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Cover Page Photograph:

Shola Forest
by Sabyasachi Patra

How Green is your party?:

India is in the midst of General elections – the largest in the world. Millions of voters vote on variety of issues and promises made to them by their candidates and parties. A major instrument of promises is the election manifesto which political parties release on the eve of the elections. These election manifestos summarise the issues that the parties are supposed to hold dear and act upon once they win the elections. We proceed to analyse the Manifestos of the two principal political parties in India to find out how they treat environment, forests, wildlife and climate change.

Analysis of BJP manifesto from environment, wildlife & climate change perspective:

Forest Clearance: The BJP manifesto says “We have ensured speed and effectiveness in issuing forest and environmental clearances for eligible projects due to which we have added around 9000 Sq. Kms to the forest cover of the country. We are committed to maintaining this pace through adoption of cleaner practises to make our nation a greener country.” (Page 26)

How can issuing environmental clearances to divert forest land lead to increase in forest cover? How can cutting of forests for industries lead to increase in forest? Perhaps this is written thinking either no one reads the manifesto or perhaps BJP thinks the people who read the manifesto have no logical faculties in their brains. Nevertheless, this is a very telling commentary on the way the ruling party treats environment, wildlife and Climate change.

Air Pollution: The BJP also promotes its existing National Clean Air Plan by saying that it will be successful in reducing air pollution by 35% in the next five years. Given the abysmal





state of air pollution level in India where by our cities are topping the list of most polluted cities in the world, this reduction even if it is achieved is too little. In Delhi the air quality index remains Severe (401-500) during Diwali and winter. The safe limit for PM_{2.5} and PM₁₀ is 60 and 100. The PM_{2.5} even if it is reduced from current levels by 50% will still be way above the safe limits and will be killing millions of people. So the promise of 35% reduction in air pollution is completely irrelevant.

Forest Act: BJP manifesto claims “We have continuously protected and promoted the interest of forest dwellers particularly the tribal communities. We have endeavoured to provide basic amenities, such as roads, telephone connectivity and cooking gas connection in addition to houses and toilets, at the doorstep of people living in remotest forest areas. We are committed to continuing our work in this direction.”

Unfortunately, unlike the claim, forests are being diverted to industries. When the forest communities can no longer depend on the forest produce as the forests are either out of reach or have been so devastated by mining/woodcutting etc that the NTFP is not available. Many tribals complain that though various Governments give them rice through schemes, those are not nutritious enough for them. Tribals were once self-sufficient. The Primitive Tribals like dongria kondh and others only come down to buy salt and oil. Once you give away their forests to industries, their lifestyle is forcibly changed. No amount of giving telephone connectivity, cooking gas etc will help them as their self-sufficient lifestyle is disrupted. They have to now leave the forests and work as coolies and other such menial jobs. So the only thing that will come out is displacing the poor tribals and local communities and allow industries to grab their lands.

Ganga: The BJP Manifesto says “We are committed to ensure a clean and uninterrupted flow of river Ganga from Gangotri to Ganga Sagar. We will ensure that the sewerage infrastructure to deal with 100% of the waste water from the Ganga towns is completed and is functioning effective-



ly, and take steps to enhance the river flow.

The villages located on the banks of the river, which are already open defecation free, will be taken up under a special project to ensure complete sustainable management of solid and liquid waste.”

Swami Gyan Swaroop Sanand started fasting for Aviral Ganga and Nirmal Ganga when his letters to the Prime Minister Modi didn't get response and he died fasting. Thankfully now the demand of activists for Clean Ganga (Nirmal Ganga) and Aviral Ganga (uninterrupted flow) of Ganga has been mentioned in the Manifesto of BJP. So it is a good thing. However, the manifesto only talks about the clean part through solid and liquid waste management. Though the manifesto claims the banks are open defecation free, it is not. And also the major point that people miss is that unless a river flows uninterruptedly, it can't be clean.

A river has a self-healing ability. You need to allow the river to flow so that the water can percolate through sand, pebbles, rocks and underground layers and then come out clean. The Manifesto avoids talking how they will ensure uninterrupted Ganga because for Ganga to flow uninterruptedly lots of dams have to be dismantled. Some of these dams are already under heavy silt burden. The Government is now promoting navigation through rivers and prefers to keep the Ganga bound by dams. So this policy is against the Nirmal Ganga and Clean Ganga. So we don't expect the situation to change in the ground level.

The dams were constructed primarily for power generation. Today the cost of solar power generation has decreased drastically. So the reason for existence of the dams in the Ganga basin and in most of the other river basins is over. Most of these dams were done without doing a holistic Environmental impact assessment. So the Government has to wake up and start dismantling many of these dams big and small to make the river flow again. Else it will remain another promise. And that is what is mostly likely going to happen. A revered river will continue to remain throttled and in chains.

Fisheries/Sea Weeds: The BJP manifesto says “We will facilitate farming of sea-weed, pearl as well as ornamental fish to ensure a better return to the fishermen.” Unfortunately, most of these are invasive species and will cause a huge harm to the ecology of the place. Sometime ago former President APJ Abdul Kalam had also said that sea weed should be cultivated. However, despite all his good qualities Abdul Kalam was not an ecologist and didn't envisage the impact of exotics. So this is also another questionable claim in the manifesto.

Urban Mobility: BJP Manifesto says “We will launch a National Urban Mobility Mission to provide technology based urban mobility solutions to all urban local bodies and increase the use of public transport, enhance walkability and cycle use. Under this mission, we will incentivize cities to integrate the public transport systems such as metro, local trains and local buses with the private service providers in the sector such as, private bus operator, private taxi operator, the auto-rickshaw, e-rickshaw services, pedestrian and cycling infrastructure for a seamless and smooth last mile connectivity. We will also promote a common mobility card/ ticketing across different modes of transport.”

On the surface people will believe that such emphasis on technology will help however it is important to strike at the root cause of urban mobility issues. Without strengthening of Public transport infrastructure no city can survive. Private players

have a role to play. However, the Government is always the largest people mover. Simple privatization leads to monopoly and inconvenience to people. So people continue to remain in the mode of owning cars and bikes and the result is congestion of the roads.

Today the Delhi Government is facing problems for parking of its buses. Even though people want to use the Delhi Metro, the last mile linkage that is the commute from home to nearest metro and from the metro to the place of work is very costly. Parking in the metro station is also prohibitive. So people still travel by their own cars. Unless the cost of owning a car becomes a disincentive like the way people in Singapore face massive taxes for their cars, they will continue to own their own cars. Wholistic planning is required to clear the Urban transport mess. The BJP manifesto promises something however, without details it appears to be simple privatization like calling Ola and Uber kind of organisations into all transport modes. That is not going to work. It needs more planning.

Swachh Bharat Mission:

The Swachh Bharat Mission is one of the programs of the current Government which has a good top of mind recall. In the current manifesto BJP says “We have constructed over 9 crore toilets under our flagship programme, Swachh Bharat Mission. We will take the Mission to a new level through sustainable Solid Waste Management in every village. Through the mission, we will ensure 100% disposal of liquid waste through emphasis on faecal sludge management and reuse of waste water in rural, peri urban and unsewered areas. We will ensure that all habitations attain open defecation free status and those that have attained the status sustain the behavioural change.”

Open defecation poses a big challenge as the faecal matter leads to E.Coli in the waters. Antibiotic resistance is also transmitted to birds and wildlife. There are birds and mammals who feed on faecal matter. They form the prey base of predatory birds and animals. So the antibiotic resistance gets transmitted. So it is important to ensure that India is 100% open defecation free.

There is a dispute about the number of toilets constructed. Nevertheless, it has come to notice that despite toilet construction people use the toilets to store grains as due to lack water they prefer to defecate in the open. It is not a simple question of behavioural change but also a case of use of lot of water in the conventional toilets. Government has to work with NGOs to find a solution to this else the open defecation will continue. BJP raising this issue is good. However, more resources have to be allocated instead of spending it on publicity.

Renewable energy/Solar Power:

BJP Manifesto says “India has become a global champion in addressing the issues of climate change through effective and feasible interventions. We have achieved cumulative installed renewable energy capacity of 76.87 GW as on February, 2019 and are on track to achieve our goal of 175 GW by 2022. We will continue our efforts in this regard and make it a popular movement. We will further make all efforts to invite other countries of the world to become members of the International Solar Alliance.”

Unfortunately, the actions of the Government in raising duty on Solar is acting as a disincentive and there is focus on expediting coalbased power plants to favour Adani. (IndiaWilds Newsletter Vol. 11 Issue IIII -

<https://www.indiawilds.com/diary/indiawilds-newsletter-vol-11-issue-iii/>). If those issues are sorted out then Solar can take off in India. Else, despite the intent the pace will continue to remain slow.

There is however, one possible good thing in the Manifesto of BJP with respect to environment and wildlife.

Green Bonus: The BJP Manifesto says “We will ensure the Himalayan States are provided special financial assistance in the form of a 'Green Bonus' to facilitate the protection and promotion of forests in those states.”

The Northeastern states are now clamouring for development. The dense forests of North Eastern states of India were like lungs of our country. However, they are now being felled for concertisation and road building and drowned by constructing large dams in rivers etc. If the North Eastern states are given a Green Bonus in lieu of keeping their forests intact, then it would be a good thing. They can still make lot of money through tourism and the Green Bonus hopefully can top up their incomes.

Overall the BJP Manifesto reflects the complete lack of understanding as well as scant regard with which the party treats environment, forests, wildlife and climate change issues. So if any wildlife lovers, biologists and conservationists want to vote for BJP then it is like cutting the same branch before the point where they are sitting. It will only result in falling down with the cut branch.

Analysis of Congress from Environment, Forests, Wildlife and Climate Change perspective:

The Election Manifesto of Indian National Congress on Environment, Forests, Wildlife and Climate Change appears to have taken inputs from experts. Following are the salient points:

Wetlands & wastelands Regeneration:

The Congress manifesto promises wetland regeneration and employment generation through it. “We recognise the need to create lakhs of lowskilled jobs in order to absorb young men and women who have completed only a few years in school. Congress will launch 2 major programmes to be implemented through Gram Sabhas and urban local bodies that will create 1 crore jobs:

- 1.Repair and restoration of water bodies (‘Water Bodies Restoration Mission’); and
- 2.Regeneration and afforestation of wasteland and degraded land (‘Wasteland Regeneration Mission’). (Page 12)

We will launch MGNREGA 3.0 to address issues of water security, soil quality and similar issues that aggravate farmers’ distress. To this end, we will:

- 1.Increase the guaranteed days of employment up to 150 days in cases where 100 days have been achieved in a block/district;
- 2.Use MGNREGA labour in the Waterbodies Restoration Mission and the Wasteland Regeneration Mission; (Page 14) In the

IndiaWilds Newsletter March 2019 issue we had talked about the importance of wetlands. So it is good to see that a party has included it in their manifesto. Linking it with job creation is good.

Earlier we had talked about creating jobs using MNREGA scheme in eradicating the invasive lantana weed from our forests. (IndiaWilds Newsletter, July 2015, <http://www.indiawilds.com/diary/indiawilds-newsletter-vol-7-issue-vii>) Creating jobs in local level will lead to boosting the economy as the multiplier effect of the job creation and the money pumped into these jobs will help in increasing spending. Massive spending boost increases the GDP.

Environment Protection Authority (EPA):

The congress manifesto promises to “constitute, by law, an independent, empowered and transparent Environment Protection Authority (EPA) to establish, monitor and enforce environmental standards and regulations. The EPA will replace all other bodies that currently exercise jurisdiction and powers.”

We don't have details. So hopefully it would be a strong agency as the Congress has said that “It is a bitter truth that India's environment has deteriorated. The 2018 Global Environmental Performance Index placed India at rank 177 out of 180 countries. The BJP Government has done virtually nothing in the last 5 years to arrest this decline.” (Page 50)

Green Budgeting:

The Congress manifesto says “We will present the national accounts in a form that will account for the costs of environmental degradation and damage. The Annual Budget will adopt the core principles of Green Budgeting.” Countries devastate their natural wealth because they think that their forests, rivers, wildlife mean nothing. The concept of Green budgeting will weigh in with the cost of environmental devastation. So any diversion of forests and the overall impact on the economy will hopefully be captured if Green budgeting principles will be used. This is an important promise, which has not been done before.

Air Pollution:

The congress manifesto “recognises that air pollution is a national public health emergency. We will significantly strengthen the National Clean Air Programme in order to urgently tackle the problem of pollution. All major sources of emission will be targeted, mitigated and reduced to acceptable levels. Sectoral emission standards will be set.” Recently the agencies have stopped sharing air pollution data so that the Government can't be questioned. So it is great to finally hear a party promising air pollution to be treated as a National Public Health Emergency and going to the root cause to solve the problem. A detailed plan of action needs to be drawn out to tackle air pollution in a holistic manner by integrating town & country planning and green areas.

Ecosystem conservation:

“We will formulate a comprehensive land and water use policy and plan that will include measures for the conservation of ecosystems and the bio-diversity and wildlife contained therein, without affecting the legitimate rights of local communities.” This is an extremely important point. For too long we have looked at conservation on a piecemeal basis. We have to move on to look at holistic conservation of entire landscapes.

It further says “We will work closely with the State Governments concerned to preserve the rich bio-diversity of the Himala-

yan range and the Western Ghats. However, the livelihood opportunities of the people living in these mountains will be protected.” Holistic view needs to be taken so it is good that this is included in the manifesto. However, we would have been happy if the manifesto of Congress had promised implementation of the Gadgil committee report on Western Ghats. Else the devastating Kerala floods of 2018 will happen repeatedly.

Conservation through local participation:

“Congress will confer legal and financial powers upon Panchayats and Municipalities to enable them to partner with State Governments in environment protection and management and to convert the total effort into a grassroots movement involving youth, women, communities and NGOs.

Congress promises to amend laws governing forests, re-define the role of the Forest Departments and make local communities the custodians of forests and shareholders of forest resources.”

This is an extremely important point as involvement of local youth, women and communities is often seen in successful conservation stories as was pointed out in the IndiaWilds March 2019 issue. The challenge of jobs for locals will be met as well as it will help in conserving the forests. This will in turn help in fighting erosion, climate change, bring in more rains etc.

Forest Cover:

Congress Manifesto says “We will work with State Governments to increase the forest cover from the current level of 21 per cent to 25 per cent by the year 2025 and, towards that goal, take the following steps:

- 1.Re-define the words and phrase ‘forest’ and ‘forest cover’ in accordance with modern scientific standards;
- 2.Assess the exact forest cover at the district level;
- 3.Involve local communities in afforestation projects and the selection of species of plants; and
- 4.Prohibit and penalise the diversion of funds for forest conservation and afforestation.”



The forest cover of 21% as defined by the current Government is a big joke. Plantations are not forests. So a study in accordance with modern scientific standards is need of the hour so that we know the actual condition. Involvement of local communities for afforestation is a good move. We had in the past suggested eradication of lantana and plantation of native species. This would be a good move if implemented.

Sand mining:

It is good that the Congress manifesto says “We will allow the import of sand for construction and stop the illegal mining of sand in riverbanks.” Sand mining is killing our rivers. And that impacts not only the riverine ecosystem but also the water security of the nation. However, politicians along with the Sand mining lobby are generally hand in glove. So it is to be seen how this will be controlled.

Ganga:

“Congress promises to double the budget allocation for cleaning rivers, including the Ganga. Congress promises to review the current methodology for cleaning rivers and to strengthen efforts by employing the latest advances in science and technology. We will convert the Ganga Action Plan into a People’s Programme and implement the same.” It also says “Congress will join hands with State Governments to stop, fully and finally, the discharge of effluents into the rivers and to clean all the rivers of India.

Promise to double the current spending in cleaning rivers is good. However, again the core issue of river flowing uninterrupted is not clearly defined. In the past, the Manmohan Singh led UPA Government had stopped hydel power projects on the demand of Swami Gyan Swaroop Sanand despite lot of investments already done. However that needs to become a policy and make our rivers flow free. Hopefully the new Government takes care to ensure that Ganga and other rivers flow in an uninterrupted manner.

Renewable Energy:

The Congress manifesto says “We will formulate a policy on Clean Energy in existing power plants that use fossil fuels and promote Green Energy to enhance the share of solar and wind energy in the total supply of energy.

Congress promises to enhance availability of, and access to, electricity in rural areas by encouraging investment in off-grid renewable power generation with ownership and revenues vesting in local bodies. Every village and every home will be electrified in the true sense. In the long term, we aim to substitute LPG used in homes by electricity and solar energy.” (page 13)

This is an interesting point made by congress. The power sector sees massive transmission losses. The cost of erecting transmission lines to distant villages is also huge and has to be borne by all consumers. So instead experts talk about creating off-grid power using renewable power as a better solution for distant communities. Promoting Solar energy in cooking would be really beneficial as LPG today has already touched 900 rupees per cylinder and hence people despite having LPG connections are still using fuelwood.

Urban Mobility:

“Congress promises to formulate and implement a policy on urban transport with emphasis on metro rail, suburban rail, electric vehicles, public bus transport, hired vehicles and shared vehicles. We will encourage non-motorised transport, namely, walking and cycling.” (Page 14)

Like the BJP Manifesto the Congress also doesn’t have much details in this regard. However, the Congress manifesto at least talks about its focus on public transport unlike the BJP, which wants to privatize everything.

Revamping Agriculture:

The election manifesto of congress talks about revamping agriculture to revive it. Since Agriculture also impacts pollution, is impacted by climate change and is also impacting our natural world through the use of synthetic pesticides, fertilisers etc it is an important component to tackle. The manifesto says “Congress promises to establish a permanent National Commission on Agricultural Development and Planning consisting of farmers, agricultural scientists and agricultural economists to examine and advise the government on how to make agriculture viable, competitive and remunerative. The recommendations of the Commission shall be ordinarily binding on the government. The Commission will subsume the existing Commission for Agricultural Costs and Prices and recommend appropriate minimum support prices.”

It would be pertinent to mention that the existing commission for Agricultural Costs and Prices produces many reports which have gone unimplemented. For example its report says that the paddy grown in Punjab, Haryana is highly water intensive, depletes the groundwater level and since the farmers immediately want to clear the fields for other crops they burn the paddy stalk and that leads to massive air pollution in Delhi. Punjab, Haryana hardly eat rice and hence growing rice there makes no sense as it depletes the water table and creates pollution. Hopefully by revamping agriculture, there would also be more focus on the holistic impact of agriculture on our environment.

Conclusion:

Looking at the overall depth and breadth of coverage of environment, wildlife and climate change related issues, clearly the manifesto of Congress comes up on top as it contains the issues often raised by conservationists. In comparison the manifesto of BJP bluffs and is also very shallow on its promises, clearly showing that nature, environment, wildlife and climate change etc are not important for BJP despite claims to the contrary.

It is a fact that there is an unprecedented division in this country along religious lines due to the philosophy of the ruling party. And the present Government favouring opening up of forests and ecologically fragile areas for wildlife is increasingly supported by many conservationists and forest officials who place allegiance to party over the interests of conservation of environment, forests and wildlife. If anyone cares to think about environment, wildlife and the future of our life in this planet earth then he/she would be advised to read this analysis. Hopefully people will realise that when the future of human survival in this planet earth is at stake, it would be important to vote for the party which promises to preserve our environment, our rivers, wetlands, forests and help in fighting climate change. Remember that India is bigger than any party or person. If you care for the well being of our nature and of planet earth, then raise your voice and also vote. Only if you tell politicians that you are not voting for them due to their lack of care for environment, then they will wake up and start acting on nature, environment, wildlife and climate change issues. Time to act is NOW.

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Safe Haven: Telineelapuram For Pelicans and Painted Storks

By - Mrs Shakti Bishnoi & A S Bishnoi

Introduction:

The relationship between man and birds is as old as the hill, flipping through the pages of history, one would realize that the relationship has been a special one and they were connected in many ways, be it supply of food, birds acting as couriers or serving as symbols of prestige. And when it comes to relationship with the avian species, the migratory birds have always played an important role.

Migratory birds- and the incredible annual journeys they take traversing thousands of kilometers, and crossing entire countries and even continents- have always been an inspiration to people around the world. The phenomenon of migration has fascinated people for centuries, and continues to do so today. In some places like Telineelapuram in Andhra Pradesh their date of arrival is considered as an auspicious day.

Telineelapuram and Telukunchi Bird Sanctuaries are located in Srikakulam district of Andhra Pradesh, India. Telineelapuram is a village located 65 kilometers from Srikakulam in Tekkali mandal, while Telukunchi is at a distance of 115 kilometers from Srikakulam in Ichchapuram mandal. Tekkali creek and the villages in its vicinity like Telineelapuram, Ijjuvaram and Naupada have become a seasonal resort for the winged tourists coming from as far as Siberia in Russia, Malaysia, Hungary, Singapore and Germany apart from 113 different species of inland birds, a majority of which are migrants from other states.

The environment-friendly region, declared a biological heritage site by the Bio-diversity Board of AP, is well protected. The 'devatha pakshulu' is shielded from any activity that would jeopardize the serene and ecological balance in the region. No industrial activity which mars the ecological balance is encouraged, so habitat is safe.

The Forest Department in its bid to promote Telineelapuram as a community based eco-tourist destination has prepared an action plan for development of the bird resort as an eco-tourist centre by constructing watchman sheds, umbrella type pagodas for visitors, digging bore-wells and construction of water tanks, providing barbed wire around the tamarind trees which shelter the birds, releasing finger lings into the tank and basic facilities for visitors at a cost of Rs.17 lakhs.

The Birds travel:

Every year spot-billed pelicans and painted storks numbering around 3000, travel some 7,000 kms and arrive in the month of September/October to escape the harsh winter. These winged visitors breed in and around the big water bodies. They reside for about seven months, and start undertaking the long reverse migration from the month of March onwards when weather starts becoming hot. During this period of stay they feed their fledglings in regular intervals throughout the day. This results in the offspring becoming big and strong enough to undertake the long flyback.

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The Tekkali creek between Bhavanapadu, Meghavaram and Kakarapalle is a wonderful feeding ground. The Telineelapuram and Nowpada swamps and its surroundings are a refuge for over 100 bird species. Ringed plover, Kentish plover, Sand plover, Dunlin, Red shank, Grey heron, Whimbrel, Bar headed goose, Greater flamingo and Little tern are resident species in the region making it a paradise for bird observers.

Celestial navigation

Even after cruising beneath the Pacific and Atlantic oceans for years, commanders of the state-of-the-art U.S.-made SSBN Typhoon-class nuclear submarine refer to the satellite-fed global positioning system and electronic gadgets to assess their position and charter their course back to the bases. But what mechanism do pelicans and painted storks follow to traverse the huge distance from the snow deserts of Siberia to the coastal village of Telineelapuram in Srikakulam district of Andhra Pradesh?

"They simply go by celestial navigation. Some researcher's say the birds possess innate sensory objects in their brain that can trace the waves generated by the Earth's magnetic field,"

Flying in groups shaped 'V,' the older birds lead the way. 'V' formation scientifically creates a vacuum in the middle to facilitate the younger ones to use less energy. Many aircraft manufacturers follow the aerodynamics and flying patterns of these migratory birds in their research and development programme. The birds fly at an average speed of 90 kmph and can do over 800 km at a stretch.

Dwindling numbers:

The migratory birds were first noticed over 15 years ago. At that time the number of birds exceeded 10,000. Today, the figure has been reduced to about 3,000.

Both the pelicans and the painted storks are sensitive to pollution. The dwindling number of the birds is attributed to a fire accident at Telineelapuram a few years ago and to increased tree felling. The locals consider the birds to be auspicious and hence poaching is rare. However poaching is said to happen at the feeding grounds.

Painted Stork:

The painted stork (*Mycteria Leucocephala*) is a large wading bird in the stork family. This large stork has a heavy yellow bill with a down curved tip. The head is bare and orange or reddish in colour. The long tertials are tipped in bright pink and at rest they extend over the back and rump, which hide short and black tail. The legs are yellowish to red but often appear white. The juvenile reach breeding condition after two or three years. The bare red skin on the head is developed when reaching breeding maturity. The painted stork is widely distributed over the plains of Asia. They are found south of the

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Workshop on Biodiversity Conservation among School Children

Himalayan ranges and are bounded on the west by the Indus river system where they are rare and extend eastwards into southeast Asia. They are mainly seen on freshwater wetlands although they sometimes forage on the coast. They are resident in most regions but make seasonal movements.

They forage in flocks in shallow waters along rivers or lakes. They immerse their half open beaks in water and sweep them from side to side and snap up their prey of small fish that are sensed by touch. The nest colonies are in trees. The best nestling sites are at the top of the trees. They make short distance in some parts of their range in response to the food and for breeding. A lot of variation is noticed in the onset of the breeding across sites in a season, like in Andhra Pradesh in Teelineelapuram , around October to November. Apart from this other sites are Kondarkarla, Gosthani Estuary and Thatipudi etc.



Painted stork being large and colourful birds and their nesting colonies become centres for tourist interest. Particularly well-known nest sites are those that are close to human settlements and these includes the colony in Teelineelapuram and telliguchi. The birds nest within the trees in the village forming mixed nesting colonies with the spot billed Pelican.

Spot Billed Pelican:

Size of pelican is similar to a vulture, with the sexes alike, head, neck and upper parts gray, underpants grayish white, blue spots on the upper mandible. Juvenile pale brown above and white below. Near threatened, resident and locally migratory,

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in well-watered tracts all over India frequents a variety of deep or shallow wetlands, manmade and natural, freshwater and saline, including marshes, lakes, river and estuaries.



Dalmatian Pelican:

White under wing and blackish trailing edge. Orange gular pouch, grayish cast to plumage, dark grey legs and found in large water bodies. Although as per “A Field Guide to the Birds of India” book by Krys Kazmierczak, it is found in northern part of India, but Teelineelpuram is home to these avian species. However we could not spot them.

Our visit to Teelineelapuram:

Painted stork, Pelicans are listed as Near Threatened by Birdlife International and IUCN, owing to some decline seen in most of its range. The local population provides security to these birds during brief nesting season when birds arrive in



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October and leaving in May-Jun.

As per the local information painted stork and pelicans have been visiting the village for the past 15 years. Due to increase in population, their arrival over the years has declined and also they select particularly the same village in spite of having nearby village of same caste/creed and occupation with same varieties of trees.

There is religious angle to the bird conservation. The village people consider the birds auspicious. Birds are considered to bring prosperity in the village which was prevalent as we could see each house with all basic necessities **and** children going to the school. A small source of water is near to village where villagers do their routine activities, and the same pond is feeding centre for the storks/pelicans. Food shortage for birds in near future would be alarming as the population in the village increasing and so is consumption of water. The Pond is natural source which receives water from adequate rainfall over a period of time, has reduced water accumulation and thereby fish/aquatics species which support their livelihood of avian.

These trees are very old and have grown to the height of 40-50 feet and they provide protection and isolation from the animals and improve their survival rate. Some of them build nests in the Bamboos. Villagers consider these migratory birds as their family and accept them and protect their juveniles and parents too.



Their excreta are used as manure. Considering the large congregation of birds, it has been considered/declared as IBA. Competition for the site selection and nest building is very high. Few individuals which are unable to occupy the strategic location shift to the nearby trees but not outside the hamlet of 50-60 villagers as on date. These nests are preferably constructed at the top of the tree. Some birds also use the older nests,



with slight modification /addition and alteration to meet the requirement. Their nests are made of twigs of tamarind, banyan, and other bushes found nearby. Their nests are not soft except the centre portion. During nesting one partner collects the twigs and other is arranging. The nest almost looks like crow nest except the twigs length and diameter is more. The nests are so closely prepared, that the distance between two nests is hardly 1/2-1 meter.

Some of the old trees are heavily crowded and it is mix of Pelican and Painted stork. We have seen 15(approx) nest on one old tamarind tree.

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Few birds were found on ground as harvesting season begins. They move freely without bothered of being hunted or killed.

On an average two chicks are recorded in the single nest. Sometimes the chicks are prone to falling from the tree, during their learning lessons being conducted, but villagers have come out with innovative ideas by putting the fishing net underneath the tree so that the chick do not die and can be collected by the parents.



Deaths due to fall:

Most of the storks leave in the month of Mar-Apr remaining leave till Jun if arrived late. But the survival rate decreases as



the water in the pond dries and less food remains to feed. They use the used nest of earlier birds with slight modifications to make it comfortable. They don't start everything new. This is adaptability. Some of them become handicap/injured during their maiden flight and are kept in captivity till they get healed and if not then they remain till rest of their life. This enclosure was constructed by the Andhra Pradesh government and one watch tower to have a better view of the village and birds.

Apart from the Migratory we could even spot, white bellied sea eagle, Indian grey hornbill, Indian roller, Jacanas, small sunbird,

Black drongo, Asian openbill, Pheasants, green bee eater, white throated king fisher, pied kingfisher etc.

A unique experience to see the cordial and well knit relationship between humans and birds. This relationship increases their (bird) life expectancy and the bond they share makes them to visit every year. This message is passed down to their generations to generations and same is applicable to humans.

Conservation News -

Tiger reserve status for Nandhaur Wildlife Sanctuary in Uttarakhand

The number of tigers have been on steady rise at Nandhaur Wildlife Sanctuary in Uttarakhand. Officials feel upgrading it to a tiger reserve would be necessary for the conservation of tigers at the facility.



Director of the sanctuary N N Pandey said, "The number of tigers at the sanctuary when it came into being in 2012 was nine which rose to 27 in 2018. The number is set to cross 32 this year,". The Nandhaur Wildlife Sanctuary is situated in Kumaon, is located close to the Nandhaur river and spread over an area of 269.5 square km.

The limited resources at the disposal of the sanctuary may not be sufficient to efficiently handle the responsibilities for long. Pandey added "Though the Wildlife Institute of India and the Forest Department are working hard with financial help from the Zoological Society of London to maintain the sanctuary as a safe habitat for tigers, the task may get difficult in the long run,".

To get the central government funds and the expertise of national level zoological scientists to conserve the growing population of tigers at the sanctuary, it is required by the state government to elevate it as a tiger reserve.

He also said that the situation becomes rather delicate from the point of view of tiger conservation as the sanctuary at present does not come formally under the ambit of the National Tiger Conservation Authority.

Conservation News -

Senior biologist at the Dehradun-based Wildlife Institute of India, Ajaj Spengku, said the density of tiger population at the sanctuary is very healthy and every step should be taken to boost its resources and maintain it as an ideal habitat for tigers.

Mining along Kaziranga banned by Supreme Court

The Hon'ble Supreme Court bench of Justice Arun Mishra and Justice Deepak Gupta has banned all mining activities along the Kaziranga National Park and also along the catchment area of rivers originating in the Karbi Anglong Hills in Assam. The Supreme Court had banned mining in Karbi Anglong hills in 1996. A Central Empowered Committee (CEC) was constituted to investigate and report about the presence of illegal mining in the region. The SC bench issued the order after the CEC (Central Empowered Committee) report found that illegal mining was continuing in the Karbi Anglong hills.

The Supreme Court bench said ““We order that all kinds of mining and related activities along the aforesaid Kaziranga National Park area and in the entire catchment area of rivers/streams and rivulets originating in Karbi Anglong Hill ranges and flowing into the Kaziranga National Park, including Tiger Reserve are restrained. No new construction shall be permitted on private lands which form part of the nine identified animal corridors.”

The Supreme Court bench also issued a notice to the Assam government and directed it to respond within three weeks. The Assam DGP has been directed to ensure compliance of the Supreme Court order to prevent illegal mining.

There is illegal mining around Kaziranga, which is said to be done with tacit understanding of the local politicians. The illegal mining is carried out by locals as well as illegal settlers in those places.

Equipment Discussions -

Four New Canon XA Professional Camcorders Feature 4K 30p High-Quality Recording

XA55, XA50, XA45 and XA40 Camcorders Deliver Crisp 4K Imagery in Compact Bodies at Affordable Price Points.

MELVILLE, NY, April 2, 2019 – Meeting videographer needs for a variety of applications, Canon U.S.A. Inc., a leader in digital imaging solutions, today announced four new additions to the lineup of XA Series professional camcorders, the XA55, XA50, XA45 and XA40. These four camcorders are the first in the series to feature 4K 30p recording. They also include a detachable XLR handle and the XA55 and XA45 each feature an HD-SDI terminal. In addition, the company has announced the Canon VIXIA HF G60 4K UHD camcorder, a budget-friendly, compact-and-lightweight camcorder.



“Often spending their days and nights working in fast-paced environments, videographers need a camcorder that is affordable, reliable, and delivers great images,” said Kazuto Ogawa, president and COO, Canon U.S.A., Inc. “These new camcorders meet the needs of a variety of users, including those capturing news, shooting influential documentaries, educating young filmmakers or developing content for their companies.”

All of the camcorders feature Canon’s five-axis Intelligent Optical Image Stabilization system, providing users with power-

Equipment Discussions -

ful image stabilization via a Dynamic mode, which helps reduce image distortion, even when shooting while moving. The ergonomically designed and highly portable camcorders have a three-inch LCD touch panel screen and user-friendly, tilting, high-resolution Electronic View Finder (EVF).

The XA55 and XA45 are excellent options for news reporting and documentary shooting, while the XA50 and XA40 are geared more towards broadcasting schools, government agencies and corporate-video production companies. The affordable VIXIA HF G60 caters to advanced amateur videographers who need a 4K UHD camcorder to shoot a wedding or a student film project.

The XA55 and XA50 camcorders both feature a 1.0-inch sensor, nine-bladed circular aperture and Dual-Pixel CMOS AF with a 15x (25.5-382.5mm) genuine wide-angle Canon optical zoom lens. For natural and realistic life-like imagery the XA55 and XA50 camcorders feature a Wide Dynamic Range (DR) Gamma mode. This lowers the barrier for focusing, especially when shooting in 4K, which requires strict focus accuracy. By suppressing overexposure in high- brightness areas of the composition, this mode helps achieve a wide dynamic range of 800 percent to help produce seamless tone gradations, resulting in smooth detail, accurate color and virtually no blown-out highlights. The camera's Dual Pixel Focus Guide takes advantage of Dual Pixel CMOS AF data to display focus-assist information on the screen. The camcorders also record 4K UHD/30p (4:2:0 8 bit) and 1080p Full HD (4:2:2 10 bit) via SDI/HDMI Output in XF-AVC and MP4 format to dual-card SD card slots with dual and relay recording.



The XA45 and XA40 camcorders both feature an eight-bladed circular aperture with the ability to record 4K UHD/30p (4:2:0 8 bit) and 1080p Full HD (4:2:2 10 bit) via SDI/HDMI Output) in MP4 or XF-AVC format to dual-card SD card slots

Equipment Discussions -

with dual and relay recording. To help provide enhanced image quality over its predecessor, over sample HD processing can be utilized with information obtained from the 4K 1/2.84-inch sensor and the DIGIC DV 6 image processor. Both camcorders boast a 20x (29.3-601mm) genuine wide-angle Canon optical zoom lens.

The Canon VIXIA HF G60 4K UHD camcorder is packed with many of the same great features found in the XA55 and XA50, like a nine-bladed circular aperture, Dual Pixel Focus Guide and Wide DR, but with the budget-conscious user in mind. The affordable camcorder is an ideal tool for young videographers taking their first steps in the craft and will be sure to please due to its compact-and-lightweight form factor in addition to ease of use.

Additionally, Canon today announced firmware updates for the XF705, XF405/XF400 and VIXIA GX10 camcorders. New features by model include:

- **XF705:** Firmware Version 1.0.1.1 now features improved zoom response when using the zoom ring or zoom rocker, improved focus following speed during zooming, and improved image quality of interlaced recording.
- **XF405/XF400:** Firmware Version 1.0.3.0 now features IP streaming, the ability to set custom white balance, support for the reset function that resets the clip number when the reel number is set and improved image quality of interlaced recording.
- **XF405 only:** Firmware Version 1.0.3.0 now features 3G-SDI mapping at level A and level B.
- **VIXIA GX10:** Firmware Version 1.0.3.0 now features the ability to set custom white balance.

Pricing and Availability

The Canon XA55, XA50 and VIXIA HF G60 are scheduled to be available in June 2019 for estimated retail prices of \$2699.00, \$2199.00 and \$1699.00, respectively. The XA45 and XA40 4K UHD video camcorders are all scheduled to be available in April 2019 for estimated retail prices of \$2199.00 and \$1699.00, respectively*.

Equipment Discussions -

Parrot launches ANAFI Thermal drone:

Parrot has launched a unique compact drone with thermal and 4K camera.

The ANAFI Thermal drone has a 4K HDR camera and a FLIR thermal sensor. FLIR is a leader in thermal imaging. This drone can help easily shift between RGB and thermal imaging. So flaws in structures, leakages etc or presence of people/ animals etc can be easily found through thermal imaging. So this drone will be of help in many different sectors and applications.

The ANAFI Thermal drone is going to be available in **May 2019**.

The FLIR sensor gives a 160x120 pixels resolution and a temperature range of 14°F to 752°F reveals the invisible and pro-



vides live temperature readings. Using the **FreeFlight 6 app**, one can immediately know heat loss, presence of intruders etc. It can give us a good idea about wildlife as well.

The gimbal can tilt 90° upwards or downwards to cover areas. There is a 3x digital zoom as well to zoom in to areas. However, how much quality is lost due to digital zoom is not known.

The normal 4K HDR camera for RGB imaging is based on a 21 MP sony sensor.

Equipment Discussions -

The ANAFI Thermal drone is light weight and is only 315g. So can be easily carried in the field. It can also quickly start and fly in 3 seconds.

It has a good top speed of 55kmph. So quickly reaching close to the subject is easy. Since it can withstand winds of upto 50 kmph, one can use this drone in bad weather.

Since there is a USB-C slot for charging, one can recharge from powerbanks as well. So that is good to charge in the field.

Its **Parrot Skycontroller 3** remote control is claimed to offer a powerful, reliable WiFi connection up to **2km²**.

The photo and videos are recorded to a 16GB micro SD card.

Price: At \$1900 US Dollars the price is way higher for normal consumers. So use of this drone is likely to be limited to the professionals in certain industries.

PRESS RELEASE

ANAFI THERMAL:

The ultra-compact and lightweight thermal drone solution dedicated to all professionals!

With thermal and 4K cameras, Parrot's unique new drone is built for several professional applications

EMBARGO: April 15, 2019—**Parrot**, the leading European drone group, has unveiled ANAFI Thermal: An all-in-one drone -based thermography solution (*drone + sensor + software*) with proven reliability and outstanding performance.

Anafi Thermal uses the lightweight, simple-to-use, and highly advanced ANAFI drone platform, which has evolved for professional usage. In addition to its built-in **4K HDR** camera, ANAFI Thermal integrates a FLIR® thermal sensor. With the ability to reveal the invisible in an instant, the FLIR® sensor is a benchmark feature in the professional drone sector. ANAFI Thermal collects relevant and previously inaccessible data with complete security, improving the return on investment, efficiency and productivity for professionals in multiple industries.

With ANAFI Thermal, professionals can view live **thermal** and **RGB images** (4K HDR) of surfaces, structures or at-risk areas as the drone flies over or under them. The drone's unique imaging capabilities allow professionals to take immediate action or analyze recorded photos and videos in unprecedented detail.

With this unparalleled solution in the UAV market, Parrot is reinforcing its commitment to professionals. ANAFI Ther-

Equipment Discussions -

mal is designed to profoundly revolutionize the way many industries and trades operate, offering professionals a complete solution that adapts perfectly to their requirements and needs:

- Experts in civil security and rescue services
- Building and public works professionals
- Energy producers and transporters
- Organizations for the preservation of the environment and animal species

ANAFI Thermal - Available May 2019

ANAFI Thermal: Two high-precision cameras film the invisible and the visible

The Paris-based engineers at Parrot used the ANAFI drone platform to develop ANAFI Thermal. The result of thousands of hours of testing and development, the platform offers exceptional features, performance and unique software maturity.

ANAFI Thermal's gimbal features **two embedded miniaturized cameras** (thermal and RGB 4K), stabilized on three axes for sharp videos and clear pictures in any flight conditions:

- A FLIR® radiometric thermal-

imaging camera with a 160x120 resolution and a temperature range of 14°F to 752°F reveals the invisible and provides live temperature readings. Directly from the FreeFlight 6 app, the pilot can instantly identify areas of heat loss in hot and cold spots and isolate subjects.

- A 4K HDR camera with 21MP

Sony sensor is an essential tool for detailed visual inspection of surfaces and

buildings. It provides high-resolution images and videos to help inspect the state of a structure and captures precise images of a search area, among other applications.



Extend ANAFI Thermal capabilities with the Pix4DModel app. Captured data is used to build a 3D image of buildings and scenes, enabling professionals to perform 3D inspections and measure dimensions after the flight.

Equipment Discussions -

Images of the visible and the invisible can be merged directly within the FreeFlight 6 app. Each element of the environment appears in high precision, with visual representations of thermal leaks and temperature differences superimposed on the image.

ANAFI Thermal's gimbal is a unique feature for a drone of this category, with the ability to **tilt vertically 90° upward or downward**. This gives professionals ground-breaking capabilities to inspect beneath structures in zenith view or roofs and flat surfaces in nadir view.

Thanks to the **3X digital zoom**, the pilot can examine hard-to-reach elements and the details of a scene in 4K or with thermal imaging without taking any risks.

ANAFI Thermal: Who is it for and how is it used?

ANAFI Thermal is a complete solution that perfectly adapts to the needs of **building industry professionals** (roofers, insulation and thermal inspection specialists), **major public works and construction groups**, **installers of solar panels**, **energy suppliers and transporters**, **civil security services** and **rescue services** such as firefighters. Lightweight and ultracompact, it is always ready to travel by hand, in a backpack or in the car trunk.

For **building professionals**, ANAFI Thermal can be used to assess thermal losses of a façade or a roof. The drone offers cost-control benefits and removes the need for equipment such as ladders and scaffolding.

For **civil security services**, ANAFI Thermal enables remote and post-intervention applications, including monitoring hot points and helping teams decide whether to retain personnel and equipment on-site. 4K imagery and thermal rendering can speed up and ease the process of conducting searches in rugged areas without endangering the search teams.

For **energy suppliers and transporters**, ANAFI Thermal can identify power failures on high-voltage cables within minutes or even isolate a defective solar panel.

For **organizations for the protection of the environment and wildlife**, ANAFI Thermal provides discreet and quiet operation, which minimizes potential stress to animals. The drone makes it possible to observe, identify and count species while the pilot remains at a distance – potentially even protecting animals from poachers through remote monitoring.

ANAFI Thermal: Compact, light, powerful, and ready to be taken anywhere

Lightweight (315g/11.1 oz.) and **ultra-compact** with a unique folding design, ANAFI Thermal is designed to accompany professionals in any field of work.

Equipment Discussions -

For rescue-service workers, civil security and inspection professionals, fast action is critical. With superior portability and power-up speed, ANAFI Thermal unfolds and becomes operational in just three seconds.

Despite its ultraportable design, ANAFI Thermal offers tremendous power. The drone is able to fly over a scene or travel to a hard-to-reach area at a top speed of **55km/h**. With the ability to withstand wind speeds of up to **50km/h**, ANAFI Thermal remains operational even in complex conditions and environments.

With **78 minutes of cumulative flight time**¹ (three batteries lasting 26min each per charge), ANAFI Thermal demonstrates unique flight performance for the market. It covers vast areas, giving professionals the time required for each assignment without unnecessary stress or pressure.

Equipped with a USB-C port for recharging, ANAFI Thermal's batteries can be recharged from any source, including computers, power banks and 12V vehicle systems.

Its Parrot Skycontroller **3** remote control ensures a powerful, reliable WiFi connection up to **2km²**. This means teams can stay at a safe distance from an at-risk or difficult-to-access area while using the drone.

ANAFI Thermal: Making thermal imaging accessible to everyone

ANAFI Thermal flight controls are available via the FreeFlight 6 app, ensuring they are accessible to everyone and can accompany the user on every assignment. Thanks to its ergonomic interface and intuitive operation, the pilot can easily switch from an **RGB view** to **thermal imaging** – or even **merge the two** to enhance the readability of the image.

Real-time analysis of the scene is facilitated by the app's built-in tools:

- Display the estimated temperature of an image element with a simple tap on the screen;
- Freeze-frame to stay on a specific element for focused analysis.

The operator can observe thermal differences on the screen by selecting one of the **three groups of settings** available:

- **Relative:** This group displays the extent of temperature differences in the image. The scene is visible with a gradient-color scale, showing the range of the coldest temperature in the scene to the hottest.
- **Absolute:** The user can manually choose a temperature range for the color gradient. The user simply needs to set a bracket for the desired temperature values.
- **Spot:** This mode is used to instantly identify thermal anomalies. Only the hottest or coldest spots are isolated.

Equipment Discussions -

The captured thermal and RGB images and videos are recorded on the drone's **16GB microSD card**. They can be shared with collaborators, experts and clients in seconds, directly via the app or a computer.

Each video can be viewed afterwards on the FreeFlight 6 app. The settings group can then be modified to isolate a specific element or analyze the temperatures in a scene.

Compatible with the **FLIR® Tools** software solution, professionals can quickly edit and analyze images -- and very simply produce inspection reports in PDF format.

ANAFI Thermal: Completely safe flights

ANAFI Thermal benefits from all of Parrot's technological expertise, including the renowned ergonomics, ease-of-use, reliability and power of its drones.

To ensure its safety, ANAFI Thermal is embedded with multiple sensors and offers a powerful built-in autopilot. The quadricopter demonstrates stability and maneuverability with exceptional accuracy.

For perfectly controlled and completely safe flights, the pilot can edit and adapt the parameters of the quadricopter to his or her flight environment:

- Setting the **flight altitude**
- Marking a flight zone by setting up a **geofence**
- Creating a flight path with the FlightPlan feature. This route can be repeated many times to measure a changing situation or to record the before-and-after of an operation, for example.
- Activating the '**Return Home**' (RTH) function. With one press of the dedicated button, ANAFI Thermal automatically returns to its take off point thanks to the precision of its GPS and its 'Precise Home' visual recognition function.

Finally, ANAFI Thermal's smart battery calculates remaining flight time and the distance it needs to cover in order to return to its take off point. If the charge level becomes critical, the pilot receives an alert. Without requiring any user action, ANAFI Thermal launches a procedure to return to its take off point.

Equipment Discussions -

Zeiss launches Otus 100mm f1.4 lens:

Zeiss has launched a 100mm f1.4 lens in its Otus range of lenses for Canon and Nikon full frame DSLRs. The Otus lens is completely manual focus and is designed to be used with the high resolution digital still and video cameras. Zeiss claims that this lens will be able to deliver medium format quality images.



Zeiss talks about the high production quality which means that quality of each lens as well as consistency in the quality of all lenses will be maintained.

The f1.4 aperture will result in some outstanding separation between the subject and background and wonderful bokeh.

According to Zeiss the Otus 100mm f1.4 lens will have minimal chromatic aberration and distortion due to the use of aspherical lens elements and special glass materials. The use of special T* reflecting coating is supposed to lead to extreme high contrast and minimal presence of stray light.

The Zeiss Otus 100mm f1.4 with its full metal housing and high quality components is expected to give a smooth and pre

Equipment Discussions -

cise focusing and operation of this lens. One can also safely put it to use in extreme environments.

The lens is priced at **\$4500 US Dollars**.

Zeiss Otus 100mm f1.4 lens Data	
Focal length	100 mm
Aperture range	f/1.4 – f/16
Lens elements	14/11
Focusing range	1.0 m (39.37") – ∞
Free working distance	0.83 m (32.68") – ∞
Angular field*(diag. / horiz. / vert.)	24.1° / 20.2° / 13.6°
Diameter of image field	43 mm (1.69")
Flange focal distance	ZF.2: 46.50 mm (1.83")
	ZE: 44.00 mm (1.73")
Coverage at close range (MOD)	206 x 309 mm (8.11 x 12.17")
Image ratio at MOD	1:8.6
Filter thread	M86 x 1.00
Entrance pupil position (in front of image plane)	35.0 mm (1.38")
Rotation angle of focusing ring (inf – MOD)	315°
Diameter max.	ZF.2: 100.7 mm (3.96")
	ZE: 100.7 mm (3.96")
Diameter of focusing ring	ZF.2: 90.0 mm (3.54")
	ZE: 90.0 mm (3.54")
Length (without lens caps)	ZF.2: 126.5 mm (4.98")
	ZE: 128.8 mm (5.07")
Length (with lens caps)	ZF.2: 150.1 mm (5.91 ")
	ZE: 152.3 mm (6.00")
Weight	ZF.2: 1336 g (2.95 lbs)
	ZE: 1405 g (3.10 lbs)

Equipment Discussions -

PRESS RELEASE

New ZEISS Otus 1.4/100 DSLR Lens for the Most Demanding Applications

ZEISS adds a tele focal length to its line of lenses for full-frame DSLR cameras from Canon or Nikon

OBERKOCHEN/Germany, 2019-04-24.

With the ZEISS Otus 1.4/100, ZEISS is expanding its lens family for Canon¹⁾- and Nikon¹⁾-photographers who do not want to make any compromises concerning image and build quality. Whether in the studio or on-the-go, for portrait or product photography, the tele focal length delivers high resolution and outstanding definition in any situation – even at maximum aperture. This high-speed lens clearly sets the subject apart from the background. The exceptional level of detail and harmonic bokeh ensure the “3D pop effect”, ZEISS lenses are known for.

Achieving the outstanding image quality of medium format cameras

"The extremely high imaging performance and reliable production quality set the ZEISS Otus 1.4/100 apart in this class of lenses," says Björn Pados, Product Manager for ZEISS Camera Lenses. "ZEISS' comprehensive expertise and many years of experience went into developing the lens. The images captured with a ZEISS Otus lens in combination with a high-resolution, full-frame DSLR camera are on par with those created using a medium format system."



Equipment Discussions -

The lens design, with aspheric lenses and special glass materials keeps chromatic aberrations and distortion to a minimum. Even when shooting against the light, the T* anti-reflective coating developed by ZEISS allows for extremely high contrast and minimizes stray light.

Robust and reliable

The ZEISS Otus 1.4/100 also features impressive production quality and ergonomics: the extended rotation angle and smooth operation of mechanical components enable highly precise manual focusing. The stable full-metal housing with internal focusing ensures a consistent center of gravity and optimum balance when taking photographs. "This makes the ZEISS Otus 1.4/100 well-suited for the rough conditions a professional photographer faces, and its high-quality mechanical design ensures it will last for a long time," adds Pados.

The ZEISS Otus lens series

The ZEISS Otus lens series was developed for professional photographers who expect unrestricted edge-to-edge image quality that extends across the entire aperture range. ZEISS launched its high-end SLR lens family back in 2013 with the release of the ZEISS Otus 1.4/55. This series continued with the addition of a short tele lens, the ZEISS Otus 1.4/85, in 2014. The ZEISS Otus 1.4/28 wide-angle lens followed in 2015.



Price and availability

Global delivery for the ZEISS Otus 1.4/100 will begin immediately, with a sales price of **4,500 Euros (incl. German VAT) or 4,500 US\$ (excl. local taxes)**. A lens shade and protective caps for the front and back lenses are included.

Natural History -

COUNTRY NOTEBOOK: Elephants in Musth : M.Krishnan - 14 December 1969

The Sunday Statesman (shared by Shri. Saktipada Panigrahi)

ELEPHANTS IN MUSTH

" THERE were quite a few tuskers in the herd of Elephants (which I thought a composite herd) at the Corbett National Park, and in the evenings, when they came out of sal cover and crossed open ground to get the water, they were usually by themselves. There was a small, mean-looking old bull with both tusks broken off short who was said to have a nasty temper, and a massive, medium-sized bull with short blunt tusks, also well past his prime, who had the habit of grazing steadily towards human intruders till they moved off. Besides these, there were three sub-adult tuskers, and I thought that was the lot.



Elephant in Musth

Photographed by - Suraj Sreedhar

Then one evening a much more impressive bull, with yard-long symmetrically curved tusks, taller than other bulls and longer and heavier in the barrel came out of the sal forest. The herd and other bulls were half a mile away, and this bull crossed the narrow belt of open scrub behind the rest house and made straight for the Ramganga.

I had a good look at him as he crossed the clearing, the slanting light of the descending sun illuminating him warmly and bringing out every little surface detail in sharp relief. He was in his prime, probably about 40 or 45 years old, with a black skin flecked with pink on the trunk and a pink trunk-tip, and covered thinly with red dust, and on either side of the face, between eye and ear there was red patch, as if the iron of his hide rusted there - this was where the dust had settled on the

sticky exudation from his musth glands.

I followed him discreetly, keeping well behind, as he went down the boulder-strewn path through the forest to the river. Once he was at the water, it was possible to approach much closer among the opposite bank but although the photographer in me urged me to do so. I had the sense to stay hidden at a sufficient distance so that I could watch once again a big tusker in musth spraying the cooling water over the irritating patches on either side of his brow where the secretion from the musth glands had spread over the skin.

Bull elephants in musth, as I reported in this column some years ago, often carry clinging, hard-packed clay on their tusks, even after bath, and I had supposed because they had used their tusks, after a bath, and I had supposed this was because they had used their tusks to dig up something, some worm or tuber deep in the earth, which when they are in musth, the deep digging fixing the earth so firmly on to the ivory that even subsequent spraying with water could not wash it off - I have seen a tusker swim right across the fast flowing Periyar with his head submerged most of the time and when he climbed ashore the mud was still clinging to his tusks.

Soon after a bath, the elephants throw dust, or at times mire, all over themselves; this habit cannot possibly fix the earth so firmly to the tusks that it stays on after the next bath - there should be no confusion on this account.

Well, I spent one of the pleasantest hours I have lived through watching the great beast drink deep at the Ramganga and then spray the water systematically all over his head and body. Then clean-washed and glistening black, he crossed the river where it was shallow, climbed on to the bank on which I was, and searched around till he found a suitable patch of dry earth which he kicked up with his forefeet till it was loose and powdery; then picking up the dust in his trunk, he threw it over himself. After this, he went up to the steep earth bank, and selecting a clear spot on its perpendicular wall, drove its tusks into it, using his great mass to bury them deep, and stood leaning his weight against the bank. Luckily, I had a small pocket-telescope with me (the normal lens of my 35 mm camera screwed on to a special eyepiece, and most useful implement) and was able to watch entire operation closely.

As he stood, leaning his buried tusks, the compression of the attitude on the head and face caused the musth to flow out of the temporal glands, and no doubt the fact the pores in the skin over them have been freshly washed free of all clogging matter helped in this. I suppose elephants in musth get some relief by expressing the secretion from the tumid glands in this manner. After a while he leaned back, pulled his tusks out of the earth and sauntered away, and I noticed lumps of impacted clay sticking to his tusks, and realized at last what causes tuskers in musth to carry hard clay on their ivory."

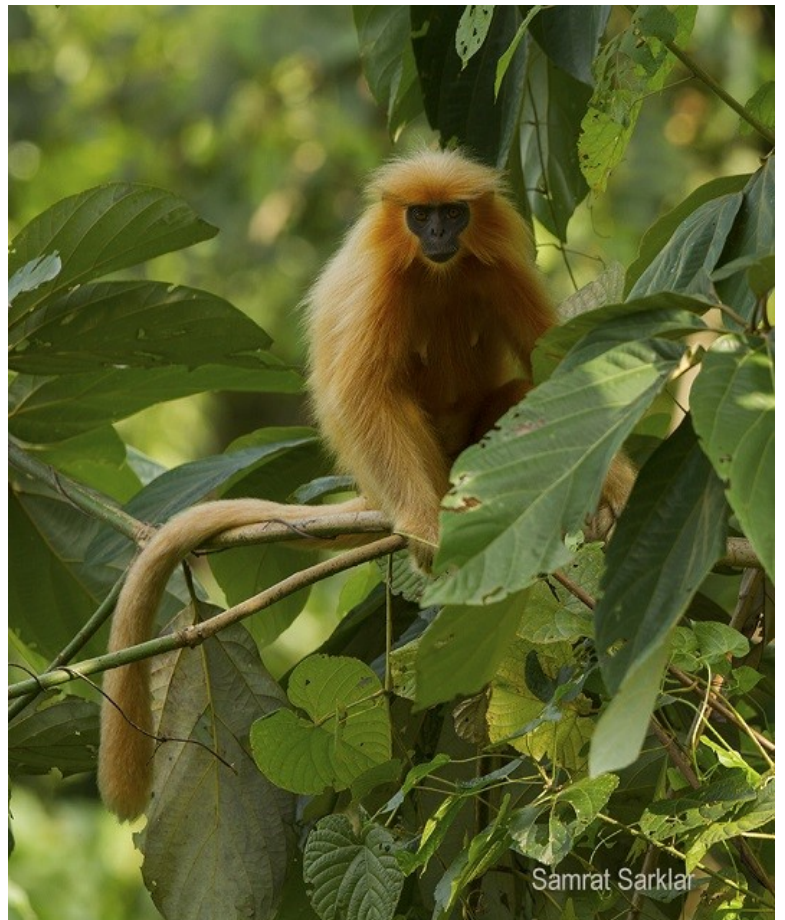
- M.Krishnan

This was published on 14 December 1969

Wildlife Photography - **Desert Fox Pups by Vipin Sharma**

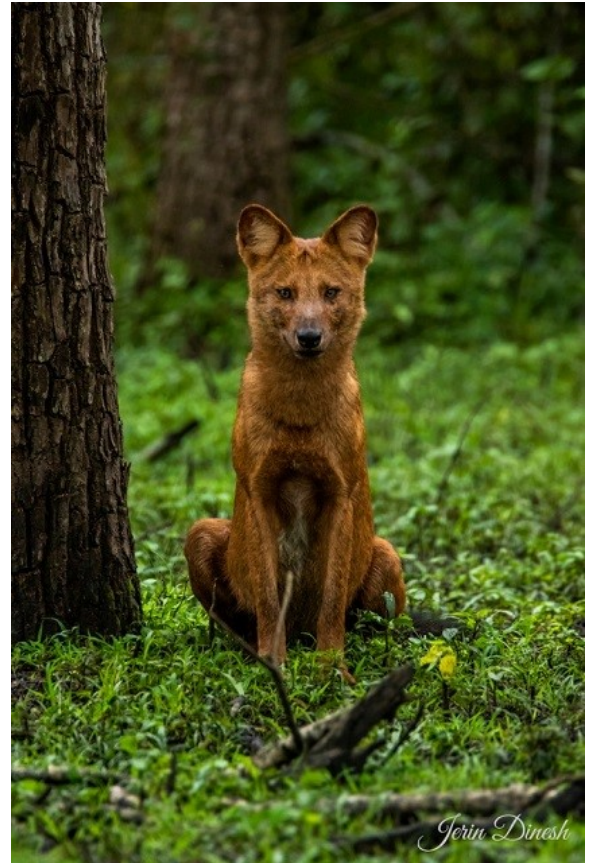


Golden Langur by Samrat Sarkar



Wildlife Photography -

Dhole by Jerin Dinesh



Flying Squirrel by Shyamala Kumar

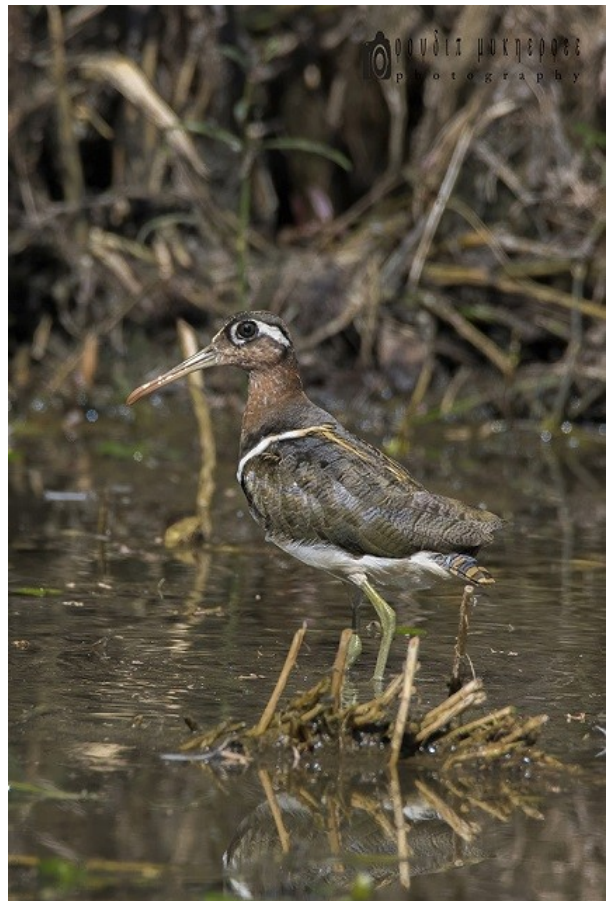


Wildlife Photography -

Grey-Francolin by Mrudul Godbole



Greater-Painted-snipe by Joydip Mukherjee



Wildlife Photography -

Crimson-Backed-Sunbird by Paramvir Singh



Bee by Prajwal Ullal





This is the **124th issue** of IndiaWilds. India now is conducting the world's largest elections to election Member of Parliaments for 543 seats. In the lead article in this issue we examine the promises made by the two major parties in India regarding conservation of environment, wildlife, forests and containing climate change issues. Unless conservation issues become a major part of our reason for voting our politicians, it would be difficult to protect our fast vanishing wilderness and wildlife. It would be a great disservice to the subsequent generations if we fail to act in time.

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

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