BOMBAY NATURAL HISTORY SOCIETY

NEWSLETTER

OCTOBER, 2022

CONSERVATION NEWSLETTER

FROM THE DIRECTOR'S DESK

Dear Members,

Each month we bring you, our valuable members, the BNHS conservation newsletter that is packed with updates from our field work, publications, and the events we conduct for nature conservation. This is our attempt to make sure you get to know about our work in real time, our attempt to make sure you are with us on our journey!

Finding a needle in the haystack – A eureka moment for BNHS scientists

As part of the Mumbai Trans Harbour Link (MTHL) project, a team of scientists and research scholars from BNHS are monitoring and ringing migratory water birds in Thane Creek Wildlife Sanctuary and its adjoining areas. Our team has captured and ringed more than 21,000 birds as part of this project. The long-term project initiated in 2017, has started to unravel fascinating information about wintering water birds in the Mumbai Metropolitan Region. Earlier in the August 2022 issue of the newsletter, I informed our members about the movement of three of our six satellite-tagged flamingos from Thane Creek to the Rann of Kutch. In March 2022, our team captured a Black-tailed Godwit and a Curlew and fitted them with a Nano radio tag — one of the world's smallest (3.5g) GPS radio tags. While the team was very excited about tagging these waders, I was a bit sceptical about the GPS tag without satellite transmitter. Unlike the satellite transmitters that transmit the location of the birds at set intervals, GPS tags store the bird's location that can only be downloaded once the bird is within the range (1 to 2 km) of a handheld Very High Frequency (radio) antenna. Thane Creek is crowded with about 200 thousand waterbirds every winter, and locating one of the tagged godwits in this huge congregation is like finding a needle in the haystack. I was very apprehensive and insisted the team deploy satellite tags for such long-distance migrants.

Five months later, in the early hours of September 23rd, I woke up with a phone call from our scientist, Mrugank Prabhu. Mrugank's voice

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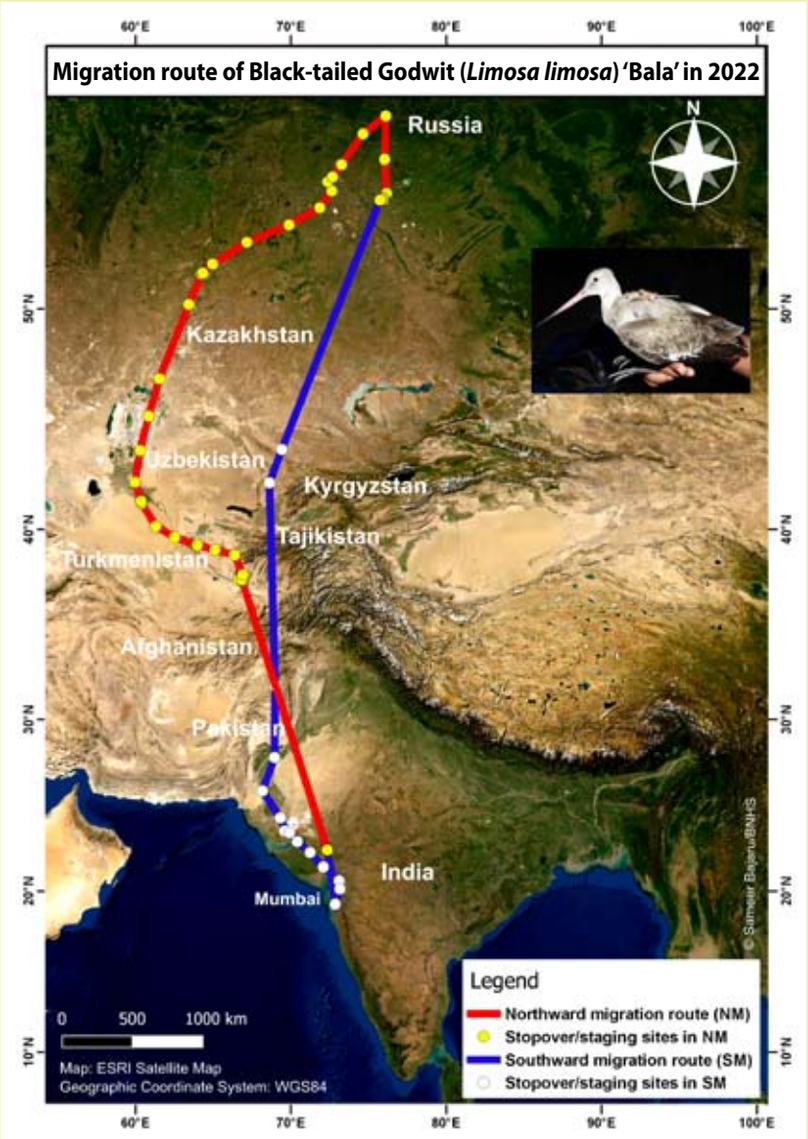

was filled with excitement as he shared the astounding news of resighting the GPS-tagged Black-tailed Godwit at the Bhandup pumping station. Mrugank informed me that the data had been downloaded, and the bird showed interesting north-south movement patterns. It was indeed a Eureka moment for all of us.

'Bala', a Black-tailed godwit named after Dr. S. Balachandran, eminent ornithologist and one of the foremost migratory bird experts in the Indian subcontinent, has returned to Mumbai, completing a successful journey. The bird with flag no. 5J4 was fitted with a GPS radio tag in March 2022. 'Bala' started his northward journey in April 2022 and reached South Western Siberia in June 2022. The bird started its returned journey from Siberia and came to Bhandup Pumping Station in just five days. In 90 days, 'Bala' completed a ~ 10,000 km return journey from Mumbai to Siberia.

Details of Bala's movement pattern are currently being analysed and will be published in issue number 3 of Vol. 119 of the Journal of the Bombay Natural History Society (JBNHS) by December 2022. Do check out the exciting findings expected to be in print by December 2022. ■

Studying isotopes for understanding migratory birds

A collaboration between BNHS and IISER Pune has resulted in a unique publication- 'Stable sulphur isotope (δ 34S) ratios in bird feathers from India indicate strong segregation between the Himalaya and Gangetic plain, and the rest of India.'

India harbours rich avifauna with 1212 species, of which 469 are migratory. Even though understanding of bird migration has considerably advanced through six decades of ringing studies by institutes such as BNHS, the migration of most species is not understood, especially of those migrating locally within India. Given the limitations of the bird ringing and satellite-based studies, isotope-based migration studies could provide new insight and complement the existing efforts. Although stable hydrogen (δ2H) and carbon (δ13C) isotopic compositions of bird feathers have been increasingly used to understand the migration of birds through the assignment of individuals to established isoscapes, far less is known about the structure of feather isoscapes based on stable sulphur isotope (δ34S) assays. This research shows the utility of feather δ34S studies to decipher avian and other animal migration between these two regions. All samples, except that of the Bar-headed Goose, analysed in the present study were from museum specimens housed in the Bombay Natural History Society (BNHS). The sample of Bar-headed Goose was collected during a field visit conducted by BNHS.

This study is the first attempt to check the feasibility of isotope-based investigations in India.

The researchers have demonstrated that modern science helps push forward the knowledge collected through natural history specimens.

The paper was published in the journal *Isotopes in Environmental and Health Studies*.

Yuvraj Date, Shreyas Managave, Girish Jathar, Rahul Khot & Keith A. Hobson (2022): Stable sulphur isotope (δ34S) ratios in bird feathers from India indicate strong segregation between the Himalaya and Gangetic plain, and the rest of India, Isotopes in Environmental and Health Studies. https://doi.org/10.1080/10256016.2022.2113995

Free book on Snakes and Lizards of the Sky Islands of the Western Ghats

BNHS scientist Saunak Pal recently co-authored a book titled *Snakes and Lizards of the Sky Islands of the Western Ghats*. This book is primarily a photographic field guide with brief species accounts, species specific distribution maps and a history of systematic studies on lizards and snakes from the high elevation shola grassland habitats of the Western Ghats. 'Sky islands' or the high elevation shola-grassland mosaics are one of the most unique habitats in the Western Ghats and have often been considered as cradles of evolution. These high mountain tops, separated by deep valleys, have been isolated over millions of years giving rise to the unique montane shola habitats (forest-grassland mosaic) that differ substantially from the lower elevation forests. These sky islands are separated from each other environmentally and physically and hence are home to highly endemic species, distinct from those found elsewhere. Recent genetic studies on various birds, reptiles, frogs among others have shown that many species are isolated to individual sky islands.

In the book, the authors document the diversity of lizards and snakes of the sky islands. The book covers 58 species of reptiles (30 snakes and 28 lizards) from the four main mountain ranges of the Western Ghats, namely: Nilgiris, Anamali, Megamalai and Agasthyamalai. Many of the species covered in the book are endemic to the high elevations of these mountain ranges. The book also includes a checklist of species found above 1000 m elevation in the four mountain ranges. ■

The book can be freely downloaded at: https://aranyakam.org/product/snakes-and-lizards-of-the-sky-islands-of-the-western-ghats/

Participation of BNHS in BirdLife World Congress 2022

The BirdLife World Congress 2022 was organized at Cambridge, UK from 11-15 September. Over the past 100 years BirdLife along with its 119 partners, over 18 million supporters and over 7,000 staff across all countries have carried out commendable work in bird conservation. Other than practicing world-leading science in terms of scientific publications, BirdLife has majorly influenced policies in favour of bird conservation. Along with its partners BirdLife is tirelessly working towards preventing extinctions of some of the critically endangered species, safeguarding sites for birds, conserving flyways for migratory birds, sustaining and restoring forests (17,993,216 hectares forest were impacted by BirdLife and its partners between 2015-2020), combating climate change, managing non-native invasive species and restoring islands, and most importantly empowering local people to facilitate bird conservation. In the last decade alone, the BirdLife Partnership has engaged over 18 million supporters, 7 million of which have been involved directly in conservation actions.

BNHS has long been the BirdLife's partner in India. Some of BNHS's conservation action programs like guardians of the skimmer, conservation of critically endangered species such

as Great Indian Bustard and Lesser Florican, understanding the quantum of exotic bird trade in India are supported by BirdLife. On behalf of BNHS, Ms. Parveen Shaikh and myself physically attended the BirdLife World Congress in Cambridge this year. Many of us at BNHS attended the Congress virtually. BNHS participated in the regional partnership meeting on 12 September and presented its bird conservation initiatives in rivers and grasslands on 14 September. Participation in the Congress was especially useful in terms of meeting some of our traditional donors, partners and colleagues at BridLife. ■

E-Bikes for CEC Mumbai

BNP PARIBAS India Ltd. donated two electric bikes to the BNHS Conservation Education Centre (CEC), Mumbai on 8 September. The Bajaj Chetak electric bikes (E-bikes) were handed over to BNHS by Mr. Philip Mayerd and Mr. Laurent David, Deputy Chief Operating Officer, BNP Paribas in the presence of BNP Paribas CSR team and other employees. Capt. Mandar Salaye, Deputy Director (HR and Admin), Dr. Raju Kasambe, Assistant Director and myself received the two E-bikes on behalf of BNHS. These bikes can run 95 km on one charge. BNHS truly appreciates BNP Paribas for their support and commitment towards green goals. Through BNHS, employees of BNP Paribas are actively engaged in various nature conservation activities. BNP Paribas intends to involve nearly 3,000 of its employees in such activities with BNHS. We at BNHS look forward to an active association with BNP Paribas in their quest for nature conservation. ■

Scientific and Popular Writing Course

Scientists working with BNHS have been converting their scientific findings and natural history observations in to well written papers over the years. This has been possible through constant training and years of mentoring by experienced seniors. Dr. Asad Rahmani, our former director, and member - Governing Council of BNHS conducted a scientific and popular writing workshop for our scientific staff from 7-11 September, 2022. This workshop was organized at our Conservation Education Centre in Goregaon. 13 research scholars of BNHS participated and successfully completed the course. All the participants found this course extremely useful in furthering their career in natural science research. BNHS plans conduct such courses to build capacity of its staff. ■

Employee and student engagement activities

BNHS CEC-Mumbai organized nature trails and employee engagement activities for employees of BNP Paribas on 10 September 2022, Participants attended nature trail and volunteered in plantation of host and nectar plants for CEC butterfly garden.

BNHS CEC-Mumbai organized tree plantation for SITA group on 15 September, Employees of SITA volunteered and planted 5 trees and in plantation of 50 butterfly host and nectar plants in the BNHS butterfly garden in BNHS Nature Reserve, Mumbai.

CEC Mumbai conducted educational tours for G. D. Jalal college on 14 September in which total 40 students and 5 teachers participated. ■

Drawing competition on Tiger Day

Global Tiger Day is an annual celebration to raise awareness for tiger conservation, held annually on 29 July. It started in 2010 at the Saint Petersburg Tiger Summit in Russia to spread awareness about the need to conserve tigers.

This year, the BNHS Nagpur office conducted conservation education in 50 schools in the Chandrapur district. For the painting competition, 39 schools responded and a total of 1142 students participated in this competition. The subjects were "Clean Drive in Schools', "Pollution in Chandrapur city" and "Wild animals and crop damage".

Some of the prize-winning entries are below.

UPCOMING EVENTS

Capsule Course in Field Ornithology and Bird Migration

Level : Basic
Venue : BNHS–Bird Migration Study Centre, Point Calimere, Tamil Nadu

We are happy to announce dates for one our most sought after training courses – Field Ornithology and Bird Migration – at Point Calimere. The new format of this course has been designed to cater to all who would like to learn more about birds through ringing and banding. This training course includes both on-field and classroom sessions dealing with a variety of topics like bird identification, monitoring, ringing/banding, bird migration study techniques and flyways, with talks from experts in the field of Indian ornithology.

The BNHS–Bird Migration Study Centre at Point Calimere has been instrumental in supporting and developing bird migration studies in India and in Central Asian Flyway since early 1960s. The Centre was established in 2008 and has been imparting training to people from different walks of life. Uniquely located, with the mudflats of the Great Vedaranyam Swamp on one side and a tropical dry evergreen forest on the other side, the Centre has facilities to ring both land and shorebirds. The Course includes field trips to the Great Vedaranyam Swamp, Udayamarthandapuram, and Point Calimere Wildlife Sanctuary.

DETAILS OF THE WORKSHOP

Duration of workshop	**05 Days**
Number of people	20 individuals
Period	31st October to 04th November, 2022
Last date for receiving applications	15 October 2022. Applicants will be enrolled on a first-come first-served basis. Please send your application by email to Dr. Ramesh Kumar Selvaraj (r.selvaraj@bnhs.org)
Venue	Point Calimere, Vedarnayan, Nagapattinam District, Tamil Nadu
How to reach	
Nearest Airport	Trichy (TRZ) = 110 km or Chennai (MAA) = 300 km
Nearest Railway Station	Nagapattinam (56 km)
Bus Station	Vedaranyam (11 km) – Frequent buses from Trichy during day time Private & Government Bus services from Chennai daily
Age group	No limit
Target Audience	BNHS members, researchers, birdwatchers, photographers, Forest Dept staff, Business groups & Corporates
Fees (per person)	**Rs. 20,000/-** **Rs. 16,000/- (for existing BNHS Members)**
How to make the payment	The course fee can be transferred by either of these three ways I. through NEFT (bank details provided on the BNHS website): https://bnhs.org/public/pdf_documents/CAPSULE-COURSE-FINAL.pdf II. By clicking on this active link: https://bnhs.org/cec-membership-form III. By scanning the QR code (for details please visit our website): https://bnhs.org/public/pdf_documents/CAPSULE-COURSE-FINAL.pdf

Please visit our website : https://bnhs.org/public/pdf_documents/CAPSULE-COURSE-FINAL.pdf or contact info@bnhs.org for further information on the course. We request you to send your applications to Dr. Ramesh Kumar Selvaraj, Scientist BNHS (r. selvaraj@bnhs.org).

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

Bivash Pandav

Dr. Bivash Pandav, 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.

CONTACT US

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