

Eastern Himalaya

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Bats & Small Mammals Workshop

Study methodologies, field tools and techniques



Clockwise from top left: *Mus musculus*; *Rhinolophus affinis*; Training on the use of bat detectors; Recording physical details of small mammals;

-- Dr. Sunita Pradhan,
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Our recent review of mammals in Darjeeling-Sikkim Himalaya lists 46 (29%) and 53 (36%) species of bats in Sikkim and Darjeeling Himalaya respectively, while small mammals make 30% of the mammal species in the landscape. Although bats and small mammals report a large number of species in the landscape, systematic survey and monitoring of these species in the context of agroecosystems have been few. Existing information on the bats and small mammals also requires to be updated and their status understood for future research, something which we are planning to take up, through systematic surveys in the Darjeeling Sikkim Himalaya. An essential part in initiating surveys and monitoring of small mammals require, sound field methodologies, study design and specific understanding and training on use of various field equipment needed for the purpose. A workshop of field methodologies for survey of small mammals and bats was organized from 2nd – 8th February 2019. 10 researchers and research assistants from Sikkim participated in the workshop with resource persons from Small Mammal Conservation and Research Foundation (SMCRF), Nepal. The workshop comprised of intense classroom and field sessions. 9 species of bats and 3 species of small mammals were documented during the workshop field studies.

Inauguration of oil press unit to enhance local livelihoods through mustard oil production

To promote climate smart agriculture and enhance livelihoods of rural communities living in the fringes of Singalila National Park, ATREE has initiated a project to cultivate oil seeds and oil extraction supported by National Bank for Agriculture and Rural Development (NABARD) in four villages.

Historically potato has been the cash crop on which farmers were dependent but the productivity has been affected by wart, blight and root rot diseases for the past 5 years. Additionally, the crop has also been depredated by wildlife from the surrounding village forests particularly by Wild Boar. Mustard is known to be a climate resilient crop which



Mustard fields in Sepi village, Darjeeling district

grows easily in the hills with low inputs and if organised well can produce oil and other bi-products that can be marketed and thus provide income to the local communities. Mustard is also a pollinator friendly plant and can benefit bee-keeping as well as other pollination dependent plants cultivated by communities. Ultimately replacing the potato fields with mustard is also an experiment to eradicate the diseases that infest potato organically from these fields.

As part of this project, an oil extraction machine with a daily capacity of pressing 50 kilograms of oilseeds was installed in Rajabhir village (one of the project village) and inauguration of oil press was organized in Rajabhir on 9th of March, 2019.

--Tshering Dorji Bhutia
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Monitoring White-bellied Heron in Manas Landscape



Left: Pibsu River in Kochugaon. Right: Kanamakra river in Kalamati

The Manas landscape was visited for the monitoring the Critically Engangered White-bellied Heron (*Ardea insignia*) in Assam where the species is known to occur. 4 sites in the Indo-Bhutan border were selected in Kokrajhar, Chirang and Baksa districts represented by Kochugaon, Koilamoila, Kuklung and Subankhata sites respectively. On these 4 sites 8 River transects including- Phibsu/Longa River, Dhiring River, Pagladiya River, Sukantaklai River, Kanamakra River, Aai River, Kuklung River and Raigajuli River were covered during the monitoring period. The monitoring was conducted to determine the presence/absence of the White-Bellied Heron and to



Left: Flock of Black Storks in Pibsu River;
 Right: Fishing at Pagladiya River

assess the habitat features and threats.

No White-bellied Heron was recorded during the monitoring but other birds like Black Stork, Cormorant, Goosander, Kingfisher, Wagtail, Thick knee, Sandpiper, Peafowl, Hornbills were recorded. Disturbances like picnics, cattle sheds, sand and boulder mining, grassland burning and fishing were recorded. These are most likely to affect as these birds which are known to be shy and elusive avoiding any form of disturbance and human presence.

--Takhe Bamin
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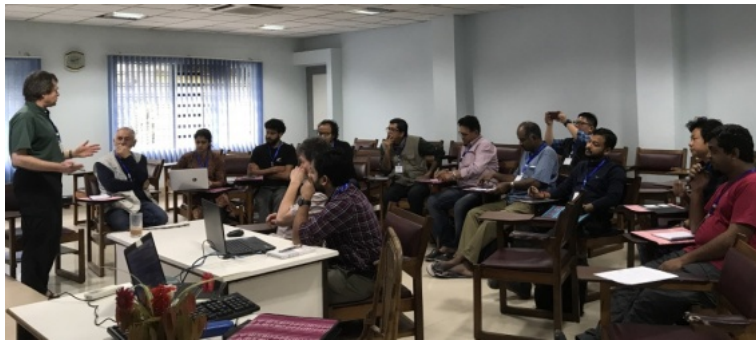
Workshop on Inspection of Aerial Imagery within White-bellied Heron (*Ardea insignia*) North-east Indian range to propose potential priority in-depth survey areas for the species



Participants at the Workshop

The White-bellied Heron (WBH), *Ardea insignis*, is the world's second largest heron and one of the most threatened birds. Occurring mainly on the southern side of the Eastern Himalayas, the WBH has a very large range, currently occurring as a resident species in Bhutan, India and Myanmar and probably in China.

One of the biggest challenges is that the species occurs at low density and the known population is too small for long-term survival. In India, the WBH occurs in northeastern India in Assam and Arunachal Pradesh. Arunachal Pradesh, has been noted as a strong-hold for the species and is the only presently known occupied locality for the species in the country. Records from other sites in North-east India are sporadic and some are clearly of transient birds in areas not normally used. Much potential WBH range in India has not been surveyed at all, or with insufficient intensity to know the species' status there. Intensive surveys are required to find other populations, if they exist, in Northeast India. To make these surveys efficient across



Discussions during a session of the workshop

the huge unknown area, existing information and knowledge will be used to prioritise survey areas. With this backdrop the workshop was organised to use knowledge gained from recent survey effort and historical records, alongside known/assumed WBH habitat preferences and human landscape use to identify (using satellite imagery) possible currently occupied WBH habitat for priority survey.

Several survey polygons were identified during the exercise based on the knowledge of the participants and criteria like vegetation, river characteristics and disturbance through human presence. Some of these were prioritized for immediate surveys. 15 participants from various organisations in India and Bhutan provided inputs in the workshop. The workshop was funded by Synchronicity Earth, UK and resource persons were from IUCN SSC White-bellied Heron Working Group, part of the Heron Specialist Group.

--Dr. Sarala Khaling,
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Training in Namdapha Tiger Reserve, Arunachal Pradesh



Participants at the Field Level Training for Bird Tour Guides

Field level training for Bird Tour Operators was organized in collaboration with Namdapha Tiger Reserve (NTR), Arunachal Pradesh. 16 field staff from 3 ranges participated in this training. Most of the staff are used by tourists, tour operators and researchers who visit the tourist circuit in NTR. 77 species of birds and 19 species of butterflies were recorded by the trainees. While the outcome and impact of this very short training cannot be gauged immediately we hope that this will create awareness, sensitization and enthusiasm among the staff as well as students to participate in biodiversity documentation. NTR has enormous potential in terms of promoting responsible nature-based tourism and there needs to be



Some species recorded during the training: Malayan giant squirrel (*Ratufa bicolor*), Chocolate Albatross (*Appias lyncida*) and Plumbeous water redstart (*Rhyacornis fuliginosa*)

concerted efforts to provide a holistic training to people who are already working as nature guides and those who can use the opportunity in future. Identification of birds and butterflies is only one small component of such a training. We believe that there is an opportunity for the NTR authority to extend affiliation to these trained personnel as "Certified Nature Guides" as has been done in some other parts of the country.

-- Rohit George,
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Reconnaissance survey in forests around Disi village, Lepa Rada district, Arunachal Pradesh



Disi village, Lepa Rada, Arunachal Pradesh

Disi is one of the 7 Galo villages around Basar who have committed themselves to protect and conserve the 15,000 ha Ngualam Pokchu forest with the leadership of a local registered community based organization Gumin Rego Kilaju (GRK.) One of the options to explore is the creation of a Community Conserved Area. Disi village is about 600m in elevation and is situated in the newly carved out district of Lepa Rada, 12 km away from the district headquarter Basar. Opportunistic surveys were conducted for 3 days using the Kidi river which flows



Some species recorded: Paris Peacock (*Papilio paris*), Red-headed Trogon (*Harpactes erythrocephalus*) and Red-throated thrush (*Turdus ruficollis*)

along Disi. About 10 Km area of the river was surveyed 4 hours daily by 4 people thus with a total survey effort 48 person hours. 39 species of birds and 39 species of butterflies were documented along the Kidi river. Activities like hunting and fishing were quite prevalent. During our surveys we observed people with guns and catapults as well as fishing activities in the habitats. Since the forest belongs to the communities there is tree felling for timber for building houses, granary and other construction. This is part of surveys that will be conducted by different groups and organisations around Ngualam Pokchu Forests to document the biodiversity of these community forests and help the people decide on the type of management system they would like to adopt in future.

--Dr. Sarala Khaling,
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Training of Nature Guides in Tale Valley Wildlife Sanctuary, Arunachal Pradesh

Talle Valley Wildlife Sanctuary is well known as a tourism destination where tourists from Arunachal Pradesh and other states visit especially for its aesthetic value and for birdwatching and butterfly observation. In recent years it has become a popular destination for orchids and an orchid trail has been set up in the Wildlife Sanctuary by the Department of Environment and Forests. Since the protected area is situated about 40 Km from Ziro the district headquarters of Subansiri district, tourism has the scope of benefitting the communities in the rural and urban areas of Ziro Valley. However, responsible tourism practices have to be put into place especially for such pristine habitats like Talle where the impact of tourism is relatively less as compared to many popular mountain protected areas in other parts of the country. One of the key aspects of this is having a community of trained people on responsible tourism who will be guiding tourists through trails across this beautiful landscape. This also requires nature guides who are trained and have information about the area, the expertise to identify major plants as well as fauna particularly birds and butterflies to start with. This capacity and expertise is lacking or is not adequate in the local personnel who are working as nature guides/tour guides in Talle Valley. Tourism is also an opportunity for the local people to develop capacity and expertise and benefit from nature for their livelihoods. In the long term we hope that the community as a whole will



Some species recorded: Grey-headed Canary-flycatcher (*Culicicapa ceylonensis*), Straightwing Blue (*Orthomiella pontis*) and White-collared blackbird (*Turdus albocinctus*)

also be aware about conserving the rich biodiversity of Talle Valley Wildlife Sanctuary and thus take stewardship of this biodiversity rich areas especially when there are threats from economic development and climate change. With this in mind a 5-day training programme was organized by Talle Valley Wildlife Sanctuary, Hapoli Division in collaboration with ATREE Eastern Himalaya-Northeast Office, Gangtok. 34 people representing different organisations from Ziro and other places participated in the training programme.

--Dr. Sarala Khaling,
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New Staff



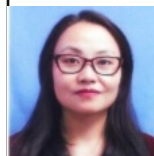
Mr. Takhe Bamin joined as Project Associate in the National Geographic Society funded project on conserving the Critically Endangered White-bellied Heron in Arunachal Pradesh.



Ms. Abriti Moktan joined as project Associate in the UNDP supported project on High Conservation Value Areas for Sikkim



Ms. Asmina Dhakal, from Namsaling Community Development Centre, Ilam, Eastern Nepal has joined the ATREE Project Office as a NOREC (Norwegian: Fredskorpset) Volunteer for a one-year exchange programme.



Ms. Poonam Rai, Program Associate ATREE is volunteering for Forum for Sustainable Energy and Sustainable Development (FEDESMO), Mozambique on a one-year exchange programme supported by NOREC

ATREE's mission is to promote socially just environmental conservation and sustainable development by generating rigorous interdisciplinary knowledge that engages actively with academia, policy makers, practitioners, activists, students and wider public audiences. ATREE's Northeast/Eastern Himalayas Office has a direct presence in the Darjeeling and Sikkim

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