



IndiaWilds Newsletter

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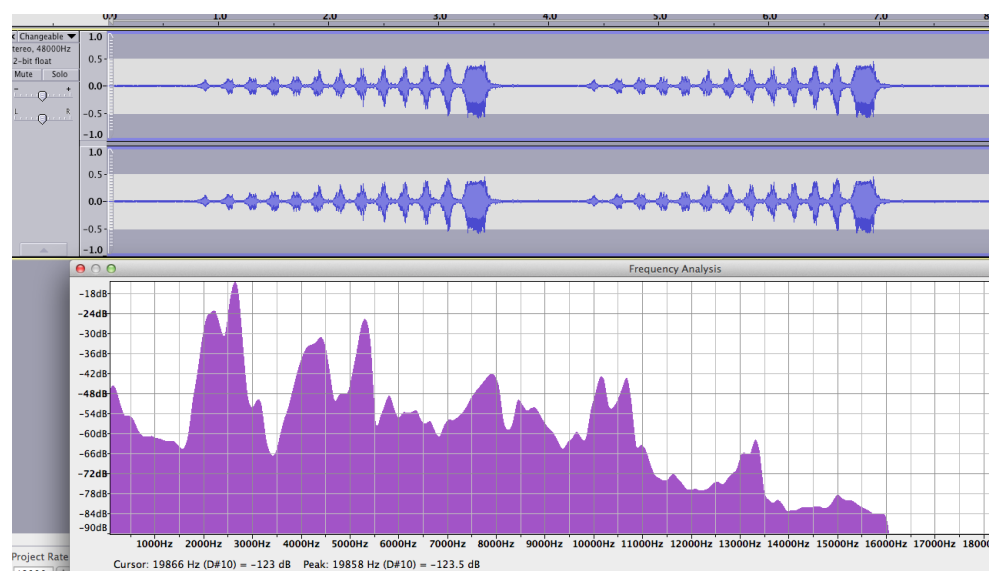
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Soundscape Ecology in Conservation:

India is losing its wilderness areas to large projects like dams, canals, power plants, roads etc. Some of these diversions are forced on the MoEF (Ministry of Environment and Forests) by other cabinet ministers and PMO, some diversions due to populist pressures, there are also many cases where clearances are given to industries and projects based on faulty EIA (Environmental Impact Assessment).

I have been privy to some EIA reports and have been aghast by the manner in which



Waveform and frequency analysis of a changeable hawk eagle call

documentation of the flora and fauna is done. Most of these reports conclude that they didn't find any evidence of wildlife in the place. Despite protests, the agencies conducting the EIA stick to their guns and say that they didn't have any direct sighting of any wildlife.

It is a well known fact that wildlife with their keen sense of hearing, smell and sight can detect our presence much before we do and due to the poaching and anthropogenic pressures wildlife often don't want to advertise their presence in front of people.



Even in reserve forests and National Parks where there is lot of disturbance from people, the animals become nocturnal in their habits. Hence the team undertaking the EIA don't get direct sighting of wildlife. In hard ground it is difficult to see the pug marks, hoof marks or other such imprints and it becomes easy for the team to declare that the place is devoid of any wildlife.

Even though wildlife may not be directly seen by us, there is a way of detecting their presence in a particular habitat. Animals, birds and insects are prone to vocalisations for various reasons. They vocalise or make sound to communicate within their own species as well with members of other species. Birds singing, mating calls of various species, vocalisations to inform others about food, mother calling child, alarm calls, warning calls to other species during conflicts and many others happen routinely during the day and night. Some calls also vary during seasons in terms of duration as well as in frequency. There are also calls and animal sounds in response to human intrusions into their habitat and also in response to anthrophony (ie.sounds created by man, tools, machines, airplanes etc). So the biophony (sounds of living organisms) signature varies in response to anthrophony.

At certain seasons, due to migrations of animals and birds, there are more and varied sounds simply due to the presence of the migrating species which were not present in the previous season. For example a grassland appearing naked to an untrained eye can suddenly with the change in season vibrate with the melodious calls of birds, sharp calls of raptors chasing them as well as lesser carnivores trying to predate on them. In less than a few months the soundscape of the place would be completely changed.

Similarly during the breeding time of various amphibians and insects the landscape resonates with their sounds. There are even cicadas which emerge periodically once in every few years and their sounds resonate in the landscape. In North America one species of cicada comes out every 17 years. Needless to say that there are many species residing in a landscape beyond the few mega fauna like elephants and tigers.

At times permissions are given for selective logging under the argument that only a few old hard growth trees are removed and the main forest remains or only if one portion of the forest is diverted the main forest is not impacted. If one records the biophony of the place after diversion of the forest land for projects, the impact of the loss of micro habitats for various species of insects, amphibians, birds and mammals will be noticeable.

We should realise that there is a complex web of interactions and inter-dependencies among various organisms big and small in this world. We cannot play God and remove a few species or few wild lands to satisfy our greed for a modern lifestyle. To rise above the biased arguments and people who are not willing to believe our impact on nature and other species, it would be important to commission studies to examine the soundscape of the place before arriving at any decision. So it would be important to make it mandatory to examine the soundscape or bioacoustics of the landscape to decide the richness of the biodiversity of the place.



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Identification of species based on sounds:

The soundscape of the place needs to be examined by competent experts who can identify the vocalisations of animals, birds, insects etc. With the advent of digital technology it is easier for each expert to mark the species in the relevant portion of the spectrogram.

These days there have been efforts to undertake real-time bioacoustics monitoring and species identification through the use of software. (*Aide et al. (2013) Real-time bioacoustics monitoring and automated species identification. PeerJ 1:e103*). With the passage of time these automated species identification softwares are going to become robust. Till that time, we can depend on individual identification of species. Voluntary



contribution of many experts can also be taken by uploading the recordings in the websites.

Limitations:

Like all shoddy EIA reports, there is also a loophole ie limitation with the use of soundscapes as one needs to follow a fixed protocol. One should also use the microphone and recording equipment, so that geophony (sound of wind) doesn't mute every other sound. Careful positioning of equipment is also required to properly record the soundscape.

I hope we can use scientific tools like soundscape ecology to correctly document the places and save them from being destroyed.

Software Programme to identify individual wolf from howl:

In a study finding which has far reaching consequences for use in conservation, a research team from Nottingham Trent University in UK have managed to create a software which can analyse the individual vocal signatures of wolves.



Wolf in Velavadar Blackbuck Sanctuary, India

A species like wolves tend to vocalize a lot. They also readily howl when other members of the group are howling in chorus. The wolf howl can be heard from a long distance and helps one member of the group to call others in case of finding a carcass, presence of prey or of competitors and as well as just to inform its position and reconnect with the group.

The researchers of Nottingham Trent University have used the frequency and amplitude of the wolf vocalisations to improve the accuracy. They have claimed to be able to now predict with 100% accuracy about the identity if a single wolf is howling and with 97% accuracy when the pack is howling. The researchers used a total of 67 recordings of 10 individual Eastern Gray Wolf (*Canis lupus lycaon*) and 112 chorus howls of 109 individual wolves.

Dolphins addressing each other by names:

In an interesting research paper (Stephanie L. King et al) published in PNAS (Proceedings of the National Academy of Sciences of the United States of America) the authors have said that Bottlenose dolphins (*Tursiops truncatus*) can use learned vocal labels to address each other.

The researchers have said that the bottlenose dolphins develop their own signature whistle. When the researchers played the whistle only the individual dolphin whose signature whistle is being played back responded to it by whistling back. Other dolphins didn't respond to the whistle.

This signature tune of dolphins may help them in communicating with each other and understanding each other's location,

especially since visibility inside water is limited. This appears to be a promising area for future research.



Bottlenose Dolphins

Current Affairs: Indian Media and Conservation:

A story in Deccan Herald caught my eye. It had the title “Zoo to breed wild dogs in captivity”. Just below the headlines one could see the photo of the two forelegs of a German Shephard dog without showing its head or other parts of its body. Parts of a collar is seen in the image. Clearly the image was clicked in someone’s house.

For a moment I was surprised as Dholes (*Cuon alpinus*) are also referred to as wild dogs. Reading the story a bit more revealed that the news was about breeding of dholes and not about feral dogs or domestic dog species like German Shephards. One can see the article in question at this link:

<http://www.deccanchronicle.com/130721/news-current-affairs/article/zoo-breed-wild-dogs-captivity>

Earlier, there were many instances of vernacular media posting images of Wart Hogs in the place of wild boar (*sus scrofa*) in the news about wild boars destroying crops - <http://indiawilds.com/forums/showthread.php?t=1729>.

Similarly there have been usage of African elephant photo in advertisement campaigns in India.



German Shephard

In an age when the regular print media is getting converted into multimedia with more images and videos to supplement the story, our mainstream media is finding it difficult. Reputed newspapers abroad, with circulation figures that are much lower than our newspapers, still respect copyright and they don't just copy images from the net and use it without seeking permissions and giving credits as our newspapers do. Paying for an image is unthinkable for most of our mainstream media.

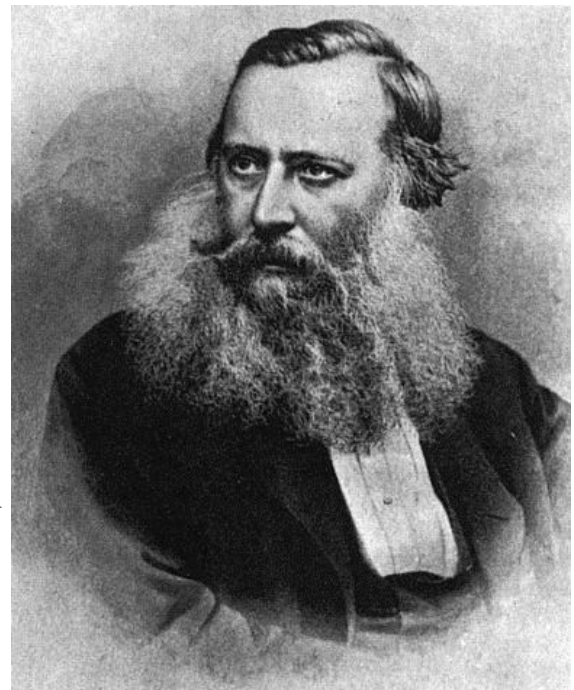
In this case, posting an image of a pet dog and trying to pass it off as a wild dog (dhole) is purposefully creating a wrong image in the minds of people. As such, our people have a lot of misconception about wildlife. Some time back in a class I had asked a bunch of students to tell me the word that first comes to their mind when they hear tiger. Blood curdling, beast, wild, angry, killer etc were the words that instantaneously came to the minds of the students, which in marketing terms are referred to as "top of mind recall". These words certainly doesn't show the tiger in good light. You can't protect something which you fear. No amount of Save the Tiger campaigns can succeed when there is so much misconception about our tigers and wildlife.

Our media should take lot of responsibility. Without media there cannot be efficient awareness campaigns. May be some of our large NGOs can conduct awareness workshops among the journalists. However, who will convince the media barons?

Golden Heritage on the Thin Red Line! - Biswajit De

India is bestowed with rich flora and fauna and is considered among the 12 Mega Bio-Diversity countries of the world. Out of the 25 bio-diversity hotspots in the world, India has two, namely- *Western ghats* and *Eastern Himalayas*. The Northeast region of India comprising of seven states viz. Assam (78,438sq.km), Arunachal Pradesh (83,743sq.km), Meghalaya (22,429sq.km), Mizoram (21,081sq.km), Tripura (10,491.69sq.km), Nagaland (16,579sq.km) and Manipur (22,327sq.km) has got two hotspots: *The Himalayas* and *the Indo-Myanmar*, comprising of a tri-juncture called *Indo-Malayan, Indo-Chinese* and *Indo-Burmese* sub regions. It is the gateway to India's rich Bio-Geographical Diversity.

Primates constitute one of the important components of the faunal diversity of the Northeast region. The region presents the highest primate diversity in the country. 11 out of a total of 15 (now 17 with the discovery of the species *Macaca munzula* and *Hoolock leuconedys* from Arunachal Pradesh) species are found in the Northeastern states. Of these 11 species, the Slow Loris, *Nycticebus bengalensis*; 5 macaque species (the Rhesus, Assamese, Stump-tailed and Pigtailed apart from the new Arunachal macaque); 3 Langur species (Golden, Capped and Phayri's leaf monkey) and two Gibbons (Western Hoolock gibbon and Eastern Hoolock gibbon), the **Golden Langurs**, *Trachypithecus geei*, are the most revered. Not only a religious symbol that enchants the visitors to the Northeast with anecdotes, beliefs and folk tales, it is also a species categorized as **"Endangered" in the IUCN Red Data Book** which is endemic to India and Bhutan. The distribution is confined to the forest belt in western Assam between the Manas river in the east, Sankosh in the west and the Brahmaputra in the south along the Indo-Bhutan border. Its distribution in Bhutan is limited to the foothills of the Black Mountains. The total range of this species in both India and Bhutan is less than 30,000sq.km.



British Naturalist Edward Pritchard Gee

Discovered by the **British Naturalist Edward Pritchard Gee** in the 1950s, the Golden Langur is a primate species.

As a tea planter, Gee was part of a highly influential group of British landowners very close to the highest levels of provincial power. Soon after India's Independence, Gee was one of the first to assess the threats to endangered species and outline conservation measures to protect them.

The Golden Langur has a black face, long tail (can be 50cm in length) and the most appealing coat of rich golden creamish hair that covers its body. They appear more tawny in shade, but when sunlight catches its coat, it does indeed shine a brilliant golden. The long tail of the Golden Langur helps it in balancing itself while leaping across the branches of trees.



Golden Langur



Google Map showing the Umananda temple on Peacock Island in Guwahati

The temple of Umananda (Siva) is located on the Peacock Island, hence the name Umananda Island. The temple was built in 1694 A.D. by the *Bar Phukan Garhganya Handique* by the order of His Majesty *Swargadeo Gadadhar Singh (1681-1696)*, one of the ablest and strongest rulers of the *Tai Ahom* dynasty. Mythological stories associated with the islands however say that the Island had appeared from the heart of the Brahmaputra River upon the request from Lord Shiva. Every day, Country boats and Launches operated by the *Central Inland Waterways Corporation and Directorate of Inland Waterways, Assam* ply from the *Kachari Ghat, Kuruwa Ferry Ghat and the Fancy Bazaar Ghat* in Guwahati to take countless visitors, tourists and worshipers to the island.

A recent survey and interviews were conducted by the author with student naturalists from the schools of Guwahati, as a part of a programme entitled “*Nature as our Classroom*”, resulting in new observations and documentation of untold stories. It is said that a group of 15 Golden Langurs were introduced into the Umananda Island some 50 years back. Veteran worshipers at the temple speak of a certain King of Nepal (name unknown) who had taken the Golden Langurs to the Island to sacrifice them to the God. Upon protests from worshipers and some local people, the King was forced to keep the primates on the island and return. Thus as an Introduced species, nurtured and cradled by nature, the Golden Langurs had been on that island ever since. Their numbers had increased to 17 some 25 years back, the veteran worshipers further observed. Now only 6 of them are alive on the Island, struggling to exist.

The Golden Langur is herbivorous and its diet mainly consists of ripe and unripe fruits, mature and young leaves, seeds, buds and flowers. With the advent of mixed religious beliefs and the need for the construction of multiple temples and the resultant increase in stalls to cater to the pilgrim and tourist traffic the daily fuel requirements has increased over the past 15 years. The stall-holders do not hesitate to indulge in illegal logging, wood-cutting and illegal encroachment on the island. Habitat destruction due to cutting of the vegetation on the island has put the status of the Golden Langurs on a knife edge. Lack of their natural diet has forced the Langurs to answer the calls of the people visiting the Island and accept offerings of Fruits, Berries, Nuts, even low-grade sponge cakes, potato chips and other Junk Food. Now, the Golden Langurs need to co-exist with the stall-holders on the island. The shops seem to be their only source of fresh water to drink. Their daily natural diet has been replaced by the cheap sponge cakes and ‘Laddoos’. The shopkeepers sell the cakes and junk food to the visitors on the island and encourage them to feed those to the Golden Langurs.



Golden Langur

People often come close to the Golden Langurs to pose photographs and feed them with the cakes. The Golden Langurs gently reach out for the cakes and then retreat to a safe distance into the trees to eat. Visitors would often be chided by the shopkeepers for breaking the cakes and laddoos into what seemed like sensible, smaller pieces, as (according to them) the Golden Langurs prefer to have one whole cake. A Boat operator runs a part time business on the Umananda Island as a resident “Chai-wala”, who sells cakes and laddos at Rs. 10 a throw. A rusted board put up by the Forest department of Assam that reads “Please do not Feed the Golden Langurs” fails to make the people aware that one should not feed junk food to the animals. But there is something irresistible about the way the Golden Langurs come swinging down when the Chai-wala calls them shouting filmy names, “Govindaaaaaaa.....Sreedeviiiiiiii.....Hemmmmaaaaaaa.....”.

Two of them had been reported to have died of Food Poisoning in the year 1999. Over the past few years the local NGOs have observed that there is a decline in the number of mature individuals. They state that they have witnessed a serious population decline, estimated to be more than 50% over the past years on the Umananda Island. Those actively involved in wildlife conservation in the state of Assam further attribute habitat loss and feeding of junk food to be the two main reasons for the dwindling population of the species.

Translocation was proposed and requested by many organizations to the Forest Department of Assam. On February 14th, 2011, a female golden langur was successfully translocated from Umananda, to the State Zoo in Guwahati as part of the Central Zoo Authority’s (CZA) conservation breeding programme for the endangered species. The officials had reported that the langur had been quarantined. They wanted to ascertain that the animal is free from diseases before putting it with other males in the zoo. But



after a few initial tests the Zoo had returned the Langur to Umananda stating Diseases and Genetic Disorders. After ten days another female Golden Langur was to be translocated from Umananda to the zoo but the project was stopped.

Interestingly, the Assam-State-Zoo-cum-Botanical Garden, Guwahati, is also thinking about building a conservation-breeding centre for the Golden Langurs on its premises. Zoo DFO, Mr. Utpal Bora said, “The project is highly ambitious and right now it is at a preliminary stage. We have submitted the initial proposals to the government to set up the breeding centre inside the zoo which is a very suitable location for their breeding. Once completed, the facility promises to be a big boon to researchers and if the project tastes success, according to reports, at least 100 Golden Langurs could be nurtured, which could be then released in the wild

Elsewhere in the State, new lifestyle choices such as the new fad by young locals towards eating primate meat, is also being blamed for the dwindling numbers of the Golden Langurs. Scientists at the Bodoland University are working towards test tube production of the endangered Golden Langur, using the embryo-transfer technology. According to the Scientists, “Embryo-transfer techniques have been applied to nearly every species of domestic animal and many species of wildlife and exotic animals. The population of the golden langur is fast declining because of various reasons and unless something is done immediately, this beautiful animal will soon disappear from this earth. So it is our responsibility to increase the population of the species.” They further state that since the University is quite close to the Manas National Park, where the Golden Langur is also found, hence it would be easy to carry out the embryo transfer process.

The responsibility lies on us as a country to tackle the real reasons causing the steady decline of the Golden Langur population. Encroachment of our forests by people needs to be tackled either by legislating policies at the state level or enforcing policies of the country already in place. The real reasons why so many people are taking to the forests, resorting to

illegal logging also needs to be probed. The solutions here may lie in cheap and renewable energy sources as well educating the locals on the importance of the monkeys in the bio-diversity chain. The role of education is very important to change attitudes and behaviour such as feeding junk food to the animals both in their natural habitats and in zoos and to stop eating primate meat, while still being respectful to any culture or tradition, past and present in the concerned areas.

It is upon us to realize that the delicate balance of the earth is at stake and every endangered species, whether Rhinos, Tigers or Langurs, are equally important. As we debate, discuss, ponder, re-think, act, spread awareness, strive to conserve, the Golden Heritage of the city of Guwahati is facing the Thin Red Line, like many other species.

Are we, the humans, moving to embark on another Ark of Time?

-Biswajit De

Guwahati



Golden Langur

Conservation News -

New habitat for Great Indian Bustard habitat found in Jaisalmer

The Great Indian Bustard, a charismatic species, which had missed out on becoming the National Bird of India because of Nehru's apprehension about the proclivity of Indians to misspell English words, is in a steep decline and is now limited to a few spots of its former range. In this backdrop, recently that was an exciting news of a sighting of a flock of 24 GIBs (Great Indian Bustards) in the grasslands of Salkha area, 45 km from Jaisalmer district. Of them, 21 were males and three females.



Great Indian Bustard

The area is situated outside the Desert National Park and the forest department, for security reasons, has set up a temporary check post. The sighting of Great Indian Bustards in Salkha area was confirmed by Chief Conservator of Forests (Wildlife) Dr. Govind Sagar Bharadwaj. He said that "the grassland is part of sacred groves or 'oraans' spread over 40 sq km. Little human disturbance, low grazing pressure and minimum encroachment for human settlement provide an ideal location for the GIBs. In just two hours, I could spot 24 birds," and called for the development of this area as an alternative habitat for Great Indian Bustards. "It is located 30km north of the Sudashri enclosure. There is a need to create awareness among locals to conserve the habitat," he further added.

Chairman of Wildlife Trust of India Ranjit Singh said the immediate efforts have to be made to conserve the new-found habitat. A high-level meeting was organized in New Delhi to discuss ways to conserve GIB habitats and directions in this regard were given to the officials. Singh said this is the mating and breeding season of the birds and priority must be given to ensure the eggs of GIBs are safe. In some instances, tourists carry the egg from a place to another, therefore, denying it the mother's warmth required for hatching.

If we protect the habitat and ensure that there is no poaching then the Great Indian Bustard population will increase. In some areas, it may need some intervention i.e. reintroduction of fresh blood to augment the existing breeding population.

Unlike UK where kids have the habit of collecting eggs from the nest, we don't have that practice here in India. At times some unethical photographers rearrange eggs to take photographs.

Shepherds and young boys who tend to goats and cattle also collect eggs of ground nesting birds to boil and eat in the field. This is despite the fact that a lot of them are vegetarian. A Lot of awareness campaigns need to be carried out.

Tiger Sightings in Buxa, Bengal

Jul 23, 2013, 03.20 AM IST

KOLKATA/JALPAIGURI:

There have been several reports of tiger sighting by both villagers and forest staff of the reserve. But there are no camera trap photographs taken to justify the sightings.

This time, sightings were reported from the Kartika forest under north Raidak range earlier this month. Confirming the report, BTR (east) deputy field director Bhaskar JB said: "A villager from the Kanjulibasti had entered the forest opposite the Raidak river on July 2 for livestock grazing when he sighted the tiger. Soon, he rushed to the local range office and gave the description, from which it seemed he had really sighted a tiger."



Further confirmation came the next day when a full-grown tiger appeared before forest guard Maina Chetri while he was on patrol at Tiamari, close to the Kartika forest, under the same range. "We believe it's the same tiger that was sighted by the villager the previous day," added Bhaskar.

Buxa veteran Tara Thapa, who has spent several years in the reserve, said the place is only a few kilometres from the Kalikhola forests in Bhutan. "Hence, chances are high that it can be a dispersing tiger that has migrated from the Bhutan forests. It may not be a resident tiger," added Thapa, who is also the physical instructor at the forest training centre in Rajabhatkhawa.

According to the DFD, due to heavy rain the pug marks were washed away and the foresters were left with no proof to back their claims. Meanwhile, chief wildlife warden NC Bahuguna said the department was planning to conduct an extensive camera trap exercise, on the lines of the recently-concluded study in the Sunderbans, to put to rest the controversy over the presence of tigers in Buxa. "We have asked the WWF officials to conduct a feasibility study," Bahuguna added.

Sources said only three months back, a full-grown tiger was sighted in the forests of Chuniajhora under the Hatipota range. "Tiger sightings are reported every month by our forest guards. I am not interested in what the critics are saying since I know that there are tigers in Buxa," said field director of the reserve RP Saini.

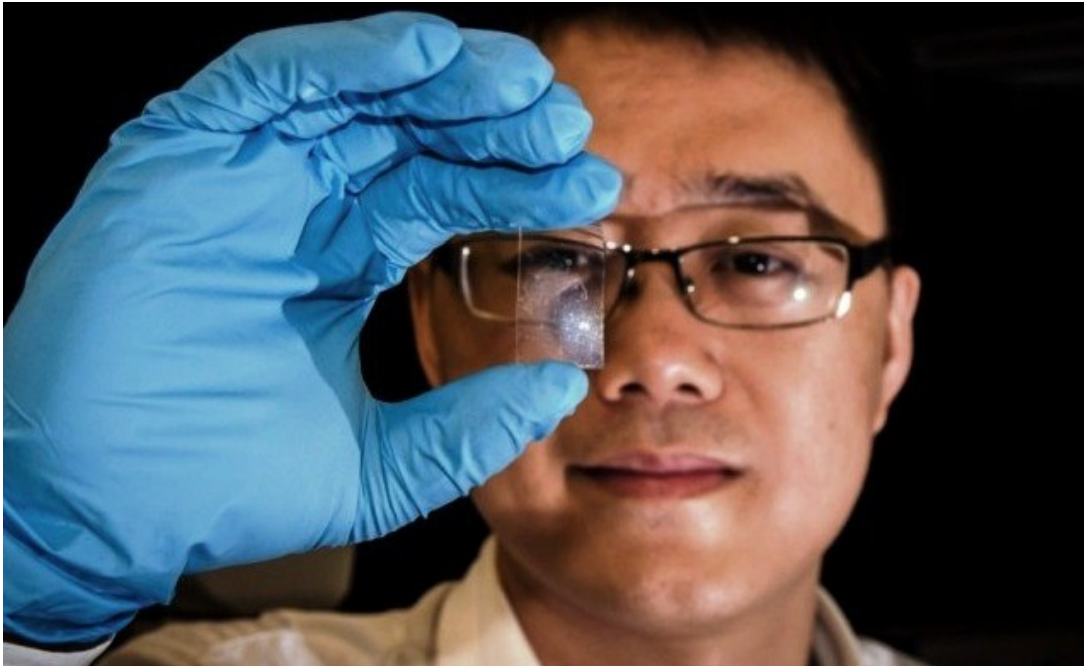
A recent scat analysis report has confirmed that Buxa is home to 20 tigers, of which four are female.

Equipment Discussions -

NTU's Graphene based sensor with extreme low light sensitivity

In a major breakthrough, scientists in Nanyang Technical University (NTU) in Singapore have claimed to develop a camera sensor which has 1000 times higher sensitivity than the CMOS and CCD sensors that we use in our cameras. They have claimed that these sensors made out of graphene need much lesser voltage and hence needs about 10 times less power.

The graphene based sensors are developed to use the same manufacturing process as the existing CMOS sensors so that the manufacturers need not make any new investments for manufacturing this sensor. "While designing this sensor, we have kept current manufacturing practices in mind," says Asst. Prof Wang Qijie from NTU's School of Electrical & Electronic



Engineering. He further stated that "this means the industry can in principle continue producing camera sensors using the CMOS process, which is the prevailing technology used by the majority of factories in the electronics industry. Therefore manufacturers can easily replace the current base material of photo sensors with our new nanostructured graphene material."

The graphene sensors have been designed to make a unique use of nano structures which hold on to the light generated electrons for a longer period of time resulting in strong signals which require less amplification. They also estimate that when mass produced this sensor will be 5 times cheaper than the current CMOS sensors.

Application:

The cameras using this sensor will have extremely high ISO ability and can shoot images and or video from daylight to complete darkness. So these cameras have the potential to replace the current IR cameras which is used by security agencies, wildlife filmmakers etc.

Other competing developments:

In March 2013, Canon had showcased the capability of its new sensor which was capable of recording faint stars and filming in a dark room with the light emanating from burning incense sticks.

<http://www.indiawilds.com/forums/showthread.php?t=12143>

The NTU research team is yet to create a device which can showcase the capability beyond the specs. However, this should evince the interest of camera manufacturers who may love to license or buy the rights.

The last word on the lowlight ability of sensors is not heard yet. We expect many more to research on similar lines.

20.2 MP Canon EOS 70D Digital SLR

Canon has introduced the next version in the 50D/60D series by introducing the Canon EOS 70D Digital SLR.

Salient Features:

- * 20.2 MP - This resolution increase probably indicates that the consumers still buy on the basis of number of mega pixels as this is higher than its 1 Series camera - 1D X and 1D C.
- * New Dual Pixel CMOS AF system for video as well as still for faster AF during liveview as well as video.
- * APS-C sized Canon CMOS sensor
- * DIGIC 5+ Image Processor.
- * ISO range of 100-12800 (expandable to 25,600)
- * High-speed continuous shooting of up to 7.0 frames per second (fps)
- * 19-point all cross-type AF system (f/2.8 dual cross-type AF center point)
- * 63-zone Dual Layer IFCL (Intelligent Focus, Color & Luminance) AE metering system
- * built-in Electronic Level Function for horizon adjustment
- * Manual WB settings and AF Microadjustment.

Sharing images as well as the Press Release from Canon.

Sabyasachi

PRESS RELEASE

Canon Introduces The New And Powerful EOS 70D Digital SLR Camera Featuring Instant And Accurate Focusing Of Still Images And Video

Designed to Change the Way Photographers Capture Images and Video, New Camera Features Newly-Developed Dual Pixel CMOS AF Technology, Built-in Wireless Capability, 20.2 Megapixel CMOS Sensor, DIGIC 5+ Image Processor, and More

MELVILLE, N.Y., July 2, 2013 – Canon U.S.A., Inc., a leader in digital imaging solutions, is proud to introduce the high-performance EOS 70D Digital SLR camera - bringing advanced features to photo enthusiasts looking for a step up from their entry-level digital SLRs. Featuring an innovative new Dual Pixel CMOS AF system for instant and precise focusing of video as well as still images, the EOS 70D also provides outstanding image quality and performance thanks to its new 20.2 megapixel APS-C Canon CMOS sensor and Canon's superb DIGIC 5+ Image Processor.

Canon's newly-developed Dual Pixel CMOS AF, a phase-detection autofocus (AF) technology on the camera's image sensor plane, enables users to shoot video with the new EOS 70D close to the quality of a video shot with a camcorder. Dual Pixel CMOS AF employs a revolutionary CMOS sensor on which all of the effective pixels are able to perform both still imaging and phase-detection AF simultaneously to achieve dramatically improved AF performance over other EOS cameras during Live View shooting and when shooting video.

Compared with Canon's conventional Live View AF systems, Dual Pixel CMOS AF realizes shorter focusing times, exceptional tracking performance and smoother autofocusing during video shooting. And, because Live View shooting can

be used in a manner similar to using the camera's viewfinder, the fast and smooth AF performance allows users to concentrate more attention on the subject and composing the photo when shooting. Dual Pixel CMOS AF also supports 1031 models of EF lenses (including many earlier models), enhancing a photographer's creative options as well as maximizing the benefit of Dual Pixel CMOS AF in a variety of situations.

"The new EOS 70D Digital SLR camera is a game-changing DSLR model that incorporates advanced features for high-quality still and video capture and intuitive operation that allows photographers to evolve their creative vision from shooting still images to shooting moving images," said Yuichi Ishizuka, executive vice president and general manager, Imaging Technologies & Communications Group, Canon U.S.A. "This camera's outstanding image quality combined with built-in wireless technology and popular creative functions and filters makes it easy to turn photos into works of art and share them immediately."



Canon EOS 70D Digital SLR

Wireless Connectivity

The EOS 70D Digital SLR camera's built-in wireless transmitter offers users several connectivity options to easily share their images. With the download of the free EOS Remote app² from the Apple App Store or the Google Play store, users can connect to both iOS® or Android™ smartphones and tablets³ to wirelessly transfer photos and videos from their camera to their device. They can also control aperture, shutter speed, and ISO from their smartphone. This camera also has the ability to connect directly to Canon's iMAGE GATEWAY⁴, making photos easily accessible and ready to share on social networking sites. In addition, the EOS 70D has the ability to connect wirelessly to computers, DLNA devices, Wi-Fi Certified® Canon cameras and wireless PictBridge⁵ compatible printers, such as the PIXMA MG6320 Wireless Photo All-In-One printer model.

Superb Still Performance

Featuring a new 20.2 megapixel APS-C Canon CMOS sensor and Canon's superb DIGIC 5+ Image Processor, as well as an extensive ISO range of 100-12800 (expandable to 25,600), the EOS 70D Digital SLR camera is capable of producing sharp,

detailed images, even in low-light conditions. And with high-speed continuous shooting of up to 7.0 frames per second (fps) united with a 19-point all cross-type AF system (including a high-precision f/2.8 dual cross-type AF center point), it allows photographers to easily capture accurately focused fast moving subjects. In addition, the camera's Scene Intelligent Auto Mode delivers optimized photos and offers outstanding scene detection for amazing results even when shooting in low light.

The EOS 70D also incorporates a 63-zone Dual Layer IFCL (Intelligent Focus, Color & Luminance) AE metering system which enhances accurate exposures by minimizing random metering errors caused by varying subject colors and light sources. Other useful features include a built-in Electronic Level Function, Manual WB settings and AF Micro adjustment.

Enhanced EOS Full HD Movie Mode for Professional Quality Video

With Canon's new Dual Pixel CMOS AF system and Movie Servo AF, the camera provides continuous phase-detection AF during video recording for quick and accurate focus tracking of moving subjects in the central 80 percent of the imaging area. While shooting with any of Canon's Stepping Motor (STM) lenses, such as the new EF-S 18-55mm f/3.5-5.6 IS STM lens, motor noise from the lens is significantly reduced so the camera will only capture the stereo sound of the scene being recorded. For added flexibility, the EOS 70D Digital SLR camera also features a built-in stereo microphone with manual audio level adjustment and an attenuator function to reduce audio clipping, an accessory jack for external stereo microphones and Video Snapshot mode with editing for expanded video shooting options. When users select the EOS Movie Mode, the EOS 70D offers the ability to shoot in 1080p Full HD video up to 30 fps in either ALL-I or IPB codecs with optional embedded time code, matching the flexibility of other current EOS cameras such as the EOS-1D X, EOS 5D Mark III, and EOS 6D models.

Expanding Creativity

The EOS 70D Digital SLR camera provides advanced amateur photographers and photo hobbyists looking to hone their creative and technical skills with an innovative range of in-camera imaging features such as High Dynamic Range, Multiple Exposure, Handheld Night Scene and HDR Backlight Control modes that allow for expanded creativity. The new camera is also equipped with built-in RAW Image Processing and Image Resizing functions.

When any one of the seven Creative Filters is applied in Live View, users can preview the effect of the filter on the three-inch Vari-Angle Touch Screen monitor without having to shoot the image first. Users can pick from effects such as Art Bold, Fish-eye, Water-painting, Grainy Black and White, Soft Focus, Toy Camera and Miniature and choose the one that best expresses their creative vision before or after the image is captured.

All of these features, when combined with a high-resolution Vari-angle Touch Screen 3.0-inch Clear View LCD monitor II with intuitive touch controls featuring multi-touch operation and Touch AF, make it the ideal camera choice for photographers looking for the best in imaging technology.

The EOS 70D is compatible with the full line of Canon EF and EF-S lenses as well as SD/SDHC/SDXC memory cards, including Ultra High Speed (UHS-1) cards.

Availability

The EOS 70D Digital SLR camera is scheduled to be available in September 2013 for an estimated retail price of **\$1199.00** for the body alone and \$1349.00 bundled with an EF-S 18-55mm f/3.5-5.6 IS STM lens or **\$1549.00** bundled with the EF-S 18-135mm f/3.5-5.6 IS STM lens. Also available will be a new Battery Grip BG-E14 that conveniently accepts up to two LP-E6 battery packs or a set of six AA batteries for an estimated retail price of \$270.00.

For more information about the Canon EOS 70D Digital SLR Camera, the full list of product specifications and compatible lenses, visit www.usa.canon.com/eos.

Natural History -

COUNTRY NOTEBOOK: Avian Courts Martial: M.Krishnan The Sunday Statesman 23 June 2013 - By Shri. Saktipada Panigrahi

"THE "lynching" of one of their kind by Common Mynahs and Jungle Babblers, and the execution of a Crow by crows, have been reported in the correspondence columns of The Statesman recently, and an explanation invited. The resigned passiveness of the victims has been remarked and a comparison to courts of justice suggested.

I have read similar reports of avian tribunals but shall not refer to them as the "court of justice" is bad, both in fact as in law. I do not object to the comparison because there is no considered justice in these assaults by birds on one of their feather.



Moorhen Chasing

Courtesy - Sabyasachi Patra

No serious student of jurisprudence will pretend that rabid injustice has not been dispensed at human judicial tribunals. There have been many bloodthirsty courts in our history where procedure was a farce and everyone knew the verdict before trial opened, but they were content to pronounce the sentence - its execution was left to others.

"I'll be judge, I'll be jury,"
said the cunning old Fury:
"I'll try the whole cause
and condemn you to death!"

Lewis Carroll tactfully refrains from what Fury did to the mouse. It is as one interested in law, not as a naturalist, that I object to the comparison!

AN EXPLANATION GOES

Having made this helpful contribution, I make another as a naturalist this time. No explanation can cover all intraspecific

attacks of individuals by groups, in gregarious birds. Such attacks are known among gregarious mammals also, but are most often noticed in birds. In the old days a moralistic explanation was sometimes advanced that it was a punishment of the culprit by plebiscite, intended to secure social welfare. We know now that birds are quite incapable of moralistic thought or self-conscious appreciation of communal good. That explanation must go.

My point is not that there can be no explanation; there can be many. But first we must consider what we know of avian social life, for in trying to explain these attacks we are trying to understand bird behaviour better than birds themselves.

Clearly no question of sexual motive or extra specific hostility is involved in these attacks. Crows and Mynahs are intelligent as birds go, but we can safely rule out the motive of conscious punishment of a crime. Birds have no critical intelligence. In fact, their social life is totally independent of an intellectual comprehension of rights and duties. Is it because of their freedom from imposition of the carping, petty, analytical intelligence that rules our lives so inexorably that we find birds fascinating?

EMOTIONAL LANGUAGE

In a bird clan social function and communications depend largely on patterned urges and responses, which may be visual, vocal, tactile or based on some other sense perception. But we do not imagine for a moment that because communication is not based on intelligence but on instinctive and emotional gestures birds are automatons. On the contrary, so many circumstances condition this "emotional language" (as Dr. Tinbergen puts it), so personal and intimate can these expressions and reactions be that no scientific observer can deny the existence of a bird mind capable of much varied and sensitive apprehension. Thanks to the recent work of scientific naturalists, the idea that birds (and even lesser animals) are automatons whose lives are merely a chain of rigid, mechanical actions has been fully exploded.

Certain of these responses are released by specific "gestures" (I use the term loosely to indicate both visual and acoustic signals), called "releasers". Releasers are of special value in the social behaviour of animals, particularly in their intraspecific fighting where they may serve to promote or inhibit hostile effort. In gregarious birds, these gestures often become highly personalised and are used only between birds knowing one another. Let me quote Tinbergen on this point: "Not all communication, however, is based on releasers; there are certain complications. As we have seen, many social animals respond to species' social releasers only when provided by certain individuals, which they know personally. In such cases, personal connections, established through learning processes, confine the reactor's responses to signals from one or a few individuals only; they still respond to the releasers of the species, but only after they narrowed their attention to particular members of the species."

That is the barest possible background against which we can try to understand these intraspecific attacks. In none of the instances reported by correspondents to *The Statesman* is there any detailed account of the circumstances anterior to the attack. We do not even know that the individual that was attacked by the group belonged to that group - though of the same feather, it might have belonged to another group. Among birds that go about habitually in company, such as Babblers (or Mynahs during certain periods, while feeding), the company is strictly limited. No outsider is tolerated, usually. Here we may note that birds are able to recognise members of their own party exceedingly well.

CLANNISH

Territorial feelings may also account for hostility towards intruders. In July 1951, I was staying at a forest bungalow and the gate of the compound seemed to limit one side of the domain of a party of LARGE GREY BABBLERS - another party of these highly clannish bird inhabited the scrub beyond the gate. One morning, a Babbler from the scrub crossed over to the compound and was promptly mobbed by the bungalow party. The assault was technical; a voluble, excited attempt at encircling the gatecrasher, which retreated to the scrub in haste and was not pursued - there was sufficient threat in the attempt to constitute an assault in law. It could be that if that intruder had come far enough in, if it had not been so near the

gate that escape was easy, there would have been more action.

Flight from what hurts or threatens is such a natural and widespread reaction among animals that the victim's lack of attempt to escape does seem surprising, at the first sight. However, it could be that it does not respond to the threat gestures of its antagonists (this preliminary display by the attackers has probably been mistaken for deliberation before attack by the older naturalists) because those gestures have no compelling force or "meaning" to it, because they do not release either flight or appeasement responses in it. Of course, encirclement, confusion and bodily injuries caused by actual attack may all be reasons for the victim's apathy - illness or injury prior to the attack may also be causes. There is no intelligent appraisal of chances of escape or acceptance of the inevitable - if that bird were capable of intelligence, it could escape.

A SAFEGUARD

A group attack can, of course, be directed against a member of the group. There is usually some safeguard to prevent actual fighting in gregarious animals and threat gestures are often sufficient to assert rights. Fighting out of sexual rivalry or over rights of precedence is confined to the rivals and the rest of the clan takes no sides but where a basic "right" is violated the protesting bird summons clan aid and usually gets it. Lorenz describes the amusing behaviour of jackdaws when a stronger bird tries to usurp the nest hole of a weaker member of the colony. The aggressor assaults the rightful holder and appropriates the site by sheer force; the dispossessed bird indulges in a proprietorial "zicking" call which soon changes to an outraged "yipping"; this brings all the jackdaws within earshot to the nest, jostling one another and yipping furiously and this sudden babble usually breaks up the fight, "particularly since the original aggressor participates in the yipping!" Lorenz explains how this is not a cunning move by the miscreant to divert suspicion from itself by crying "stop thief" with the rest, but an uncontrollable reaction - he adds. "I have often seen cases, however, where the aggressor was very definitely recognised by the advancing members of the colony and was thoroughly thrashed if he persisted in the attack."

CONCEDED 'RIGHTS'

It is likely that some such communal disturbances, initiated by the outraged calls of a bird defending some usually conceded "right" against an aggressor brought about the "lynchings" reported. But the culprit need not have indulged in violent aggression - its culpability may be accidental and beyond its control.

That brings us to the CROWS. I have heard the theory that an injured or a sick bird is some times executed by its clan and that this is a communal safeguard, for obviously an incapacitated bird must be a drag on the clan and can not perform its duties by the next generation efficiently. There is, of course, no suggestion of conscious action in all this - the birds act instinctively in this manner. This is not a variation of the "court of justice" idea and is scientifically sound, but still it is a speculative theory.

I have seen crows pecking a crow to death - I am sure many others have witnessed this happening. I can not attempt any explanation of the murder because I did not observe the incidents that led up to it and had not studied those crows closely enough to know their identities or their relationship to the victim, i.e, it is my ignorance of the "facts of the case" that obscures my understanding. However, I am happy to provide an example to the contrary from my own observation. I have seen a party of crows trying to rouse a member that has fallen to the earth with man-inflicted injuries. They flew low over it, repeatedly flying just over its prostrate, struggling body, evidently trying to induce to follow them; later, they alighted and settled around it, cawing agitatedly; they approached close and then hopped away. That wounded crow took nearly 15 minutes to die and only when it was quite still did its companions fly away.

I trust I have at least explained why there can not be any one explanation of intraspecific mobbing and how it is useless to theorise unless all the facts are known, especially those anterior to the attack. No little bird can tell us the truth about these things because, as pointed out already, we are attempting to understand motives far beyond avian understanding. However,

our knowledge of bird behaviour is much sounder and more comprehensive than what it was, and an expert observer can often account for an avian mobbing - perhaps much more certainly than we can explain why human mobs sometimes react as people did during the recent Kumbha Mela."

[concluded]

-M.Krishnan

This was first published on 11 July 1954 in The Sunday Statesman

Image of the Month -

The Honour for the Image of the Month for June 2013 goes to Praveen Siddannavar's leopard image titled "Monsoon Leopard Kabini".

Camera - Canon 1D Mark IV, Canon f4 500mm lens

EXIF - ISO 800 Av 4 Tv 1/640 sec EC -0.3, small crop

Date - 16th June 2013 @ 7:45am



© Praveen Siddannavar

Wildlife Photography -

Leopard after storm & Rain by Kaleeswara Srikanth



Himalayan Tahr by Mrudul Godbole



Wildlife Photography -

Secured Steps by Arindam Datta



Nilgiri Langur by Roopak Gangadharan

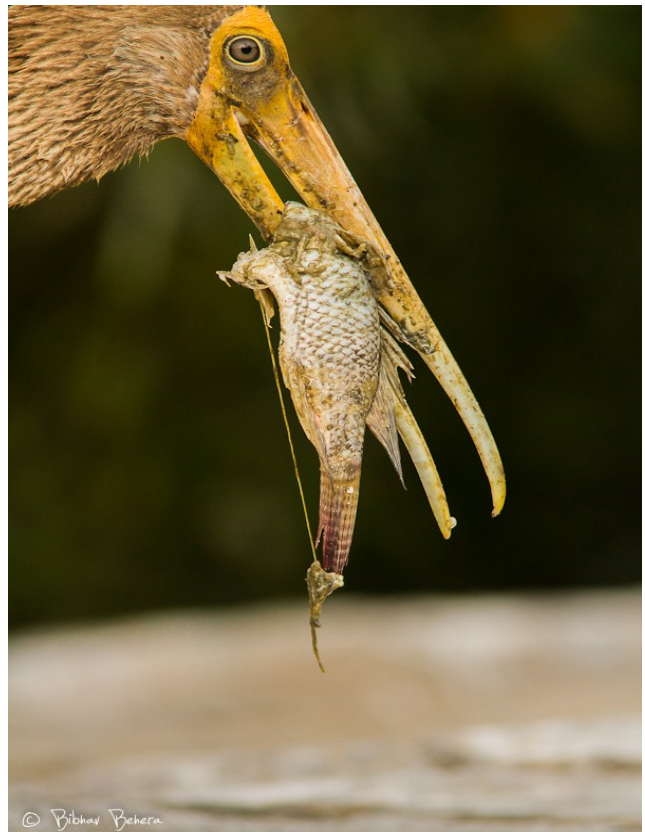


Wildlife Photography -

Lesser Golden-backed Woodpecker by Sucheth Lingachar



Painted Stork Juvenile with catch by Bibhav Behera



Wildlife Photography -

Spotted Owlet by Kaleeswara Srikanth



Test of Time by Kaling Dai





I look forward to your inputs and support in preserving the last tracts of wilderness and wildlife left in our beautiful country. For other interesting articles and images check - <http://www.indiawilds.com/forums/>
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Regards,

Sabyasachi Patra

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