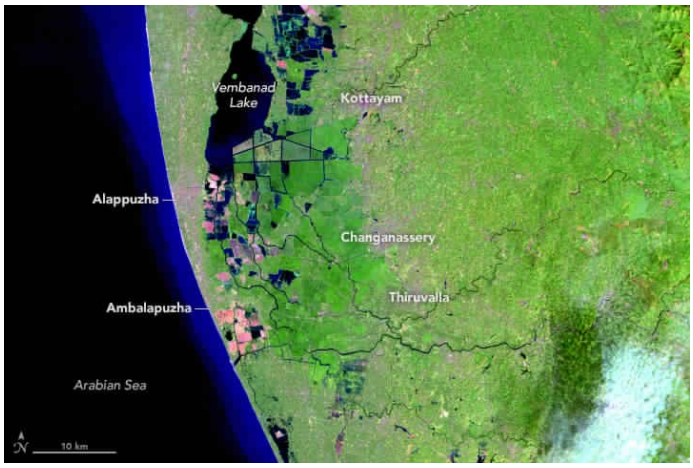
Shri Suresh Prabhu
Hon'ble Minister for Civil Aviation
Twitter: @sureshpprabhu

Article -

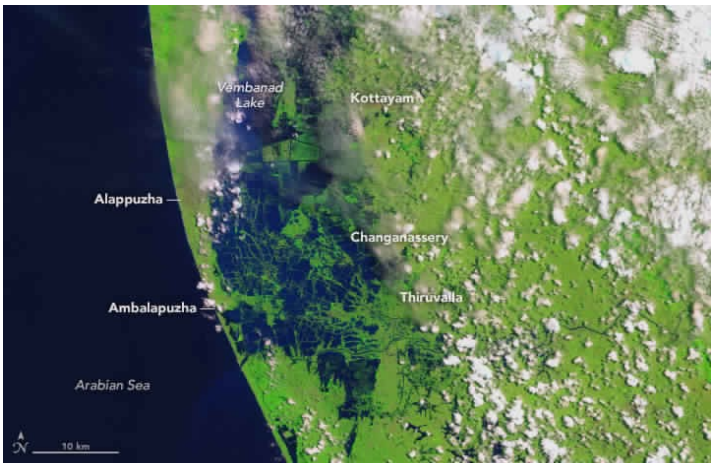
Flood Fury:Will we learn from Kerala & Kodagu?

July and August is the time for Monsoons is a well known fact. However, the people of Kerala as well as Kodagu in Karnataka were not prepared for the floods. The sorrow of Kodagu was perhaps muted in view of the devastation caused in Kerala where the Floods rivaled the impact of 1924 Kerala floods.

774 out of 1564 villages of Kerala were flooded. Over 13 lakh people had to leave their houses and shift to relief camps. In many places the water suddenly rose a minimum of 20 feet and entire ground floor of houses were drowned. The monetary impact of devastation is quoted as north of 50,000 crores. However, like most of the initial estimates this seems to be low as people come home to discover that in many cases entire houses have either collapsed or have become unliveable.



Kerala before floods captured by NASA on Feb 6 2018



Kerala Floods NASA image of Aug 22, 2018. Blue colour represents flood water inundation

We always tend to blame it on nature saying that it rained a lot and that caused unprecedented floods. Unfortunately, that is farthest from the truth. It is the hand of man that has provoked nature's fury.

Kerala is a state which has constructed 53 large dams on its rivers. The question that immediately comes to mind is why a state like Kerala which has 53 large dams had to suffer such a massive flooding. The answer is dams are not used for flood control but primarily for power generation.

The Kerala Electricity board is the one who proposes to build dams and invariably it is in an ecologically fragile place. They plan to retain maximum water even after the monsoon is over. So most of the dams are normally very close to full capacity even before the monsoon rains started. So even when there is sudden rains, the people manning the dams take their own sweet time to take stock of the situation and then release water. This sudden water release leads to flooding. In the normal course a river without a dam would have swollen slightly and the extra water in the rainfall would have gone with the flow without causing breeching of the banks and flooding. Idduki dam hadn't released water for some 38 years. It was carrying water to its near full capacity when it was forced to open its gates due to the heavy rains.

Article -

Idduki dam Kerala

There is deforestation along the banks of the river. So there is massive silting in the dams and the carrying capacity of the dams have come down over a period of time. There is no single study which captures this figure of loss of carrying capacity of dams over time and its impact. So the amount of water the dams carry now is way less than whatever water they used to carry when they were initially constructed.

To complicate the issue further, there are also large dams which are controlled by other states. So the objective of the dam officials of other states is different as they want to retain more water whereas Kerala was requesting them to release water continuously without waiting for the water levels to reach the maximum and then suddenly release water. This had reached serious proportions as the Tamil Nadu officials manning the Mullaperiyar dam were steadfastly saying NO to releasing water and waiting for the water level to reach the maximum. The Kerala Government had asked Tamil Nadu to release water when the water level reached 136 feet and then again requested when the level further rose to 139 feet. However, Tamil Nadu officials were adamant to raise it further stating that under the Supreme Court order they are

Mullaperiyar dam

Article -

allowed to store water upto 142 feet.

In the absence of an independent authority manning the dams, everytime the states have to knock the doors of Supreme Court.

The Kerala Floods also raises some important ecological questions which the political parties and Govt. wants to sweep under the carpet.

The Western Ghat Ecology panel headed by Prof. Madhav Gadgil had submitted its report to the Government which didn't want to implement it. None of the states (Goa, Maharashtra, Karnataka, Kerala) wanted to implement it as well as that would have entailed curtailing rampant industrialisation and concretisation in the places marked as ecologically sensitive. The short-sighted approach meant that industries and real-estate mafia continued to vandalise the places and concretise it and make money. There have been rampant quarrying in the hills making them denuded and fragile. So when there is rain, there is landslides. People put in their hard earned money to buy such places or construct houses in nearby places and for many people it was a heart-breaking sight to watch their only house breaking like a match-box and being swept away in landslides.

Dams resulted in artificially restraining the rivers. The floodplains were then easily taken over. In a state like Kerala, with leftists leanings, it was easily justified that people are "reclaiming" the forest/swamp lands with their blood, sweat and toil. Most of the wetlands are "reclaimed". The floodplains and wetlands are designed by nature to absorb the excess water.

Article -

However, now that they are gone, where will the water go except getting into the houses?

When the Government turns a blind eye to ecological devastation, it doesn't mean that it can absolve itself from being complicit in the crime. When the dams hurriedly opened their gates, the people who had constructed their houses were simply in many cases wiped away. If the flooding didn't kill them, the loss of lifelong savings will kill them psychologically. Now each has to fend for himself or herself.

The Government agencies are insensitive to nature as well. The Kochi airport is constructed in the floodplains. No wonder it is flooded and the airport had to be shut down till the end of August.

The Government has to wake up and accept that the extent of devastation in the floods has been exacerbated due to the hand of man and immediately implement Gadgil Committee recommendations. Bitter medicine has to be swallowed when the health condition is precarious.

The Government has to also look into the role of dams. It is important to question the logic of maximizing water retention in dams for the purpose of electricity generation and irrigation. As such the cost of per unit of new power generated from Solar power is much cheaper. So it would be in the interests of the nation to break down some of these dams and allow the river to flow naturally. As such their carrying capacity has dropped due to siltation. So better break few of those and reduce the headache. Let the dams be damned so that people don't bear the brunt of man's folly.

Nationalise the major rivers and administer the dams and water release to individual river management authorities. This River Management Authority should look at the river from a holistic perspective and not just become a water releasing authority. Under their aegis the river basin management, cropping advisory to the farmers, maintaining ecological flow as well as steps to study and maintain the riverine ecosystem should be carried out.

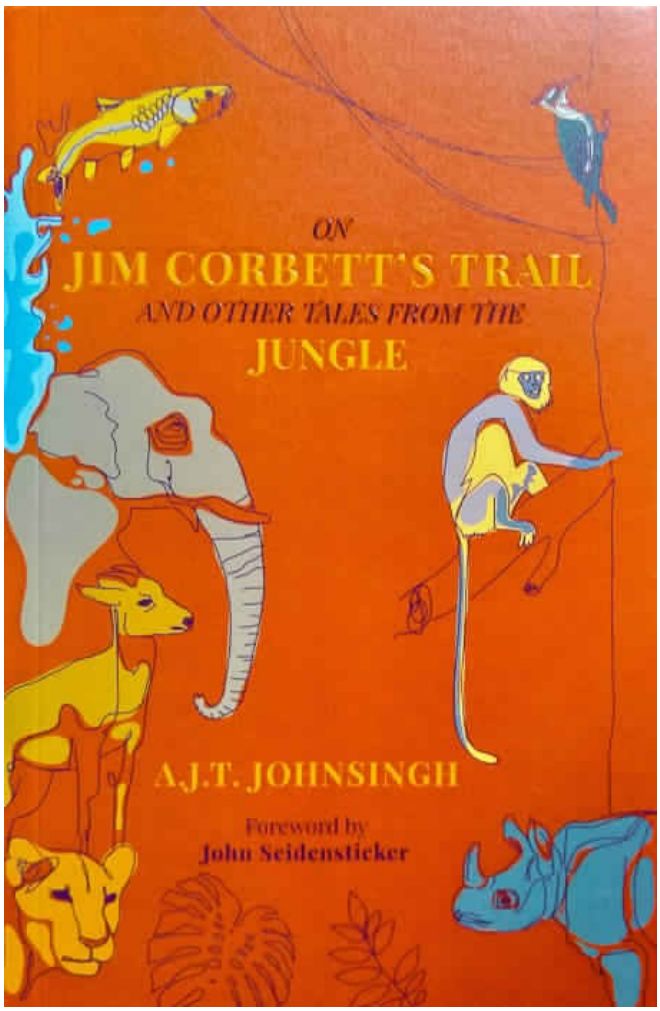
When we restore our ecosystems, both forest as well as riparian ecosystems, and halt loss of biodiversity, wild species as well as people will benefit and poverty will reduce.

Unfortunately, this Government hasn't shown any inclination to act in an ecologically responsible manner despite coining some beautiful slogans. So it is important for the people to understand and put pressure on the Government at Centre as well as State to act. Else, this kind of devastation will become a recurring theme.

Book Review -

On Jim Corbett's Trail and Other Tales From the Jungle : By A.J.T. Johnsingh

Jim Corbett. The name evokes so much of awe, reverence and inspiration in many of us. His books have got millions of people hooked to wildlife in India and abroad. I was also one of them and the author of "On Jim Corbett's Trail and other tales from the jungle" Shri A.J.T. Johnsingh being one of the more celebrated ones. He is author of some lovely books depicting his work and experiences like "Field Days", "Walking in the western Ghats" and a two volume tome called "Mammals of South Asia" which he coedited with Neema Manjrekar. It is no wonder that when I heard about the book I became really eager to read it.



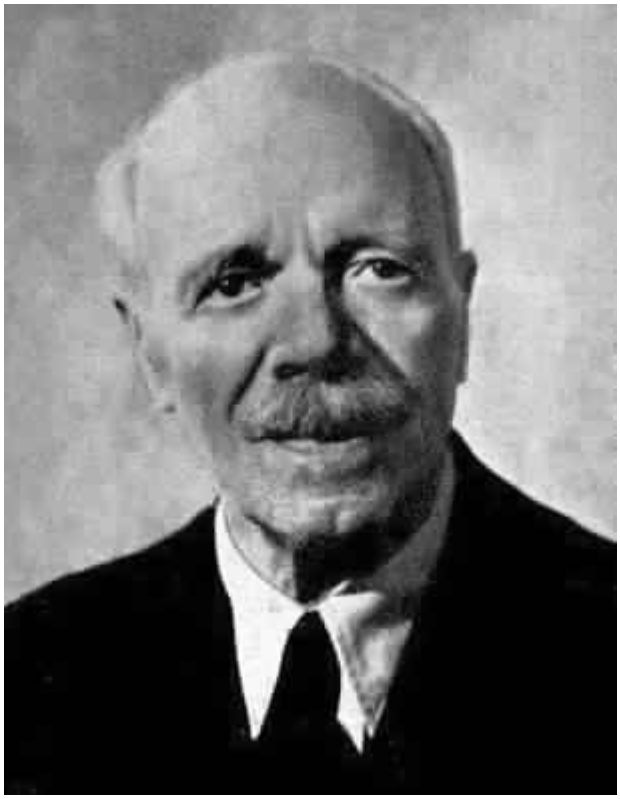
The first part of the book is focused on the author A.J.T. Johnsingh trying to visit all the places mentioned in the books of Jim Corbett. Over several attempts, the author along with some of his colleagues have tried to cover all the small villages mentioned by Jim Corbett when he was moving in search of the maneaters.

Most of those places remain etched in the memory of fans of Jim Corbett books even though many have never got an opportunity to set their feet in those remote places. The author found that it takes a combination of travel by jeep as well as several days of walk by able bodied men to reach some of those places where Jim Corbett roamed around without any assistants and often without food. That a man can undertake such hardships not for pleasure but to complete the unpleasant

Book Review -

task of killing a maneating tiger or leopard, when at any step the hunter can be hunted, tells us a lot about the mental strength as well as selfless spirit of the legendary Jim Corbett who never accepted any reward for killing the maneaters.

Since Jim Corbett was a phenomenal naturalist and has given vivid descriptions of the flora and fauna of the places where he was hunting the maneaters without which the biodiversity of those places would have remained unknown. Johnsingh has documented the present day situation of wilderness and wildlife in those remote regions of Uttarakhand and Corbett's writings serve as a benchmark to compare the decline of wildlife in the roughly 7 or 8 decades.



India is plagued with overpopulation with our population exceeding 1.3 billion. So our wilderness areas are under tremendous pressure. Wildlife is vanishing at an alarming rate due to rapid concretisation of the places. So when Johnsingh spots deserted villages he also spots an opportunity to create tiger reserves and accord protection to the areas so that there is a realistic chance of sambar and other herbivores bouncing back in numbers and ensuring that tigers can have a sufficient prey base.

Johnsingh has mentioned the example of protection of Serow in Japan where it was designated as 'natural monument' and later in 1955 upgraded to 'special natural monument'. With large scale afforestation cum habitat improvement and protection of the species, the Serow population "shot up from 75,000 in 1980 to 100,000 in 1985."

With increased human population the anthropogenic pressures has increased and the wildlife is bearing the brunt of it. Relocating the villages will be of great help. Johnsingh also found that there are some villages who are demanding to be moved out of the forest. "The Teria village has a population of about forty families... complained that crop raiding by sambar and wild pigs was a serious problem and that they would happily move out of the jungle provided they are provided a suitable resettlement package." He also suggests that one option can be to allow the villages to suffer natural decay as the young ones move out to the cities in search of jobs and a modern lifestyle.

The author suggests special management inputs for Corbett Tiger Reserve "which has the only viable population of tigers in the entire range, would need special management inputs to enhance prey abundance. The southern boundary plantation forests of the Reserve, with monoculture plantations of teak and eucalyptus, 350 sq. km are adjacent to the plantations of the Bijnor Forest Division. Two hundred to three hundred firewood cutters, who come on bicycles every day and take firewood for sale to far-off places, disturb the area. Wood cutters can take away fresh kills also.... The monoculture planta-

Book Review -

tions, particularly teak, when compared with the surrounding vegetation are inferior habitats for sambar and pigs, as they do not offer the cool shade critically needed in summer. Besides, teak plantations do not offer enough cover (from December to June) to the tiger, which is a stalking predator, to hunt successfully. Therefore the prey (cheetal and nilgai) that are found in the plantations remain largely unavailable to the tiger." These inputs are also relevant for other forests.

During his treks along the Nandhour river valley the author describes his encounters with poachers clad in camouflage clothing and having guns, spears and dogs. In one such encounter the poachers ran away while open firing in the air when they saw that they are being photographed. Johnsingh has estimated that the Nandhour landscape has the potential to sustain 30 tigers and had called for creation of Nandhour Tiger Reserve. Creation of a Tiger Reserve and completely stopping poaching can only help increase the preybase and the tiger numbers. He suggests dedicated field manager for the area is fit and treks a lot as the impact is better if the effort is top down. That will motivate the subordinates to move into the field. Along with that he has suggested recruitment of ex-army personnel as well as persuading the elders in the village of the poachers to give up poaching.

The author notes the impact of deforestation and habitat degradation on the lives of people. "*In the past, most villages in the lower reaches of the outer Himalaya had two settlement locations, one for winter and the other for summer, three to five kilometres from the winter settlement up in the hills. The summer settlement was always situated near a perennial source of water. In the beginning of April, most of the populace with their livestock moved to the summer settlement…the migration was largely because of livestock. The Kanda village was abandoned in the early 1970s, when its inhabitants started living permanently in Kanda nallah, their winter settlement, on the right bank of the Mandal River.* ***Similar abandonment of summer villages has happened in many places in the Himalaya; one major reason for this is the drying up of the water sources due to habitat degradation, caused by excessive lopping, unregulated fires and grazing***."

It is a sad that that these kinds of impact of humans on wilderness areas and the resulting area becoming unliveable should have been documented and used to educate the masses as well as the policy makers much earlier. The causes of rural to urban migration of people being caused majorly by human induced habitat destruction and climate change should be studied in more detail to help the policy makers.

Like Jim Corbett, Johnsingh too is fond of Mahseer, a group of freshwater fish, which can reportedly grow to weights exceeding 100kg with 50-70 kg specimens routinely caught in the past by anglers, are. Unfortunately such large Mahseer are no longer found. In the chapter 'The Flight of the Mahseer' the author talks about the problems faced by Mahseer leading to its virtual decimation in many parts of its former range. "The decline has been due to a combination of factors including the use of electricity and poisoning, which destroys brood fish and juveniles. Pollution, the silting of rivers and the construction of dams have impeded migration, which is crucial for spawning. But the most lethal is the use of dynamite, easily available from organisations such as the Public Works Department and the Border Roads Organisation. Dynamite kills adults, young fish and even the developing larvae. Dynamiting has decimated mahseer populations in most parts of its

Book Review -

range." It is important that people realise that they need to take steps to save the Mahseer. "*People need to be convinced that fish is a renewable resource, but it cannot renew itself when it is being massacred thoughtlessly. Spawning sites need to be protected; the rivers should be kept clean. More youth should be encouraged to take up angling and fishing must be regulated.*"

In the second part of the book, Johnsingh has looked at other wilderness areas in South, West, Central India as well as East and North East. One can find a similar approach of solving conservation issues of the species residing in those areas. So when in Kalakad Mundanthurai he is talking about stopping poaching and relocating Tahr from the 9th hairpin bend in Pollachi-Valparai road to Kottangathatti and Kannunni peaks; in Gir he is espousing the lost art of lion-tracking to help keep the staff fit as well as help in conservation and in Mishmi Hills he is asking for banning .22 air rifles.
There are also many interesting information about natural history in the book. In the chapter on leopards Johnsingh writes

an incident where the leopard is using the tip of its tail to attract attention of the deers to make them come closer to investigate brining them into the ambush range. In the chapter titled "*The Lure of The Langurs" he writes about the feeding association of cheetals with langurs. "Being wasteful feeders, the monkeys were dropping lots of plant parts and to my pleasant surprise I found goral, cheetal, barking deer and sambar feeding on the plant parts dropped by the langur….Paul Newton following one group of langur in the sal-mixed forest, oveserved that "the group dropped nearly fifteen hundred kilogrammes of food in a year. The dropped forage was eaten by cheetal, both in summer and in winter…*

Book Review -

making a beeline, sometime from as far as two hundred meters away, for the trees where the langurs fed. Cheetals are main beneficiaries of this association – they not only get food, but are also warned of predators by langur alarm calls."

Perhaps realising that our generation has more often than not failed in the battles to save Wild India from being destroyed and dismembered, the author seems to repose his hope on the younger generation and ends his book with a chapter titled "How I became a Man-eater". Kids will obviously love this chapter and hopefully love for the wild will be germinated in their tender minds.

One man's love for Jim Corbett can actually result in creation of wildlife sanctuaries, national parks and tiger reserves. If only the Government listens!

Johnsingh has done a fantastic job of documenting the problems in areas where Jim Corbett had moved around as well as in other parts of India and he has also identified the opportunities for saving these beautify and fragile ecosystems. It is now up to us the readers of the book as well as conservationists and activists to put pressure on the Government to bring his suggestions to fruition.

The book "**On Jim Corbett's Trail and other tales from the jungle**" is published by **Natraj Publishers** and has 258 pages. There are many colour photos as well as black and white photos maps and a few sketches. The black and white sketches evokes nostalgia as they will remind people about Jim Corbett's books. The book comes with extensive references as well as Scientific and English names of all vertebrates. The botanical names of plants have been weaved with the narration in the chapters itself and will be of help to budding naturalists as well as to researchers and others to identify the species and know their impact. The book is **priced at Rs. 595/-** and will appeal to naturalists, conservationists, researchers as well as students and laymam. It is a must buy for your home library as well as for gifting to friends and kids.

Highly Recommended!

Conservation News -

Second tiger released into the wild in Satakosia:

A tigress nick named Sundari which was brought from Bandhavgarh and was kept in an enclosure has been released into the wild on 17th of August. This tigress code named T-412 was relocated from Bandhavgarh on 28th June. There was considerable disquiet among conservationists and researchers regarding the lengthy incarceration, as this tigress was kept in an enclosure. A wild tiger shouldn't be kept in an enclosure for long.

The authorities had to grapple with the demonstrations by locals in Angul, where many residents of nearby villagers had gathered to protest against the tiger relocation. People were fearful that because of presence of tiger their illegal entry into the forest to collect forest produce as well as poaching will become a problem. Villagers also fear that their livestock which routinely graze inside the forest will be killed by tigers. So they had threatened to poison and kill the tigers. Any tiger death would have been a big problem for the authorities. Taking into consideration the protests by locals the Madhya Pradesh Government had already stopped further relocation of tigers. The third tiger which was to be shifted to Satkosia from Kanha has now been shifted to Sanjay Duburi National Park.

The plan was to relocate three pairs of tigers to Satkosia in two years time. However, the future of this relocation project is uncertain due to protests from locals. The Tiger Reserve authorities have to do a massive PR exercise to educate people the benefits of having tigers in a forest as that would attract more tourist revenue. The existing ecotourism project will become popular and more people will find work. If there is any livestock killing then the forest department will have to immediately provide compensation. More of local people should be taken under contract as watchers. That would provide them employment as well as help in securing the forests.

The Odisha Government is taking this relocation seriously. During the release of the tigress Sundari, the Principal Chief Conservator of Forests (PCCF), APCCF and other top officials, researchers of Wildlife Institute of India and other top officials were present. With this there is now one pair of tigers for breeding in the park.

Once the good news about the wellbeing of this pair of tigers is known, we hope the Odisha Government will be able to convince the Madhya Pradesh Government to provide more tigers. This will help in creating a healthy gene pool.

Compensatory Afforestation Fund rules notified:

The compensatory afforestation fund rules have been notified on 10th of August, 2018. The Compensatory Afforestation Bill was passed in July 2016. It specifies the activities that would be allowed. Under the Forest Conservation Act (1980), any forest land that is diverted for non-forest use like mining, roads, railways, canals, dams or other such industrial or linear projects will be compensated for by paying a certain amount to the CAF (Compensatory Afforestation Fund) which will be equal to the NPV (Net Present Value) of the forest land being divested. This money will then be used to create forests.

Conservation News -

The CAF Bill was first passed in Lok Sabha in 2008. However, it could not be passed in the Rajya Sabha. The Narendra Modi Government after coming to power in 2014 introduced the CAF bill in 2015 and finally it was passed in 2016. It became an Act in August 3, 2016. Now that the CAF rules have been notified, the CAF Act will come into force from September 30, 2018.

The CAF has over 52,000 crores of rupees in it lying idle. Speaking about it, the Union minister for MoEF&CC Dr. Harsh Vardhan said that the release of fund to States will boost the efforts of the Government towards restoration and enhancement of forest wealth, enhance bio-richness, water availability and secure ecological security of the country, adding that this effort will help in creating the additional carbon sink to meet the nation's Intended Nationally Determined Contribution (INDC) of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by the year 2030.

The Minister also pointed out that the publication of the CAF Rules will pave the way for smooth transfer of funds worth about Rs. 52, 000 crore to the States. He also said that the fund will be kept in the interest-bearing Public account of the Centre and States, will be safe and will be used only for compensatory afforestation, soil moisture conservation, wildlife management and catchment area treatment. The Minister also said that these activities will be managed by statutory body called National Authority and State Authority and has a strong monitoring mechanism.

Till now this fund was being managed by Compensatory Afforestation Fund Management and Planning Authority (CAMPA). "The release of the fund was restricted to only 10% of principal amount from interest accrued over it. Now, the Fund will be managed as per the CAF Act and Rules, unlocking the use of funds collected for the purpose of forest ecosystem restoration and water security", Dr. Vardhan averred.

He stressed that the Act provides that the Compensatory Afforestation will be compulsorily undertaken from the funds deposited for compensatory afforestation only on priority. The Minister said that this legislation will provide funds to the State Governments, which will get 90% of their share of funds – about Rs. 52, 000 crore to plan better and utilize the fund for compensatory afforestation, conservation of wild flora and fauna, wildlife habitat management and regeneration of degraded forest and restoration of ecosystem services.

The Minister also pointed out that it has been provided that the expenditure can be done as per Annual Plan of Operation (APO), prepared in consultation with Gram Sabha to ensure that the rights of tribal population are protected. "With this objective in view, the afforestation of indigenous plant species has been proposed", Dr. Vardhan added.

The forests rights activists accuse the Government of trying to bypass the Gram Sabhas in the implementation of the Compensatory Afforestation Fund. The other challenge is availability of suitable land. In many cases, the forest department is accused of clear felling existing forests and then allowing plantations in those in the name of CAF. We Indians are known to find loopholes and exploit it. So CAF Act and Rules also will provide many such opportunities. We hope the Government continues its dialogue with local communities and researchers to understand the problems and create amendments wher-

Conservation News -

ever it is due.

Khangchendzonga becomes 11th Indian Biosphere reserve to be part of WNBR:

The Khangchendzonga Biosphere Reserve has become the 11th Biosphere Reserve from India that has been included in the UNESCO designated World Network of Biosphere Reserves (WNBR). The decision to include Khangchendzonga Biosphere Reserve in WNBR was taken at the 30th Session of International Coordinating Council (ICC) of Man and Biosphere (MAB) Programme of UNESCO held at Palembang, Indonesia, from July 23-27, 2018. India has 18 Biosphere Reserves and with the inclusion of Khangchendzonga, the number of internationally designated WNBR has become 11, with 7 Biosphere Reserves being domestic Biosphere Reserves.

Khangchendzonga Biosphere Reserve in Sikkim is one of the highest ecosystems in the world, reaching elevations of 1, 220 metres above sea-level. It includes a range of ecolines , varying from sub-tropic to Arctic, as well as natural forests in different biomes, that support an immensely rich diversity of forest types and habitats.

The core area of the Biosphere Reserve is a major transboundary Wildlife Protected Area. The southern and central landscape, which makes up 86% of the core area, is situated in the Greater Himalayas. The northern part of the area accounts for 14% is characterized by trans-Himalayan features. Buffer zones are being developed to promote eco-tourism activities. Plantation and soil conservation work is also being carried out.

The core zone – Khangchendzonga National Park was designated a World Heritage Site in 2016 under the 'mixed' category. Many of the mountains, peaks, lakes, caves, rocks, Stupas (shrines) and hot springs function as pilgrimage sites. Over 118 species of the large number of medicinal plants found in Dzongu Valley in north Sikkim are of ethno-medical utility. The transition zone is targeted for eco-development activities, afforestation, plantation of medicinal herbs and soil conservation measures.

Single Window Clearance for Environmental projects launched:

The Prime Minister, Shri Narendra Modi, launched PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and EnvironmentalSingle-window Hub) on the occasion of World Biofuel Day on 10th of August, 2018.

In a series of tweets, Union Minister for Environment, Forest and Climate Change, Dr. Harsh Vardhan highlighted that PARIVESH automates the entire process of submitting the application and tracking the status of such proposals at each stage of processing. Dr. Vardhan emphasised that with the launch of PARIVESH, the vision of the Prime Minister for E-Governance and enhancing Ease of Doing Responsible Business is being translated into action by MoEF&CC. He said that

Conservation News -

with PARIVESH, MoEFCC has become more of a facilitator, than a regulator. The Minister said that "PARIVESH" is a workflow based application, based on the concept of web architecture. He pointed out that it has been rolled out for online submission, monitoring and management of proposals submitted by Project Proponents to the Ministry of Environment, Forest and Climate Change (MOEFCC), as well as to the State Level Environmental Impact Assessment Authorities (SEIAA), to seek various types of clearances (e.g. Environment, Forest, Wildlife and Coastal Regulation Zone Clearances) from Central, State and district-level authorities. He said that the system has been designed, developed and hosted by the Ministry of Environment, Forest and Climate Change, with technical support from National Informatics Centre, (NIC), New Delhi.

The Minister said that the main highlights of PARIVESH include - single registration and single sign-in for all types of clearances (i.e. Environment, Forest, Wildlife and CRZ), unique-ID for all types of clearances required for a particular project and a single Window interface for the proponent to submit applications for getting all types of clearances (i.e. Environment, Forests, Wildlife and CRZ clearances). Highlighting that PARIVESH offers a framework to generate economic growth and strengthens Sustainable Development through EGovernance, he also stated that with automatic highlighting of non-compliance by the system, PARIVESH helps in improving the overall performance and efficiency of the whole appraisal process.

The Minister highlighted that PARIVESH also helps the processing authorities, as it has a Single Window System for Central, State and District level clearances, auto-generation of agenda (based on first come, first served principle), minutes of the meetings and online generation of approval letters, resulting in ease and uniformity in processing of clearance applications, online submission and monitoring of compliance reports including geo-tagged images of the site by regulatory body / inspecting officers even through the Mobile App for enhanced compliance monitoring. He added that the facility of Geographic Information System (GIS) interface for the Appraisal Committee will help them in analyzing the proposal efficiently, automatic alerts (via SMS and emails) at important stages to the concerned officers, committee members and higher authorities to check the delays, if any. "PARIVESH enables project proponents, citizens to view, track and interact with scrutiny officers, generates online clearance letters, online mailers and alerts to state functionaries in case of delays beyond stipulated time for processing of applications", Dr. Harsh Vardhan said.

The Government claims that PARIVESH is a Single-Window Integrated Environmental Management System, developed in pursuance of the spirit of 'Digital India' initiated by the Prime Minister and capturing the essence of Minimum Government and Maximum Governance. Critics say that MoEF&CC is opening the floodgates and becoming a rubber stamp for all environment and wildlife clearances.

India's wildlife and its forests is not just a commodity but a natural heritage. The wellbeing of all species and humans are intricately linked with a healthy ecosystem. Especially in the era of Climate Change where sudden massive rainfall, draught and natural calamities have become the norm, tinkering with India's forests, rivers, lakes, wetlands and other ecologically fragile areas should be done with abundant caution. In July, the Union Cabinet Minister for MoEF&CC Dr. Harsh Vardhan had said that Climate Change is a moral and ethical responsibility. However, by blindly automating the clearance process

Conservation News -

with focus on speed of clearance rather than focusing on saving India's natural heritage clearly shows that the Ministry of Environment & forests is presiding over the decimation of Indias natural wealth. Industries will be happy. However, India will be poorer and will suffer for such hasty decisions.

Funds for Prevention of Pollution in Lakes, Rivers and Ground Water:

In a written reply to the Parliament, Union Minister of State for MoEF&CC Dr Mahesh Sharma has said that to fight pollution of rivers, lakes and ground water pollution, the primary responsibility of setting up and processing sewage treatment is of the State Govts. and local bodies. "Pollution abatement of rivers and lakes is a continuous and ongoing process. It is the responsibility of the State Governments/ concerned local bodies to set up facilities for collection, transportation and treatment of sewage for abatement of pollution of rivers & lakes. The Union environment Ministry has been supplementing the efforts of the State Governments in abatement of pollution in rivers under the scheme of National River Conservation Plan (NRCP) and conservation & management of lakes & wetlands under a separate scheme of National Plan for Conservation of Aquatic Eco-systems (NPCA), on a cost sharing basis between the Central and State Governments.

NRCP {excluding Ganga and its tributaries, which are handled by Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR) from 01/08/2014 onwards} has so far covered polluted stretches of 32 rivers in 76 towns spread over 14 States in the country at a sanctioned cost of Rs. 4581.91 crore and Central share of Rs. 2258.72 crore has been released to the State Governments for implementation of various pollution abatement schemes. Sewage treatment capacity of 2472.43 mld (million litres per day) has been created so far under the NRCP. During the last three years and current year, Central share of Rs.351.87 crore has been released to various State Governments, for pollution abatement of rivers under NRCP. No funds have been released to Jharkhand during the last three years and current year under NRCP.

State Governments, apart from their own budgetary allocation, are also accessing financial assistance for creation of sewerage infrastructure, including Sewage Treatment Plants (STPs), in various cities/towns under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Mission of Ministry of Housing & Urban Affairs as well as Namami Gange programme of Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR). During the last three years and current year, Central funds of Rs.3696.49 crore has been released to various State Governments/ State Programme Management Groups/other executing agencies of State Governments by National Mission for Clean Ganga (NMCG) of MoWR,RD&GR under the Namami Gange programme, which includes Rs.82.08 crores to Jharkhand.

NPCA has so far covered 148 identified wetlands and lakes in 24 States & 1 Union Territory and Central share of Rs. 893.69 crore has been released so far to the State Governments. During the last three years and current year, Central share of Rs.158.70 crore has been released to various State Governments. No funds have been released to Jharkhand during the last three years and current year under NPCA.

Conservation News -

The MoWR, RD&GR is also implementing the scheme of Repair, Renovation and Restoration (RRR) of water bodies, including ponds and tanks, which aims at improving catchment areas of tanks commands, increase in storage capacity, ground water recharge, improvement in agriculture and increased availability of drinking water.

Central Ground Water Board (CGWB) under MoWR, RD&GR is implementing the 'Ground Water Management & Regulation' scheme, under which studies on monitoring, analyzing and mapping of ground water quality and other preventive steps are taken up throughout the country, including Jharkhand. Under this programme, an amount of Rs.526.64 crore has been incurred during the last three years and current year.

Funds for implementation of pollution abatement schemes under NRCP & NPCA are released by this Ministry in a phased manner to the concerned States based on progress of work and on receipt of Utilization Certificates as well as physical and financial progress reports from the States. The reports on physical progress of works as well as Utilization Certificates are examined and unspent balances are taken into account before releasing the next instalment of funds. In addition, regular monitoring and review of progress of implementation of schemes by Central and State Government officers, including site visits, is carried out".

No study by CPCB to assess Pollution due to Synthetic Fertilizers and Agricultural Pollutants in India:

The Central Pollution Control Board (CPCB) hasn't done any study to assess pollution of water bodies due to the synthetic fertilizer run off from the fields into the surrounding waterbodies. This information was shared in a written reply to the Rajya Sabha by Dr. Mahesh Sharma, Union Minister of State for MoEF&CC on 6th August, 2018. In the reply he wrote "Water bodies in the country are polluted due to discharge of untreated sewage, industrial effluent, agricultural run off containing fertilizers, pesticides, etc. No study has been carried out by the Central Pollution Control Board (CPCB) to assess pollution of water bodies from application of synthetic fertilizers. However, CPCB is monitoring the water quality of both surface and ground water under the National Water Monitoring Programme (NWMP) through a network of monitoring stations in the country. The water quality is assessed for various parameters, including physico-chemical, bacteriological, heavy metals, pesticides, etc."

The steps taken by the Government to check the pollution of water bodies, inter alia, include formulation and notification of standards for effluents from industries, operations or processes; enforcing of these standards by State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) through consent mechanism and regular monitoring; setting up of monitoring network for assessment of water quality; installation of Online Continuous Effluent Monitoring systems (OCEMS) to check the discharge of effluent directly into water bodies; promotion of cleaner production processes; installation of Common Effluent Treatment Plants for cluster of Small Scale Industrial units; issuance of directions for implementation of Zero Liquid Discharge in certain categories of highly polluting industries; issuance of directions under Section 5 of

Conservation News -

Environment (Protection) Act, 1986 and under Section 18(1)(b) of Water (Prevention and Control of Pollution) Act, 1974, etc".

List of Native tree species used in Compensatory Afforestation in Delhi:

The Union Minister of State for Environment, Forest and Climate Change, Dr. Mahesh Sharma admitted that the forest officials including Indian Forest Service officers as well as ACFs, Range Officers, Forest guards etc are not trained to identify native tree species. This was based on a question whether the forest officials are trained to identify whether a tree species being felled is a native species or alien species.

The Government is planting the following hardy native species to combat pollution in Delhi:

S.No.	Species	
	Vernacular Names	Botanical Names
1.	Pilkhan	*Ficus virens*
2.	Peepal	*Ficus religiosa*
3.	Bargad	*Ficus bengalensis*
4.	Gular	*Ficus glomerata*
5.	Ber	*Zizyphus mauritiana*
6.	Arjun	*Terminelia arjuna*
7.	Jamun	*Syzygium cumini*
8.	Neem	*Azadirachta indica*
9.	Gundani	*Cordia ghara*
10.	Baheda	*Terminalia bellerica*
11.	Lasoora	*Cordia mixa*
12.	Mango	*Mangifera indica*
13.	Jungle Jalebi	*Pithecellobium dulce*
14.	Imli	*Tamarandus indica*
15.	Shehtoot	*Morus alba*
16.	Bakayan	*Melia azadirach*
17.	Meetha Neem/ Curry patta	*Murraya koenigii*
18.	Khirni	*Manilkara hexandra*
19	Dhak	*Butea monosperma*
20	Harad	*Terminalia chebula*
21	Bael Patra –	*Aegle Marmelos*

Conservation News -

Native Species which have higher aesthetic value/flowering and are being planted in Delhi:-

S.No.	Species	
	Vernacular Names	Botanical Names
1.	Amaltas	*Cassia fistula*
2.	Gulmohar	*Delonix regia*
3.	Semul	*Bombax ceiba*
4.	Indian coral tree	*Erythrina variegate*
5.	Ashoka	*Saraca asoca*
6	Jacaranda	*Jacaranda mimosifolia*
7.	Tichoma gorichori	*Tecoma stans*
8.	Anar	*Punica granatum*
9.	Knakchampa	*Pterospermum acerifolium*
10.	Rainbow shower tree	*Cassio nodosa*
11.	Mahuwa	*Madhuca longifolia*
12.	cassio renigers	
13.	Champa	*Magnolia champaca*
14.	Kassod	*Cassia siamea*
15.	Kareel	*Diospyros cordifolia*
16.	Roheda	*Tecomella undulata*
17.	Sonjna	*Moringa concanensis*
18.	Kadamb	*Mitragyna parviflora*
19.	Jhinjheri	*Bauhinia racemos*
20.	Caper tree	*Capparis spinosa*
21.	Queen Flower	*Lagerstroemia flos reginae*
22		*Lagerstroemia borelia*
23.	Harshingar	*Nyctanthes arbor-tristis*

Native shrub species of Delhi

S.No.	Species	
	Vernacular Names	Botanical Names
1.	Aegelia (Rhododendron)	
2.	White orchid-tree	*Bahunia acuminate*
3.	Bougainvillea	*Bougainvillea glabra*
4.	Hibiscus	*Hibiscus syriacus*
5	Kaner	*Nerium oleander*
6	Chandini	*Tabernaemontana divaricata*

Equipment Discussions -

Nikon launches Z7 & Z6 Full frame Mirrorless cameras :

Nikon has announced a full Mirrorless system with Z7 and Z6 full frame mirrorless cameras, a new Z mount as well as host of lenses from wide angle to 500mm telephoto lens. Nikon has also announced an adapter to use F mount lenses in its mirrorless cameras.

Overview of Nikon Z7 & Z6 full frame Mirrorless cameras:

The Z 7 and Z 6 are equipped with a new backside illumination, Nikon FX-format CMOS sensor with focal-plane phase-detection AF pixels, and the latest image-processing engine, EXPEED 6.

The Z 7 has 45.7 effective megapixels, and supports a standard sensitivity range of ISO 64-25600. In combination with NIKKOR Z lenses, the camera achieves an outstanding level of sharpness and detail, all the way to the edges of the image.

The Z 6 is an all-purpose FX-format camera with 24.5 effective megapixels, and supports the wide range of ISO 100-51200 standard sensitivities. With superior performance at high sensitivities and full-frame 4K UHD movie recording with full pixel readout, the Z 6 responds to a variety of needs, such as shooting in dimly lit environments, and movie recording.

Primary features of the Z 7 and Z 6

1.Equipped with a new backside illumination Nikon FX-format CMOS sensor with focal-plane phase-detection AF pixels

Equipment Discussions -

A backside illumination CMOS sensor, with focal-plane phase-detection AF pixels, has been adopted for both the Z 7 and the Z 6. The Z 7 has 45.7 effective megapixels, and supports the ISO 64-25600 range of standard sensitivities (reduction to the equivalent of ISO 32 and expansion to the equivalent of ISO 102400 is also possible). The Z 6 has a 24.5 effective megapixels, and supports a broad range of standard sensitivities, from ISO 100-51200 (additional reduction to the equivalent of ISO 50 and expansion to the equivalent of ISO 204800).

2.A hybrid AF system with focus points covering approximately 90% of the imaging area

The Z 7 has 493 focus points* and the Z 6 has 273 focus points*, enabling broad coverage of approximately 90% of the imaging area both horizontally and vertically. This hybrid AF system uses an algorithm optimized for the FX-format sensor, and automatically switches between focal-plane phase-detection AF and contrast-detect AF to achieve focus. The use of NIKKOR Z lenses further increases AF accuracy with both still images and movies.

*With FX (36×24) format and single-point AF.

3.The new EXPEED 6 image-processing engine for sharp and clear imaging, and new functions that support creative imaging expression

The Z 7 and Z 6 are equipped with the new EXPEED 6 image-processing engine. Employing the superior resolving power of NIKKOR Z and NIKKOR F lenses, subjects are rendered more sharply than ever before. Noise is also effectively reduced. Additionally, a mid-range sharpening option has been added to Picture Control sharpness parameters. This option, along with existing sharpening and clarity parameters, allows users to make various textures within the screen sharper or softer, for both still images and movies*. The cameras also offer 20 options of Creative Picture Control, supporting creative imaging expression. The effect level is adjustable from 0 to 100.

Equipment Discussions -

*Mid-range sharpness adjustment is only possible at “High quality” movie setting.

4.An electronic viewfinder that utilizes Nikon’s superior optical and image-processing technologies to offer a clear and natural view

The electronic viewfinder adopted for the Z 7 and Z 6 is comfortable and easy to use, comparable to optical viewfinders. Both cameras are equipped with an electronic viewfinder for which an approximately 3690k-dot OLED panel has been adopted. The electronic viewfinder has, respectively, frame coverage and magnification of approximately 100% and 0.8x, as well as an approximately 37.0° diagonal viewing angle. It draws on Nikon’s superior optical and image-processing technologies, ensuring a clear and comfortable view comparable to that of optical viewfinders, with reduced aberration and minimum eyestrain, even during extended shoots. Furthermore, a fluorine coat that effectively repels dirt has been applied to the eyepiece protection window. In addition, the <i> menu can be displayed in the electronic viewfinder, allowing users to quickly view and adjust a variety of shooting settings, including ISO sensitivity, AF-area mode, and Picture Control, all while looking through the viewfinder.

5.An ergonomic design unique to Nikon that enables intuitive operation

The Z 7 and Z 6 have inherited the superior operability that Nikon has cultivated over the years through its development of cameras. The bodies are compact, while boasting a firm grip that is easy to hold, and buttons such as that for the sub-selector, AF-ON, ISO, and exposure compensation are all placed so that they can be operated swiftly and easily. Additionally, a display panel has been positioned on the top part of the camera, where information about settings can be displayed, the same as with high-end digital SLR camera models

6.Movie functions such as 10-bit N-Log that captures a wide dynamic range, and timecoding, responding to professional needs

The Z 7 and Z 6 support recording of not only full-frame 4K UHD (3840 x 2160)/30p movies using the FX-based movie format, but also Full-HD/120p movies. Sharper 4K UHD movies are made possible, using the full-pixel readout.*1 Additionally, Active D-Lighting, electronic vibration reduction, and focus peaking can be used with 4K UHD and Full-HD movie recording. Nikon’s original N-Log can also be used with 10-bit*2 HDMI output. The cameras utilize extensive color depth and twelve-stop, 1300% dynamic range to record a wealth of tone information from highlights and shadows for more effective color grading. Timecode support*3makes synchronizing video and sound from multiple devices easier. Additionally, the control ring built into NIKKOR Z lenses can be used to quietly and smoothly adjust settings such as aperture and exposure compensation.

*1DX-based movie format with the Z 7.

*2Simultaneous recording of 4K UHD movies with 10-bit output to the camera’s memory card is not possible.

*3Not available when shooting slow-motion movies.

Equipment Discussions -

7.Nikon's first*1 in-camera vibration reduction with approx. 5.0-stop*2 effectiveness

The Z 7 and Z 6 are equipped with in-camera vibration reduction (VR). The VR unit provides compensation for movement along five axes. The effects of vibration reduction are equivalent to a shutter speed up to approximately 5.0 stops*2. This function can also be used effectively with NIKKOR F lenses, including those not equipped with a VR function, with the Mount Adapter FTZ (sold separately)*3.

*1Among interchangeable-lens cameras.

*2Measured in accordance with CIPA standards (using the NIKKOR Z 24-70mm f/4 S, with zoom set at the maximum tele-photo position).

*3The level of compensation achieved when a NIKKOR F mount lens is used is not as high as that of a NIKKOR Z lens.

8.Other features

- Same level of strength and durability, as well as dust- and drip-resistance, as the Nikon D850, offered in a compact body
- An 8-cm/3.2-in., approximately 2100k-dot touch-sensitive LCD monitor, with a tilting mechanism
- Silent photography function eliminates shake and noise caused by shutter release
- Peaking stack image function*1 enables confirmation of the area in focus after shooting using focus shift, which is convenient for focus stacking*2
- High-speed continuous shooting (extended)*3 at approximately 9 fps (Z 7) and 12 fps (Z 6) captures fast motion
- Interval timer photography that makes 8K (Z 7) time-lapse movie creation*2 possible
- An extended low-light metering range*4 allows users to easily capture scenes such as the transition from sunset to starry night sky, using aperture-priority auto mode
- Built-in Wi-Fi® for direct connection to a smart device using SnapBridge
- Built-in Wi-Fi® makes the transfer of images and movies to a computer possible
- Support for existing digital SLR camera accessories such as the WT-7/A/B/C Wireless Transmitter (available separately) for transferring images and movies at high speed over a wired or wireless LAN, and radio-controlled Advanced Wireless Lighting, which makes flexible multi-flash photography possible

*1Can only be confirmed using the camera with which focus shift was performed.

*2Third-party software is required.

*3Continuous H (extended) in 12-bit RAW, JPEG, or TIFF format.

*4With interval timer shooting or time-lapse movie recording with silent photography and exposure smoothing enabled

Price and Availability

The COOLPIX P1000 will have a suggested retail price **(SRP) of $999.95** and will be available in September 2018. The new ML-L7 Bluetooth connected remote control will also be available in September 2018 for a **SRP of $49.95**.

Equipment Discussions -

DJI Introduces Mavic 2 Pro and Mavic 2 Zoom:

DJI, which has now established itself as the leader in the consumer aerial imaging industry has introduced two new quad-copters, Mavic 2 Pro and Mavic 2 Zoom.

The Mavic 2 Pro has an integrated camera which is expected to increase the quality by leaps and bounds. The Mavic 2 Zoom has optical zoom capability with an integrated 24-48 zoom lens.

The Mavic 2 series of drones have the familiar foldable design of the previous Mavic Pro. There are advanced features like Hyperlapse and ActiveTrack. The flight time has been increased to 31 minutes and the video transmission system has be-come more stable and usable. This promises to make it useful for many professional applications.

Mavic 2 Pro: Superior Image Quality with Hasselblad

Sometime back DJI has taken over iconic medium format camera company Hasselblad. Now the Mavic 2 Pro has been Co-engineered in partnership with Hasselblad, the world's leader in medium format photography. The Mavic 2 Pro is the world's first drone with an integrated Hasselblad camera for outstanding image quality with superior light and color per-formance. The Mavic 2 Pro has a 1-inch CMOS sensor with a 10-bit Dlog-M color profile, so the camera captures four times as many levels of color per channel compared to Mavic Pro to provide maximum flexibility for photo and video editing.

The Mavic 2 Pro can capture 20-megapixel aerial shots with utmost color accuracy using Hasselblad's unique Hasselblad

Equipment Discussions -

Natural Color Solution (HNCS) technology, while an adjustable aperture from f/2.8-f/11 provides more control across a wide variety of lighting conditions. With 4K 10-bit HDR support, the Mavic 2 Pro can be plugged into a 4K TV with HLG and will play back footage with the right color tones.

Mavic 2 Zoom: A Dynamic Perspective with Optical and Digital Zoom

The Mavic 2 Zoom in turn is powered by a 1/2.3-inch CMOS sensor and it has become DJI's first foldable consumer drone with zoom, providing a dynamic perspective. With the Mavic 2 Zoom, you can get closer to your subject at a moment's notice by combining two-times optical zoom (24-48mm) with two-times digital zoom to simulate a 96mm telephoto lens that captures lossless video in full HD resolution. Hybrid auto-focus on the Mavic 2 Zoom combines phase and contrast detection for higher focus accuracy with an increased focus speed of up to 40% faster than before. One can shoot vivid 12-megapixel photos or take advantage of the new Super Resolution feature that uses optical zoom to automatically capture and stitch nine photos together for a highly detailed 48-megapixel image, making it an ideal option for landscape photography.

This drone will be more useful when you don't want to be too close to people while shooting or you want to suddenly change perspectives.

Exclusive to the Mavic 2 Zoom, the new Dolly Zoom QuickShot mode opens a new visual language for storytelling that was previously reserved for professional cinematographers. It creates an otherworldly warped perspective by automatically zooming in as it flies away from its subject, keeping the subject the same size while the full background of the scene is revealed.

Mavic 2 Series: DJI's New Flagship Consumer Drone with Powerful Camera Options

The Mavic Pro 2 and Mavic 2 zoom have the ability to capture vivid 4K ultra-high definition video with, recording at a maximum bitrate of 100 megabits per second using the H.265 compression codec. For photographers, new Enhanced High Dynamic Range capabilities blend a sequence of photos for ghost-free high dynamic range, giving the Mavic 2 Pro an impressive 14 stops of dynamic range and Mavic 2 Zoom up to 13 stops. We would have been very happy if DJI would have increased the maximum bitrate to around 140 or 160 Mbps.

New Intelligent Tools For Epic, Cinematic Shots

The Mavic 2 is the ultimate tool for aerial content creation with new intelligent flight modes that make capturing professional-quality results almost effortless. A new Hyperlapse feature produces establishing shots that show the passing of time, which you can share to social media immediately. JPEG and RAW photos can be simultaneously saved on a Micro SD card or the internal storage, leaving more room for post editing. Choose between Circle, Course Lock, Waypoint or Free mode to create timelapses with a simple tap of a button in the DJI GO 4 Mobile App:

Equipment Discussions -

Free - pilots the drone manually while shooting a Hyperlapse video.

Circle - automatically flies the drone in a circular pattern around a subject you select to create a timelapse video that captures the action.

Course Lock - keeps the camera fixed on shooting subject while the drone flies in a straight direction to create a unique perspective.

Waypoint - plans a complex flight path based on both altitude and GPS coordinates to capture complex shots.

Keeping a moving subject in the frame is now easier than ever with ActiveTrack 2.0. This enhanced auto-track feature delivers a powerful combination of autonomous tracking and obstacle sensing capabilities never before seen in a DJI drone. Using the main camera and the front dual vision cameras, the Mavic 2 creates a three-dimensional map of the area in front of it, and uses new trajectory algorithms to analyze motion and predict the subject's path up to three seconds in the future. When tracking a target, the Mavic 2 can recognize and avoid obstacles while shooting your target without interruption. It can stay on target, even if your subject momentarily goes behind an obstacle, and can track the subject at higher speeds of up to 44 mph (72 km/h).

Safer, Smarter and Stable Flight

The Mavic 2 delivers autonomous flight capabilities that help you capture shots with even more confidence in complex environments. A fully upgraded FlightAutonomy system transmits data to a more powerful central processor for more accurate obstacle sensing and safer flight. For the first time ever in a DJI drone, Mavic 2 has 10 sensors on all sides of the aircraft to automatically detect obstacles in its path and help prevent collisions, allowing you to focus on capturing the perfect shot.

An improved Advanced Pilot Assistance System (APAS) allows the aircraft to analyze its surrounding environment and automatically fly around obstacles without stopping. In addition, the Mavic 2 has a Bottom Auxiliary Light that turns on automatically to ensure safe and precise landings in low-light situations.

A newly designed OcuSync 2.0 video transmission system enables a more stable connection between the drone and its remote controller. The system features stronger interference resistance and auto-switching capabilities that supports both 2.4 GHz and 5.8 GHz frequency bands with the capability to use different frequencies for uplink and downlink data streams. It delivers 1080p video transmission feeds at a distance of up to 8km, allowing you to instantly edit and upload Full HD footage directly from the video cache in the DJI app in a wider variety of situations. Original resolution photos in JPEG can be saved directly to your mobile device, so you can immediately share what you create without the need to transfer files from the drone.

Equipment Discussions -

Aerodynamic Design and Extended Flight Time

The Mavic 2 's redesigned, more aerodynamic airframe reduces body drag by up to 19% compared to the Mavic Pro, allowing the Mavic 2 to fly at speeds of up to 44 mph (72 km/h) in Sport mode. Combined with a more efficient, quieter propulsion system and noise reducing propellers, the Mavic 2 has a maximum flight time of up to 31 minutes.

To ensure crisp photos and smooth, shake-free footage, the Mavic 2 houses an ultra-precise three-axis mechanical gimbal to stabilize its camera even during high-speed motion. Photos and videos can be saved directly to the drone using its 8 GB onboard storage. All DJI users have control over how their data is stored and managed, as part of DJI's commitment to protecting its customers' data.

A redesigned remote controller features detachable control sticks for ease of storage and portability. The Mavic 2 is compatible with DJI Goggles with the gimbal (yaw) control range up to -75°–– +75° in Head Tracking mode, offering users a more immersive FPV flight experience.

Price and Availability

The US retail price of a Mavic 2 Pro, including the drone, battery, remote controller, charger, and four pairs of propellers, is **$1,449 USD.**

The US retail price of a Mavic 2 Zoom, including the drone, battery, charger, remote controller and four pairs of propellers, is **$1,249 USD**.

A Fly More Kit, including two additional batteries, a multi-battery charging hub, a car charger, a battery to power bank adapter, two pairs of propellers and a carrying bag, retails at $319 USD. A gimbal replacement service exclusively for Mavic 2, will be available soon.

B&H Link: ***https://www.bhphotovideo.com/c/buy/DJI_Mavic_Pro_2/Ntt/DJI%2BMavic%2BPro%2B2/N/0/kw/search/BI/19990/KBID/13252/DFF/d10-v1-t12***

Equipment Discussions -

Nikon launches NIKKOR Z Mount lenses for Mirrorless cameras:

Along with the Nikon Z7 and Nikon Z6 fullframe mirrorless cameras, Nikon announced several lenses in the new Z mount. These new lenses are the standard zoom NIKKOR Z 24-70mm f/4 S, the wide-angle prime NIKKOR Z 35mm f/1.8 S, and the standard prime NIKKOR Z 50mm f/1.8 S.

Nikon has announced that its NIKKOR Z lenses pursue a new dimension in optical performance, by taking advantage of the superior design flexibility made possible by the combination of the larger Z mount with its inner diameter of 55 mm, and a short flange focal distance of 16 mm. The lenses offer sharp resolution with both still-image and movie recording capability, and are equipped with functions that include: compensation for focus breathing (the shifting of the angle of view when focus is adjusted), quiet operation, smooth exposure control, a control ring, and performance that are all well suited to movie recording.

The mirrorless system necessitated a new lens mount which Nikon has named as Z lens mount. With an interior diameter of 55mm and a back flange distance of 16mm, this mount permits for the creation of new lens designs and smaller camera bodies. One of the first lenses being released is the NIKKOR Z 24-70mm f/4 S. This standard zoom is both compact and versatile with a constant f/4 aperture for consistent performance. It has a button-less retractable design for getting compact when not in use and uses both aspherical and aspherical/ED glass elements to combat aberrations. There is also a Nano Crystal Coat for minimizing flare and ghosting. The lens has a minimum focus distance of 11.8” and has been designed for minimal breathing and silent operation to benefit video shooters. Additionally, a programmable control ring is available for quick access to NIKKOR Z 50mm f/1.8 S select settings.

Equipment Discussions -

S Line Lenses

The NIKKOR Z 24-70mm f/4 S, NIKKOR Z 35mm f/1.8 S, and NIKKOR Z 50mm f/1.8 S are S-Line interchangeable lenses. The S-Line is a newly designated grade of NIKKOR Z lenses that adhere to a new benchmark in optical performance, creating new definitions of design principles and quality control. These lenses realize a rendering performance that surpasses that of conventional f/4 standard zoom lenses and f/1.8 wide-angle or standard prime lenses. From maximum aperture, clear and sharp resolution can be achieved as well as beautiful bokeh characteristics.

Additionally, the Mount Adapter FTZ has been designed to allow users of Nikon SLR cameras to utilize their existing NIKKOR F mount lenses with the Z mount system and enjoy taking advantage of an even wider variety of lens characteristics with their photography.

NIKKOR Z 24-70mm f/4 S primary features

- Standard focal-length range from wide-angle 24 mm to medium-telephoto 70 mm can effectively cover a wide variety of scenes and subjects with rendering performance that will change the perception of zoom lenses with a maximum aperture of f/4
- Optical design that suppresses variations in aberrations from shooting distances of close-up to infinity, demonstrating sharp resolution even in the peripheral areas of the frame from the maximum aperture, and fine point-image reproduction
- Achieved a minimum focus distance of just 0.3 m across the zoom range
- Adoption of an ED glass element, an aspherical ED lens element, and three aspherical lens elements

Equipment Discussions -

- Nano Crystal Coat adopted to suppress ghost and flare
- Has the size needed to deliver an extremely high standard of optical performance, yet provides outstanding portability; employs a retracting mechanism that can be set on/off without pressing a button and reduces total length for a compact lens that can easily be taken anywhere
- In consideration to a dust- and drip-resistance, the entire lens, including moving parts, has been sealed
- Fluorine coat applied to front lens surface

Price: $996.95 US dollars

NIKKOR Z 35mm f/1.8 S primary features

- Rendering performance that redefines perceptions of what a 35 mm f/1.8 lens can do
- Sharp resolution even in the peripheral areas of the frame from the maximum aperture, provide effective suppression of sagittal coma flare that enables superb point-image reproduction when capturing point light sources in night landscapes, and the soft and natural bokeh characteristics expected of a fast (bright) lens
- Adoption of a new multi-focusing system achieves quiet, fast, and accurate AF control, as well as high image-forming performance at any focus distance
- Adoption of two ED glass elements, and three aspherical lens elements
- Nano Crystal Coat adopted to suppress ghost and flare

Equipment Discussions -

- In consideration to a dust- and drip-resistance, the entire lens, including moving parts, has been sealed

Price: $846.95 US dollars

NIKKOR Z 50mm f/1.8 S primary features

- Superior rendering for exquisite image expression that redefines perceptions of what a 50 mm f/1.8 lens can do

- Thorough suppression of axial chromatic aberration ensures superior resolution with faithful reproduction of the fine textures in subjects, even from maximum aperture
- Sharp and clear rendering of details from the center of the frame to the peripheral edges, regardless of the shooting distance
- The soft and beautiful bokeh characteristics at any shooting distance possible only with a fast (bright) lens
- Adoption of two ED glass elements, and two aspherical lens elements
- Nano Crystal Coat adopted to suppress ghost and flare
- Adoption of a new, powerful stepping motor (STM) enables quiet and accurate AF control with both still-image and movie recording
- In consideration to a dust- and drip-resistance, the entire lens, including moving parts, has been sealed

Price: $596.95 US Dollars

Mount Adapter FTZ primary features

- Shooting with AE, or AF/AE, is available with approximately 360 NIKKOR F lenses from AI type onwards*

Equipment Discussions -

- The unique characteristics of NIKKOR F mount lenses can be applied to Z mount system image quality
- In-camera VR (Vibration Reduction) available when attaching a NIKKOR F lens without built-in VR; in-camera VR also performs well with movie recording

- When attaching a NIKKOR F lens with built-in VR, lens VR and in-camera VR effectively work together to compensate for camera shake by enabling three-axis VR
- Various sections of the adapter are effectively sealed to ensure dust- and drip-resistant performance equivalent to that of NIKKOR F lenses
- Designed to be lightweight yet tough, with consideration for superior operability as a part of a complete system
- *Shooting with AF/AE is not possible with some lenses

Price: $246.95 US Dollars

Development of the new NIKKOR Z 58mm f/0.95 S Noct lens that pursues ultimate optical performance

The NIKKOR Z 58mm f/0.95 S Noct that Nikon is currently developing will be a large aperture, standard 58 mm prime focal-length, the fastest lens in Nikon's history*, manual-focus lens positioned at the very top of the S-Line. It will symbolize the Nikon Z mount system's new dimension in optical performance.

It has inherited the design concept behind the original AI Noct-Nikkor 58mm f/1.2, a standard prime lens released in 1977, named for "Nocturne" (a musical composition inspired by or evocative of the night), and popular for its ability to

Equipment Discussions -

finely reproduce point light sources as point images. This new Noct lens that is currently in development will take advantage of advanced design flexibility, afforded by the Z mount, pursuing ultimate optical performance. Development

continues with the goals of achieving an extremely fast maximum aperture of f/0.95, offering the ultimate in NIKKOR rendering performance with superior detail and sharpness. Additionally, the goal is to achieve beautiful blur characteristics, or bokeh, with good continuity, while ensuring outstanding point-image reproduction capabilities for more compelling, three-dimensional imaging.

B&H Link for preorder: ***https://www.bhphotovideo.com/c/buy/NIKKOR_Z_Lenses/Ntt/NIKKOR%2BZ%2BLenses/N/0/kw/search/BI/19990/KBID/13252/DFF/d10-v1-t12***

Natural History -

COUNTRY NOTEBOOK: The Wild Buffaloes of Assam : M.Krishnan - 24 June 1968

The Sunday Statesman (shared by Shri. Saktipada Panigrahi)

THE WILD BUFFALOES OF ASSAM

" THE WILD BUFFALOES of Assam are really wild --- that is, they have never been tamed. Now, all strains of the familiar village buffalo are descended directly from this wild progenitor and most of them look very like it except that they are smaller and, being domesticated much less aggressive. However,this difference in temperament and build between the wild and the village buffalo is entirely a question of degree and not, as in many other domesticated animals a radical change fixed in the strain.

Take domestic strains of the humped cattle, for instance. In many places in India they have been allowed to run wild and after generations they remain very much what they were. And they finest pedigreed draught breed anywhere, the very distinctive Amrit Mahal was actually evolved under semi-wild conditions so as to improve its mettle and rangy power.

Village buffs, on the other hand, if given their freedom soon become almost indistinguishable from their wild ancestor. The "Wild buffaloes" of Ceylon are really feral, that is domestic stock allowed to run wild. And authentic wild buffalo bulls will seek out village herds and mate with the domesticated cows in them. In fact, near Kaziranga village there is such a wild bull, of imposing proportions.

The point I began with is that Wild Buffaloes in Assam have never been domesticated and that Assam has played a notable part in saving this most magnificent of wild oxen from extinction.

It is a curious fact that although the domesticated buffalo was much-prized all over India 2,000 years ago and exported to other countries, the Wild Buffalo (a peculiarly Indian animal if one excludes Nepal) had a comparatively limited range, more or less confined to the delta areas of eastern India north of the Godavari. It was rapidly wiped out over most of the area, and today it is Assam that is the main stronghold of our Wild Buffalo.

There are several herd distributed over Kaziranga sanctuary but this is not the only sanctuary in Assam which can boast of these noble animals, there are plenty in Manas, and also in the less well-known Laokhowa and Sonai Rupa sanctuaries.

At Mihimukh there was a herd that like many other animals here, permitted a close approach. In Wild Buffaloes the horn is mainly of two types, long sabre-curved and more or less alongside the reck or rising upwards in a steeper curve both horn types occur in the same herd and a cow in the Mihimukh herd (cows generally have longer but thinner horns than the bulls) and quite remarkable horns almost meeting overhead in a circle. The bull of this herd massive and long though not tall, was given to a demonstration that amused me. I took my time gradually getting close to him on elephant back in an aimless-seeming zigzag and every time he felt we were approaching close he would stop stare at us, and then come trotting three steps forwards in an intimidatory gesture to come to a rocking halt about 70 feet away, then he would go back.

Another demonstration indulged in by a long bull we surprised at a wallow was much more the usual threat-gesture of wild oxen, he lowered his head and butted the mire savagely. GAUR bulls and even the bulls of domestic humped cattle demolish termite heaps and mounds of earth in such demonstrations. It is of course wise to halt when any wild animal is demonstrating and beat an unostentatious retreat, but it is my experience that when a Gaur or Buffalo bull really means to charge, he wastes no time on formal demonstrations.

Except that we are familiar with village, buffaloes and that they look so like the wild ones the sanctuaries of Assam would be more renowned for their Buffaloes than even for their Rhinos. Anyway nowhere else is there such a large population of Wild Buffaloes and Assam's achievement in saving these magnificent beasts deserves more acclaim than it has had."

- M. Krishnan

This was published on 24 June 1968.

Wildlife Photography -

Sambhar in Satpura by Shyamala Kumar

Tiger in Ranathambore by Vipin Sharma

Wildlife Photography -

Koklass Male by Sandipan Ghosh

Broadbill-long-tailed by Jitendra Katre

Wildlife Photography -

Indian Scops Owl by Sudhir Garg

Tree Frog by Prajwal Ullal

Wildlife Photography -

Owl Moth of Yeoor Hills by Anil Kumar Verma

Ladhak by Sandipan Ghosh

This is the **116th Issue of IndiaWilds**.

The photo of a pair of Brahminy ducks taking off from Chilika waters adorns the cover page of this issue. This beautiful and fragile ecosystem of Chilika which is reputed to have been formed some four and half thousand years ago is under grave threat from a man-made project. It is important for us to understand the consequences of each of our actions and then move forward. Else one moment of thoughlessness can undo what too several thousand years to make.

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/***

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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

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