

BOMBAY NATURAL HISTORY SOCIETY NEWSLETTER



NOVEMBER, 2022

CONSERVATION NEWSLETTER

FROM THE DIRECTOR'S DESK

Each month, BNHS will bring you, our valuable member, a conservation newsletter that is packed with updates from our field work, publications and the events we hold for nature conservation.

This is our attempt to make sure you get to know about our work in real time. This is our attempt to make sure you are with us on our journey!

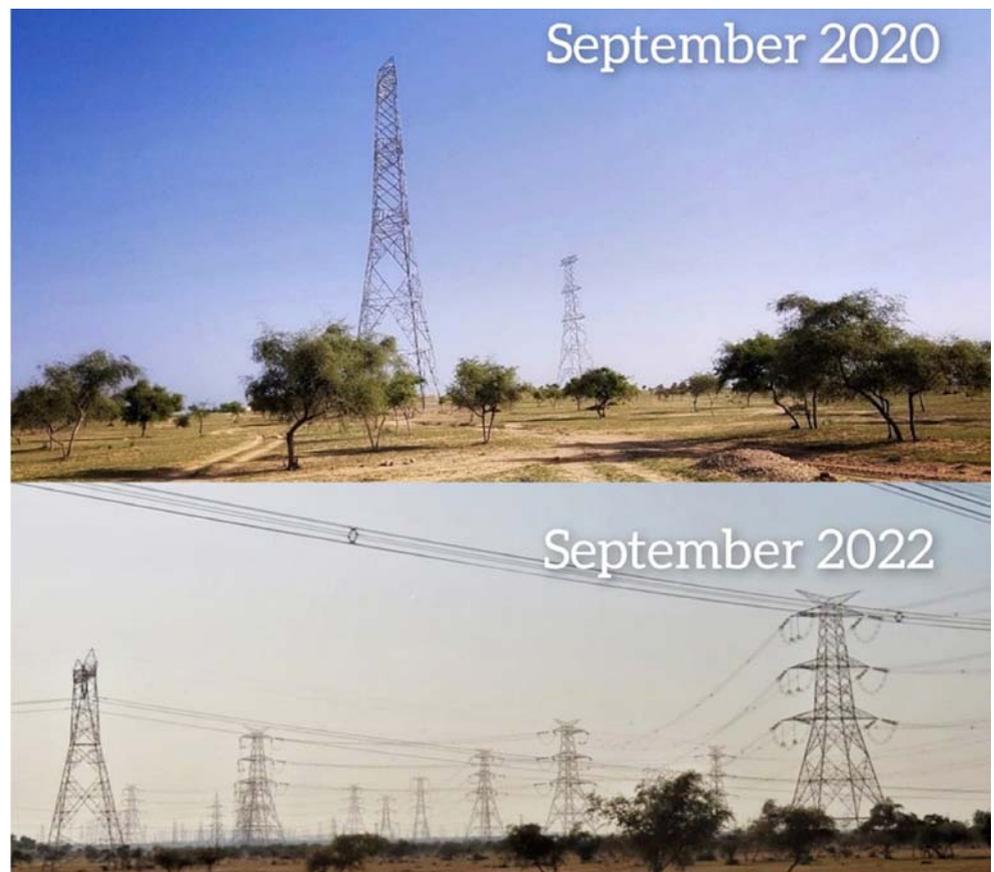
Another Great Indian Bustard falls victim to the transmission lines

Short in stature, clad in a white dhoti and kurta with a colourful turban on his head and a pair of binoculars around his neck, Shri Sumer Singh Bhati greeted us with his trademark charming smile at the Deg Rai Mata temple. This was my first field visit after joining BNHS and I was super excited to experience the wilderness of Thar desert, other than feasting on *laal maans* and *bajra roti* soaked in ghee. Accompanied by Drs. Sujit Narwade and Neelkanth Bora of BNHS, I was in the Deg Rai Mata Oran near Devikot. The Deg Rai Mata Oran is a fairly large sacred groove (ca. 60 km²) that is revered and protected by the locals. At the time, construction of a power grid near Devikot was also going on in full swing. I came across good number of Chinkara, saw both Indian fox as well as desert fox and a desert cat with four kittens in the company of Sumer Singh. Good number of demoiselle cranes were present in the water body near the temple. My joy of witnessing the abundance of wildlife in that afternoon drive in the Oran with Sumer Singh however was short lived. Without wasting any time, Sumer Singh was keen to show me the threat that was looming large

on this area. Pylons were being erected in the Oran and the skyline of this Oran was all set to change. The directives of the Honourable Supreme Court of India to

place the transmission lines underground made absolutely no difference to this place. During my subsequent visits to this Oran in

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The skyline of Thar desert in general and Deg Rai Mata Oran in particular has changed drastically in just past two years, making the environment extremely hostile for a low flying bird with poor frontal vision like the Great Indian Bustard

later part of 2021 and 2022, I witnessed the rapid change in the skyline of this place. Sumer Singh took me to the place where a female Great Indian Bustard had died after colliding with a transmission line in the Oran on 16 September 2020. We discussed the idea of erecting a statue in the memory of this dead bustard near the temple. We went ahead and a memorial for this dead bustard was inaugurated in April 2022 near Deg Rai Mata temple. By September 2022, the power grid near Devikot was functional and the skyline of Deg Rai Mata Oran was covered with a maze of transmission lines. On 17 October 2022, Sumer Singh reported the death of another Great Indian Bustard in Deg Rai Mata Oran. Two bustards were seen in this Oran by a herder on 16 October and this unfortunate death happened the very next day. We estimate presence of around 20-25 bustards in the Pokhran Field Firing Range (PFFR). While bustards spend most part of the year within the safe environment of the PFFR, they venture out



Sumer Singh Bhati of Sanwata village lamenting over the tragic death of the Great Indian Bustard in Deg Rai Mata Oran on 17 October 2022. This is the second such death of a GIB reported by Sumer Singh from this area

of the firing range during winter. BNHS is trying its best to understand movement patterns of this bustard population during winter and come up with appropriate conservation strategies. I shall update you more on this in the coming months. ■

Death of a Lesser Florican female and her chicks due to harvester machine at Village Kalyanipura, Ajmer, Rajasthan



The team from BNHS rushed to the site near Kalyanipura where two Lesser Floricans were found dead in an agriculture field

Several parts of Central India has witnessed a massive decline in the breeding population of Lesser Florican in the recent past. The Blackbuck National Park in Velavadar, Gujarat and Shokaliya landscape near Nasirabad in Ajmer

district, Rajasthan continue to be the major breeding grounds of this critically endangered bird. BNHS has been engaged in conservation activities related to Lesser Florican in Shokaliya

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landscape since 2017. The Shokaliya landscape is dominated by agriculture fields with meagre or no grasslands. Working with local communities and garnering their support for creation of a community reserve, practicing florican friendly cropping pattern and estimating the number of floricans in this area has been some of our major activities in Shokaliya. As part of the florican friendly agriculture program, BNHS roped in Mr. Naurat Prajapat as one of the *Kharmor Mitra* (friends of floricans). Mr. Prajapat actively monitors the floricans in his farmland at village Kalyanipura, Ajmer, Rajasthan. He even spared three *bigha* land from harvesting Jowar crop which is being used intensively by the floricans. On the morning of 09 October, Mr. Prajapat called Chandrapraksh, our local contact in Shokaliya, and informed him about a dead Lesser Florican in a field where the BNHS team had recently seen a florican with chicks. Chandrapraksh rushed to the spot immediately, carefully marked the dead bird and took photographs. The carcass was intact except for the legs which probably got damaged by the

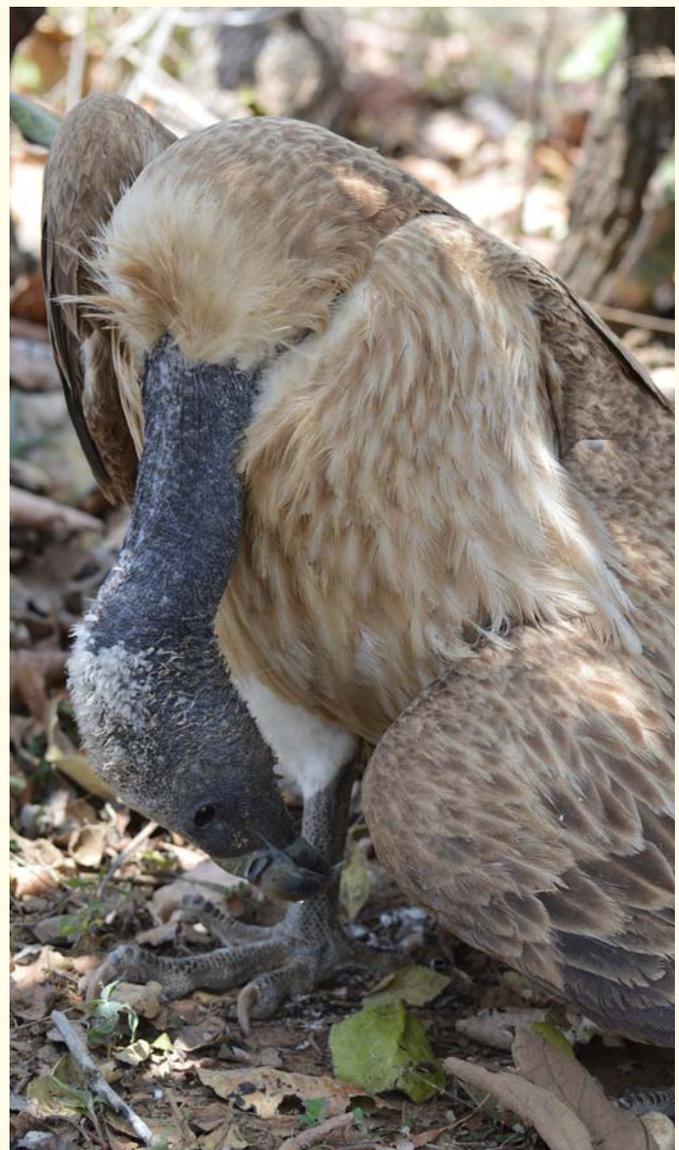
harvester. Another Lesser Florican was also found dead some 50m away. Most likely, the mother florican while attempting to protect its chicks from the harvester, unfortunately could not escape and perished along with one of her chicks.

Loss of grasslands, the primary habitat of floricans, has forced the birds to adapt to agriculture fields with short crops. Use of insecticides in these crop fields adversely affect these breeding birds. Now a change of practice in harvesting pattern of crops through the use of heavy machinery seems to be detrimental for the breeding floricans, as evident from the present case. Promoting florican friendly agriculture practices in this landscape is on the top of our priority list and we are determined to work on a war footing basis in order to avoid such tragic episodes happening in the coming breeding seasons. Saving endangered species in a protected area is far more easier than saving them in a human dominated/modified landscape. Both Great Indian Bustard and Lesser Florican are facing this problem of conservation interventions in a highly human modified landscape. ■

Recent Research – Aceclofenac emerges as a major vulture toxic drug

The drug diclofenac, which was widely used as a painkiller for cattle, is well established as the main driver of the catastrophic vulture declines across Asia. Although veterinary use of diclofenac is now banned in India and several other Asian countries, veterinary use of a similar drug, aceclofenac is still permitted. A previous experimental study showed that aceclofenac is very quickly metabolised into diclofenac in cattle. Now an important new study [<https://authors.elsevier.com/a/1frBw4wOUny1bm>] by the Indian Veterinary Research Institute (IVRI) in collaboration with scientists from the BNHS, Royal Society for Protection of Birds (RSPB), University of Pretoria and University of Cambridge shows that the same is true in water buffaloes. This finding confirms that aceclofenac metabolises to the vulture-toxic drug so rapidly in the bodies of both cattle and buffaloes that its use is a grave threat to vultures. Veterinary use of aceclofenac should be totally banned, since safe alternatives (meloxicam and tolfenamic acid) are available. Despite requests for this ban to the Indian Government, and an ongoing Delhi High Court case, no such action has been taken so far.

[Chandramohan, S., K. Mathesh, J.W. Mallord, V. Naidoo, K. Mahendran, M. Kesavan, G. K. Gaur, A.M. Pawde, N. Prakash, S. Ranade, D. Saikia, A.K. Sharma, R. Shringarpure, R.E. Green and V.M. Prakash (2022). Metabolism of aceclofenac to diclofenac in the domestic water buffalo *Bubalus bubalis* confirms it as a threat to Critically Endangered *Gyps* vultures in South Asia. *Environmental Toxicology and Pharmacology* 96 (2022) 103984. <https://doi.org/10.1016/j.etap.2022.103984>] ■



A vulture with a drooping head

Birds of Akshi

Akshi is a small fishermen's village between the famous Nagaon and Alibag beaches. The area, known to seasoned birdwatchers for migratory birds, is now making its mark as a popular destination to sight and record colour-flagged shorebirds which could be seen roosting and feeding on the tidal mudflats.

The bird ringing session for the migratory season of 2022-23 was initiated in Akshi beach, Maharashtra by the Wetlands Programme. The ringing session was carried out in two phases- 29th Sep to 01 Oct and 15th-20th Oct 2022. A total of 122 birds were ringed of which 98 were shorebirds and 24 were land birds. The shorebirds were also marked with colour flags. The months of September and October are the arrival months of migratory birds in India and are crucial to determine the flock composition and site usage. The birds

tagged in earlier migratory seasons were also recaptured during the ringing sessions and many were resighted showing a strong site fidelity for Akshi beach.

On the occasion of World Migratory Bird Day on 8 October 2022, a training workshop was conducted at Akshi Beach for the students of the Nature Club of J.S.M. College, Alibag. This workshop was jointly conducted by ENVIS-BNHS and Wetlands Programme. A field session on bird identification in the morning was followed by technical sessions on bird migration and shorebirds of Akshi. The objective of the workshop was to orient the local students and potential future naturalists on the role of Akshi beach in supporting long distance migratory birds. The photographers who have been systematically documenting the tagged bird records as well as bird populations at Akshi were also invited to share their experiences. ■



Resighting of a Ruddy Turnstone ringed earlier at Akshi beach



A ringed Terek Sandpiper with colour flags at Akshi beach



BNHS biologist, Tuhina Katti releasing a ringed Oystercatcher in Akshi beach



BNHS biologist, Omkar Joshi ringing and colour flagging a Lesser Sand Plover in Akshi beach

Candid Capture: Camera Trapping to assess mammalian diversity in Pong Dam Lake Wildlife Sanctuary

We have been updating our readers about various camera trapping and wildlife monitoring activities. We told you how BNHS, along with the forest department in Delhi, discovered a healthy population of leopards in Asola wildlife sanctuary.

Pong dam in Himachal Pradesh is known for its migratory bird population. Now, we are carrying out a camera trapping exercise in Pong Dam Lake Wildlife Sanctuary, Kangra District, Himachal Pradesh to record and assess its mammalian diversity. This is part of the project “Conservation and Wise-use of Five Wetlands in Three Himalayan States to Secure Habitats of Birds Migrating within the Central Asian Flyway”, funded by the Ministry of Environment, Forests and Climate Change under National Mission for Himalayan Studies Scheme.

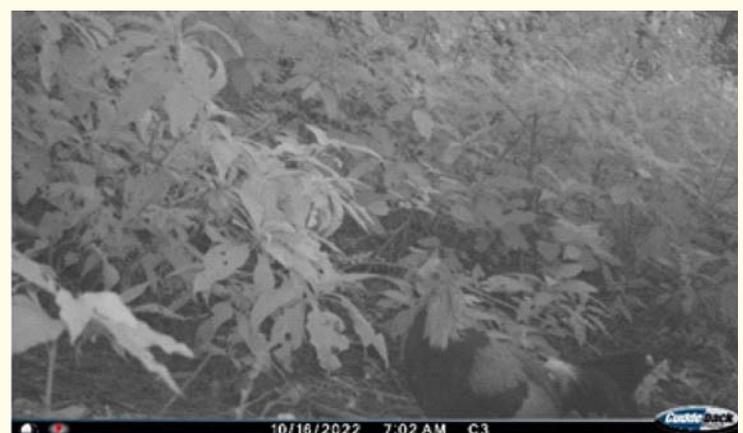
The camera trapping exercise was initiated during May 2022. Pre-monsoon surveys were carried out till second week of July 2022. The aim of the exercise was to detect the presence and absence of the mammalian species in different locations in and around the Sanctuary. Of the 24 major mammalian species reported in this sanctuary, presence of seven species were confirmed through the study. Sambar, Golden Jackal, Indian Muntjac, Indian Crested Porcupine, Indian Hare, Rhesus Macaque, and Small Indian Civet were the species captured during the trapping exercise. Golden Jackal was predominant among the mammalian species captured. Preliminary distribution maps are being prepared based on the



Team members collecting habitat variables around the camera trapping location

capture data. The post-monsoon camera trapping exercise started from October 2022. Along with the camera trapping data, habitat variables such as canopy cover, ground cover, shrub cover, major tree/shrub species etc. are also being collected. So far, three mammalian species have been recorded in the camera traps. Of these, majority of the captures are of Golden Jackal. Other species which have been captured are Indian Crested Porcupine, Indian Hare, Red Junglefowl and Indian Peafowl.

The outcome of the exercise will be helpful to get accurate and robust results on the distribution of mammalian species in different locations in the sanctuary and its environs along with their habitat parameters, which will enhance our knowledge of the area. ■



Camera Trap Images: L-R: Golden Jackal, Indian Hare, Indian Peafowl, Red Junglefowl

Wildlife week celebrations and wildlife outreach

On the occasion of 68th Wildlife week, 2-8 October 2022, our Conservation Education Centre in Mumbai organized various events and nature trails. These included screening of the much-acclaimed documentary, Khee. The documentary aptly portrays the alarming number of free ranging stray dogs on prowl, upsetting the ecology, hunting endangered wildlife and even attacking humans in Ladakh - the magnificent Indian terrain otherwise known for its high passes, cold deserts, monasteries and prayer flags. This issue has been evocatively captured in the film, Khee. Mr. Sumit Mullick, Chief Information Commissioner of Maharashtra and Former Chief Secretary of Maharashtra, was present as a chief guest for the event.

Mr. Mullick spoke on this occasion about the need to address this serious issue of stray dogs. Mr. Kishor Rithe, Honorary Secretary of BNHS, appreciated this film and expressed that the film will help in better understanding of the issue and stakeholders support to address this critical issue. Governing council members of BNHS were also present on this occasion. Mr. Sandeep Dhupal, Producer and Nikhil Talegaonkar, Director of the film KHEE were felicitated by BNHS on this occasion.

A "Butterfly Festival" was organized at the BNHS Conservation Education Centre, (CEC BNHS) Mumbai on 15-16 October 2022 with help from BNP Paribas. 170 people and kids participated in it. Activities like understanding the life cycle of butterflies, butterfly trail, exhibition, butterfly tattoo, pebble painting, poster making were organized and a short documentary about the life cycle and migration of butterflies was screened. On the spot prizes were distributed for best three pebble paintings and posters. Many participants purchased souvenirs from the BNHS souvenir shop in the Centre. Volunteers of BNP Paribas helped in organizing the event. ■

A glimpse of our Field courses

A field trip was organized at Kaas plateau, Maharashtra for the participants of 'Field course in Botany' during 1-2 October 2022. The course is conducted by BNHS CEC Mumbai. In two days participants have observed more than 40 species of plants and highlights were *Ceropegia jainii*, *Drosera burmanni*, *Drosera indica*, *Habenaria grandifloriformis* etc. Dr. Rajdeo Singh & Ms. Kiran Thumma guided the participants. ■



Botany field course participants at the Kaas plateau

Basic Course in Ornithology'

A field visit was organized for the participants of the 'Basic Course in Ornithology' at the TS Chanakya wetlands in Navi Mumbai on 11 September 2022. 23 participants of the course attended the visit. More than 50 species of birds were seen during the field visit. Mr. Nandkishor Dudhe, Ms. Shainaz Jussa and Ms. Priya Gupta guided the participants. ■

Basic Course in Butterfly Studies'

The 'Basic Course in Butterfly Studies' at the BNHS Nature Reserve, Mumbai started on 18 September 2022. Nearly 30 species of butterflies were seen during the field visit. Seven participants attended the field visit. Dr. Raju Kasambe and Ms. Priya Gupta guided the participants. ■

Field course in Botany

A field visit was organized for 'Field course in Botany' and 'Leadership Course in Biodiversity Conservation' at the Bhandup Pumping Station, Mumbai on 18 September 2022. Nine participants of the course attended the visit. Participants learned about flower morphology, mangrove and mangrove associate plants. Dr. Rajdeo Singh conducted the trail and Ms. Kiran Thumma coordinated the program. ■

Basic Course in Ornithology

A field visit was organized at the Bhandup Pumping Station, Mumbai for the participants of 'Basic Course in Ornithology' on 2 October 2022. The course was conducted by BNHS CEC Mumbai. More than 50 species of birds were seen during field visit. 20 participants attended the field visit. Some participants also saw golden jackals. ■

Field camp at Belvai, Karnataka for 'Basic course in Butterfly studies'



Participants at the butterfly field course

A field camp was organized at Belvai, Karnataka for the participants of 'Basic Course in Butterfly studies' and 'Leadership Course in Biodiversity Conservation' during 7-9 October 2022. 15 participants of the course attended the camp. More than 80 species of butterflies were seen during the field visit. Participants also learned about Butterfly morphology, behaviour, threats, field study technique etc. Ms. Neha Mujumdar conducted the trail and Ms. Kiran Thumma coordinated the program. ■

Monsoon Expeditions of BNHS

While monsoon season, the most active and exciting time of the year for herpetofauna (frogs and snakes), offers plenty to explore in the field, August and September's waning monsoon provide an opportunity for seeing wildflowers.

Amboli, situated in the Western Ghats of Southern Maharashtra, was visited by members of the Bombay Natural

History Society in July. Mr Kaka Bhise, President of the Malabar Nature Conservation Club and Hon. Wildlife Warden of Sindhudurg District led the group, with Mr Asif Khan accompanying from BNHS. Members saw endemic species such as the Malabar Gliding Frog, Malabar Pit Viper, Bombay Night Frog and Bioluminescent Fungi. ■

Valley of Flowers

Additionally, the Programmes Department organised two camps to explore the laterite plateau flora of the Western Ghats, and the Himalayan Wild Flowers at Kaas and Valley of Flowers respectively. Both camps were led by Dr Rajdeo Singh, ex-Botanist of BNHS and Assistant Professor at St. Xavier's College, along with Ms Kiran Thumma from BNHS.

During the Kaas camp, members saw three species of carnivorous plants- *Drosera indica* (Flycatcher), *Drosera burmannii* (Burmann's Sundew) and *Utricularia* (Bladderwort). In the Valley of Flowers they were treated with a good bloom of the Bharama Kamal (*Saussurea obvallata*) which grows only above 15000 ft. This rare flower, the state flower of Uttarakhand, is used as an offering in hill temples and has also found its way onto a postal stamp.

Besides the typical monsoon locations, the BNHS Programme Dept. also conducted a camp in the trans-Himalayan region of Ladakh, exploring places like Hemis National Park, Chusul Marshes, Hanle Marshes and Tso Kar. The members got to observe the endangered Black-necked Crane, Sharp-tailed



Participants enroute the Valley of Flowers

Sandpiper (2 in at Tso Kar), Himalayan Wolf, and the rare and difficult-to-spot Pallas's Cat (*Otocolobus manul*).

Besides the above-mentioned camps a variety of day trails were conducted around the city for flowers, reptiles and amphibians, butterflies and monsoon-specific birds like the Oriental Dwarf Kingfisher. ■

Thank you for reading and for being with us on this conservation journey!

Signed

BivashPandav, Director, BNHS



BNHS MISSION

Vision: Premier independent scientific organization with a broad-based constituency, excelling in the conservation of threatened species and habitats.

Mission: Conservation of nature, primarily biological diversity, through action based on research, education and public awareness.

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