(1) Presented by: Ms Divya Vasudev, Conservation Initiatives, Assam

Title: "Conserving Piscivorous Raptors in Wetlands of Northeast India."

Wetlands form an important social-ecological system in the floodplains of Assam, Northeast India, and piscivorous raptors—the grey-headed fish eagle, Pallas' fish eagle, and osprey—are critical to the health of these systems. We initiated a science-based conservation program for these raptors in the Brahmaputra floodplains. As a first step, we assess the distribution of piscivorous raptors in wetlands outside PAs, which are used by both people and wildlife. We mapped wetlands across the floodplains and overlaid eBird records of the three raptors on these. We choose wetlands to survey, based on past records, and to be representative of wetland size, availability of roost trees and neighbouring wooded cover. We surveyed each wetland for 2 consecutive days between 8am and 2pm, which, based on our reconnaissance surveys was the best time to spot raptor presence in these multiple-use wetlands. In each wetland, we note down raptor use of the wetlands, along with its behaviour, and other ground covariates (eg., canopy cover, fishing activity, presence of water hyacinth). In total, we have surveyed around 55 wetlands, covering the landscapes surrounding Kaziranga, Golaghat, Jorhat, and Sonitpur. We have sighted the grey headed fish eagle 34 times, and osprey 2 times, but have had no sighting of Pallas' fish eagle in our sampled wetlands-situated outside the parks. The Kaziranga landscape clearly emerged as an important landscape for raptors, with the National Park likely serving as a source habitat. Neighbourhood woody cover seems to be an important driver of raptor distribution, based on preliminary assessments. Our continued surveys will provide a more comprehensive picture of the conservation status of piscivorous raptors in these important social-ecological wetland systems of Assam.

(2) Presented by: Hrishikesh Karandikar, Wildlife Research and Conservation Society, Pune

Title"" "Site Occupancy and Habitat Selection of the Forest Owlets in the Reserved Forests of Madhya Pradesh."

WRCS has been studying the Forest Owlet in Khandwa and Burhanpur districts for the last decade. The current study focused on the occupancy of the Forest Owlet in the two districts and the West Betul Forest Division. Our main objectives were: a) to understand Forest Owlet occupancy in the three forest divisions of Madhya Pradesh, and b) to assess habitat selectivity of the Forest Owlet. We surveyed the forest owlet occupancy in the three forest divisions beat-wise, keeping each forest beat as a sampling area. Each beat was surveyed at least

three times using the call playback method. Habitat and disturbance data was collected during each survey. Other habitat data was extracted post hoc using GIS and remote sensing. Our results show that the modelled occupancy of the Forest Owlet was 0.23 (SD 0.25), and the detection probability was 0.28 (SD 0.27). Our results show that beats in Khandwa and Burnahpur have a higher occupancy than Betul. Forest Owlet showed a higher habitat selectivity for high Tree density and Forest Area, while habitat selectivity decreased with increasing distance from agriculture, elevation and slope. We recommend better forest management practices, retention of cavity-bearing trees, conserving large contiguous forests between Melghat TR and Khandwa and Burhanpur districts, working with locals and forest departments, and population estimates of the forest owlets to help conserve them.

(3) Presented by: Aditya Ganesh, Ashoka Trust for Research in Ecology and the Environment (ATREE)

A poster titled, "Understanding Eagle Owl Population Dynamics in Response to Ecotonal Land Cover Changes"

The eastern buffer of the Kalakkad-Mundanthurai Tiger Reserve (KMTR) in Tirunelveli, Tamil Nadu, is undergoing rapid urbanization and land cover changes, with dire consequences for native biodiversity. This area, an extremely fertile, rice-cultivating region, boasts vast farmscapes, and is home to Indian eagle owls (Bubo bengalensis), which are key predators in agroecosystems, contributing significantly to rodent control in paddy farms. In this study, using owl occupancy data and satellite imagery from 2010 and 2022, we studied the land cover changes in the landscape and the impacts it had on the abundance and distribution patterns of Indian eagle owls. We found that the study area had undergone considerable fragmentation between 2010 and 2022, resulting in the formation of a mosaic agricultural landscape (Fig. 1). Significant land cover changes had occurred during this period, resulting in an increase in built area, with a simultaneous reduction in crop area. An alarming (56%) decline in the encounter frequency of eagle owls was observed. The presence of eagle owls was significantly correlated with area under farm cover. Additionally, changes in owl abundance were also correlated with changes in area under farm cover, indicating the importance of intact farmscapes for this species.

(4) Presented by: Ms Bano Haralu, Conservation India and Nagaland Wildlife and Biodiversity Conservation Trust (NWBCT)

Title: "The Amur Falcon Story from North East India."

Our first stop was a conversation with the Village Council members to share the bio-history of the raptors. We then sought their permission to initiate nature conservation education in the village targeting the children. This is how the "Friends of the Amur Falcon" Campaign was born. Five Eco clubs were supported by various NGO's including BNHS, RRCF, WCT, and WCS.
The Training the Trainer module by Dusty Foot Productions was the manual we used for training the Eco -club teachers. In addition, we so developed a unique education manual solely on the behaviour of Amur Falcons which was studied by the Eco club students. This initiative was the first time Village Councils and the villagers were talking "conservation" In the community. When the bio history of the raptors were shared some people in the community were moved leading them to take a stand against the killing of the birds. The "Friends of the Amur Falcon" Campaign taught us that often communities take decisions because they don't see how they fit into the greater 'chain of life'. When told that farmers like themselves in South Africa await the arrival of the raptors to prepare their fields before sowing they could make the connection and their role in completing the circle.

(5) Presented by: Arjun Kannan, ATREE, Bengaluru, Karnataka

Title: "Analysing fine-scale tracking data to understand wintering habitat selection in Montagu's harriers."

Grassland raptors have been on the decline in India. Although these declines have been related with loss of grassland habitats, there is no evidence on how raptors respond to fragmented grassland habitats having a matrix of croplands and urban areas. This lack of evidence stems from the fact that there have been very little studies that have followed individuals of species throughout their full-annual cycles in India. Raptors are wide-ranging, especially those species that spend their non-breeding (wintering) periods in the Indian subcontinent, with individuals often using more than one wintering site. The advent of high resolution tracking devices have now enabled us to track individuals at high spatial and temporal resolutions. This study aims to understand the wintering habitat selection by Montagu's harriers in the Indian subcontinent. This migratory grassland raptor has been on the decline with studies showing a dwindling of population by more than 50% across the Indian wintering region. We tagged 6 individuals using GPS-GSM transmitters at Tal Chhapar Blackbuck Sanctuary, Rajasthan from 2019 to 2022. The analysis showed that the home ranges of tagged individuals were mostly within the protected area. They showed a strong selection for open grassland habitats and rarely ventured outside the protected area into the adjoining croplands.

(6) **Presented by: Chiranjib Bora, Gauhati University**

Poster titled, "Diet composition of Barn owl (Tyto alba) and Spotted owlet (Athene brama) coexisting in an agricultural landscape of central Assam."

Owls belong to the order Strigiformes and are nocturnal predatory birds. Barn Owls (Tyto alba) and Spotted Owlets (Athene brama) are common in Northeast India. Analysis of their pellets sheds light on their diets. The study conducted in Nagaon, Assam, spanned January 2021 to August 2022, across four seasons. Pellets gathered from Puranigudam and Nonoi were cleaned in order to use the undigested remains to determine the species of prey. Five hundred and eighteen prey items from twenty-five species were identified from 312 barn owl pellets. Most of the prey items were small mammals, including the Asian house shrew (Suncus murinus), the Sikkim rat (Rattus sikkimensis), and the lesser bandicoot rat (Bandicota bengalensis) (6.37%). The niche width of the barn owl was 4.9, with seasonal variations ranging from 3.2 to 6.86. The spotted owlet consumed a diet primarily composed of insects (55.2%), mammals (40%), amphibians (2.9%), and birds (1.9%), with 72 pellets producing 105 prey items from 10 species. With a range of 2.4 to 3.8, its niche breadth was 3.3. The diet of barn owls varied with the seasons, but they always included small mammals, mostly rodents during the winter. The spotted owlet's diet had a higher percentage of insects, increasing mammalian prey in winter and pre-monsoon seasons.

(7) **Presented by: Dhawal Mehta, Department of Zoology, Biomedical Technology, Human Genetics, and Wildlife Biology & Conservation, Gujarat University**

Poster titled, "The Wise Owl's Woe: Habitat use in the urbanscape of Gujarat's capital."

The study assessed the habitat use by the different owl species in Gandhinagar and helped in generating a baseline on the owl diversity, abundance, and distribution. The owl species were recorded in a systematic and opportunistic manner, and the roost/nest sites were located. The owl abundance at these sites was documented. Habitat parameters (natural and anthropogenic) were recorded at the owl roost/nest presence and absence locations. The data was analysed in a Generalized Linear Model framework by employing the habitat parameters as predictor variables with abundance or presence/absence of species as a response to understand owl distribution. The best fit models were selected on the basis of the least Bayesian Information Criteria (BIC). Acacia nilotica, Cassia siamea and Azadirachta indica were important tree species for

owl roosting and nesting. Vegetation cover and old growth trees played a crucial role in the habitat use by owls. Some species like Barn Owl and Spotted Owlet were resilient to human presence, while others strongly avoided any form of anthropogenic disturbance. The current unprecedented rate of urban sprawl and consequent habitat loss in the study area is worrisome and can be highly detrimental to the owl population. Conservation measures that consolidate ecology and economy are vital for the conservation of owls in this urbanscape of Gujarat.

(8) Presented by: Ms Prachi Mehta, Wildlife Research and Conservation Society, Pune

Title: "How Owls Co-exist: Learning from the Long term Study on Owls in Central India."

From 2017 to 2023, we examined the occurrence, habitat, diet, nest selection and movement patterns of the endangered Forest Owlet with the widely distributed Spotted Owlet, Jungle Owlet, Scops Owl, Indian Eagle Owl, Brown Fish Owl, Mottled Wood Owl and the Barn Owl in Melghat Tiger Reserve in Maharashtra. Tree Density was highest (997 ±333.15) in the home range of the Jungle Owlet and lowest (28.33 ± 2.89) for the Barn Owl. The Forest Owlet shared highest similarity in diet composition with the Spotted Owlet (72%), and least with the Brown Fish Owl (2%). Nest cavity entrance length (cm) was highest for the Barn Owl (67 ± 20.95) and smallest for the Forest Owlet (9.7 ±2.4). Our results suggest that sympatric owls co-exist in close proximity by sharing broader environmental space. At fine scale, they show heterogeneity in habitat use, diet composition and the time of activity.

(9) Presented by: Dr. Pankaj Chandan, Himalayan Foundation for Conservation Leadership & NDF Jammu, WWF - India

Title: "Status and Conservation of Raptors in Western Himalayas."

During the study by the team of researchers a total of 793 individuals representing 46 species of raptors were recorded across various selected study sites in Western Himalayas. The encounter rate of raptors at surveyed sites was 13.21. Overall diversity of raptors in western Himalaya was observed to be moderate (H=2.8) in western Himalaya. The value of evenness of species was 0.37 indicating some species of raptors are abundant in the western Himalayas and some are rare. Among the threatened species, Egyptian vulture were sighted at Gharana and nearby areas of Jammu, Saker falcon at Hanle and Tsokar in Ladakh, Steppe eagle at Dayalachak and Hirpora, Imperial eagle at Gharana,

Indian spotted eagle at Gharana and Hirpora, Tawny eagle at Kathua. Among near threatened species, Bearded vulture was sighted at Hanle, Hirpora, Taklangla and Tsokar, Cinereous vulture at Kathua and Hanle, Himalayan griffon vulture at Kathua and Samba, Himalayan vulture at Dayalachak, Hanle and Hirpora, Mountain hawk eagle in Hanle and Pallid Harrier at Gharana and Hirpora.

The study highlights that conservation of raptors in the Western Himalayas is critical for maintaining ecological balance and biodiversity. By protecting their habitats, engaging with communities and frontline staff of the forest and wildlife departments, and enforcing conservation laws, we can ensure the survival of these magnificent birds for future generations. The study emphasized on the need for continued efforts in habitat protection and research on raptors in western Himalayas.

(10) Presented by: Dr Nishant Kumar, THINKPAWS Sustainability Research Foundation (www.thinkpaws.org) & Wildlife Institute of India, Dehradun

Title: "Mitigating Birdstrikes: Co-opting a bird-feeding ritual to protect aviation and wildlife in Delhi."

The intersection of aeroecology and aviation safety within urban areas is a critical issue, as birdstrikes pose significant risks during takeoff or landing, a problem amplified by ~ 5% annual growth in air-traffic. The aviation industry incurs losses of billions from >21,000 birdstrikes/yr, attributable to rapid urbanisation and birds responding to anthropogenic food subsidies or habitats. We mitigated birdstrike threats by resident and migratory kites during fly-past on Republic Day in Delhi. For this, we managed kites' access to waste and temporarily displaced flocks by co-opting their congregations in response to a regional ritual of meat-tossing. Data on kites' home range, movement and demography enabled strategically matched meat-induced flocking away from flight formations. Feeble flocking during smog/overcast weather constrained our outcomes. Intervention misalignment with Muslims, who traditionally feed kites (~90% of breeders), resulted in already well-fed kites that demonstrated diminished responses. Conflicts associated with synurbic species that target food subsidies are sensitive to cultural nuances and vary seasonally, based on taxa-specific links in life-history choices and social processes within human-altered environments. This paper addresses strategic limitations in wildlife management related to social-ecological linkages associated with frequent inter-stakeholder conflicts. Our results indicate how conflict mitigation/management involving

tropical species must consider their inextricable ties with human activities, cultural practices, politics, history, socio-economics, and urban planning at multiple spatiotemporal scales.

(11) Presented by: S. Sangeeth Sailas, Sálim Ali Centre for Ornithology and Natural History (SACON)

Title: "Factors influencing the habitat use of owls in a mosaic landscape in the Garo Hills, Meghalaya."

Our study aimed to assess the ecological correlates of habitat for several under-studied owl species in Meghalaya and test whether Community Reserves, a major part of the Protected Area Network in the region act as refugia sites for owls. For this, we surveyed for owls using standard survey protocol during January to March, 2020. Then, we used occupancy and N-mixture models to assess the effect of habitat variables on occupancy and abundance of owls. We found Brown Wood Owls, old-growth forest specialists considered to be declining due to habitat loss, were associated with water bodies, areas with gentle slopes, along with greater Girth at Breast Height (GBH) and height heterogeneity of trees. In contrast, Mountain Scops-owls avoided water bodies and preferred areas with higher disturbance, while Collared Owlets were associated with steep slopes. We also found significantly higher detections for the Brown Wood Owl inside Community Reserves, indicating that they indeed serve as refugia sites for this species. We highlight the need to preserve water bodies and protect old-growth forests in the region. We also stress the importance of maintaining Community Reserves, the only areas with old-growth forests in the studied landscape, apart from the Nokrek National Park.

(12) Presented by: Roshnath Ramesh, Malabar Awareness and Rescue Center for Wildlife, Kannur, Kerala

Poster titled: "White-bellied Sea-Eagles in Kerala: Nesting Status and Nest Site Characteristics."

The White-bellied Sea-Eagles (Icthyophaga leucogaster) are an indicator of a healthy coastal zone. With no recent studies in Kerala, our major goal was to investigate the nesting status and nest site and tree characteristics of these birds to develop conservation and management measures. We conducted surveys from 2021 to 2023 (Nov- Mar) throughout the coastline of Kerala's Kannur and Kasaragod districts, where they are known to nest. Nesting populations are found declining, raising conservation concerns because they are monogamous, have well-established territory, and nest site fidelity. The choice of nesting sites

was influenced by their proximity to their foraging grounds. Anthropogenic disturbances did not influence nesting site selection. Height influenced the bird's choice of nesting tree because it improves visibility, which aids foraging, predator protection, and escape. Nests were situated high in the canopy, in line with tree height and facing westward, towards the sea. Mangifera indica and Ficus benghalensis were the most selected nesting trees (among the eight species). Since none of the nesting sites are located in Protected Areas and are all privately or publicly owned, we recommend public participatory management strategies for the conservation of the surviving nesting sites.

(13) Presented by: Shamik Sathe (SCHOOL STUDENT) on behalf of WRCS, Pune

Title: "Urban Nesting of Raptors."

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Indian Eagle Owl, Peregrine Falcon, White-eyed Buzzard, Spotted Owlet,

Within the limits of Pune city, six species of raptors were observed namely Indian Eagle Owl, Brown Fish Owl, Spotted Owlet, Peregrine Falon, Red-headed Falcon and White-eyed Buzzard. Living in urban areas the raptors have been adapted to the city conditions. The Indian Eagle Owl nest was in an old quarry in the city. The nest site has 2 adults and 5 juveniles indicating breeding success. The eagle owls must be having good rodent supply from a nearby garbage dump from a restaurant. Eagle Owl pellet also had a bat remains in it. The White eyed buzzard eagle had two nests and both had successful fledglings. The peregrine falcon has made a nest on the ledge of one of tall buildings in the city and had good breeding success with 3 juveniles. Good supply of feral pigeons and parakeets in the city must have contributed to high breeding success. Red-headed falcon nest was an electricity pylon and it had 2 juveniles too. The raptors in urban landscape have adapted to using man-made structures and prey commonly found in the urban spaces to feed the juveniles and increase breeding success.

(14) Presented by: Ms Sneha Singh, Department of Wildlife Sciences, Aligarh Muslim University, Uttar Pradesh

Title: "Farmers pesticides choices and decision dynamics: Implications for raptor conservation in agricultural landscapes."

Agrochemical pattern in the study area: Farmers' pesticide uses mainly ChE-inhibiting insecticides and nAChR-insecticides such as organophosphorus, carbamates, neonicotinoids, and pyrethroids. The ecological awareness of

farmers regarding the impacts of pesticides on raptors has had a moderate influence on their pesticide selection criteria. Although farmers recognize raptors as natural pest regulators, their perception of both raptors and biological pesticides remains skeptical. Performance and Awareness criteria were two key factors influencing farmers' adoption of chemical pesticides.
Conservation Implications necessitate the urgent need to raise awareness among farmers about the risk pesticides pose to wildlife. Design effective conservation strategies beyond protected areas, including agricultural landscapes.

(15) Presented by: Sidharth Srinivasan, Nature Conservation Foundation, Mysore

Title: "Encounter rates and active nests of raptors in the Indian Trans-Himalaya: Towards a long-term monitoring program."
Our goal was to monitor breeding raptor population trends over time, at a landscape scale in the Trans-Himalaya. We chose the regions of Spiti Valley and Ladakh and in both regions, we monitor raptors along road transects over two seasons in a year, covering ~150km in each region. We started this project in Spiti Valley in 2021 and extended this to Ladakh in 2023. Additionally, in Ladakh in 2023, we also set up a long-term raptor nest monitoring project to determine the number of active nests of cliff-nesting raptors in the landscape in that year. We hope to extend this project to Spiti in the coming years.
Initial results suggest that the Spiti Valley landscape harbours relatively lower numbers of raptors that hunt prey (eg., Golden Eagle) when compared to scavenging raptors (eg., the Bearded Vulture). We monitored ~60 nests in Ladakh in both years, but the number of active nests was low (~19%). We observed that some nests that were unoccupied in 2023 were occupied in 2024, highlighting the importance of monitoring unoccupied nests.
We hope that over time, this long-term raptor monitoring project will help us understand the population trends of raptors across Spiti and Ladakh. This understanding can then form the basis of contextual and adaptive conservation priorities for raptors in this region.

(16) Presented by: Dr. Tahir Ali Rather, The Corbett Foundation, Mumbai.

Title: "Tracking Raptors: Home ranges, habitat use, and movement patterns of Eagles and Harriers in Gujarat, India."
We deployed GPS-GSM satellite transmitters on four raptor species with the objective of investigating their daily and seasonal movement patterns, migration

flyways, home range patterns, and habitat associations in their wintering areas. Home ranges were calculated as kernel utilization distributions and Random Forest algorithm was used to determine their habitat associations. Daily and monthly distances were determined using Tracking Analyst in ArcGIS. Results: Greater Spotted Eagle had the largest home range size of 4624.03 km 2 calculated in Kazakhstan while as Pallid Harrier Male had the smallest home range of 3.98 km 2 in Russia. Daily average distance travelled varied from 1757.19 ± 478.18 km covered by Marsh Harrier during migration to 41.22 ± 20.92 by Indian Spotted Eagle. Scrubs, water bodies, croplands, and settlement were important habitat features associated with eagles while as croplands, open scrub, saltpans, salt affected areas, and built up were associated with Harriers. Conservation implications: The results align with similar studies that raptors in wintering grounds use variety of habitats that provide ample feeding opportunities. All raptors used the Western Circum-Himalayan Corridor of Central Asian Flyway during their migration which suggests the necessity of a better appreciation of this corridor.

(17) Presented by: Ms Debangini Ray, Department of Environmental Studies, Dr. Vishwanath Karad MIT World Peace University, Pune, Maharashtra,

Title: "Exploring anthropogenic threats and human perceptions towards owls in Indian cities"

Owls are nocturnal raptors, critical in maintaining ecosystem function and balance. Cities create numerous anthropogenic challenges to these raptors, evident in the increasing number of owl rescues across India recently. To explore threats to urban owls, we collected data on owl rescues conducted between January 2021 and January 2024 from 8 organisations across 7 cities- Mumbai, Pune, Kolkata, New Delhi, Bengaluru, Panjim, and Guwahati, and conducted in-depth interviews with 15 rescuers, rehabilitators and wildlife vets. Further, we conducted tally surveys for 660 citizens in Guwahati to understand their knowledge of owl presence. We additionally recorded narratives of owl interactions shared by 20 citizens. The major threats recorded were Chinese manja, nest displacement, entrapment, animal attack and collisions, but the intensity and nature of these threats vary across cities. Barn owls are the most frequently rescued in all the seven cities. We discovered a religious affinity towards the barn owl and an intolerance towards other owl species in Guwahati. This is an ongoing study. Future research will recover patterns in owl species distribution vis-á-vis anthropogenic pressures.

(18) Poster by: Yuyutshu, Centre for Ecological Sciences

Title: Ow-lit: Do Spotted Owlet Athene brama exploit urban lit areas to forage?
*We wanted to determine if Spotted owlet exploit ALAN in urban areas to forage. For this we divided the IISc campus into 200*200m grids and conducted point counts at the centroid. If an individual was sighted, we measured the perch height and the light intensity using lux meter. This provided us with the usage of light at a larger spatial scale. To understand the usage of light at smaller spatial scale, we conducted focal animal sampling and recorded the above-mentioned measurements at different perches of the individual.*

(19) Presented by: Sunny Joshi, WWF-India, New Delhi

Poster titled, "Understanding breeding ecology and threats for critically endangered vultures at select sites."
The project aims to contribute to vulture conservation through long-term monitoring of breeding success, assessing threats and understanding their movement at selected locations. Vulture populations have declined by 99% due to the veterinary use of NSAID diclofenac. Threats include habitat loss, electrocution, collision, and accidental poisoning. Monitoring breeding and movement, and assessing food availability are essential to establish vulture safe areas. Various activities undertaken: Assess trends in breeding success of critically endangered vultures; Monitor vulture movement patterns; Identify and evaluate prevalent threats to vulture populations at study sites. Study Sites in Uttarakhand, Madhya Pradesh and Rajasthan. NSAIDs Surveys conducted at cattle shelters and camps within 20 km of vulture nesting sites using structured questionnaires. Satellite Telemetry: Vultures captured and tagged with satellite devices to monitor movements. Nesting success was stable or slightly increased in Madhya Pradesh & Rajasthan. The NSAIDs survey found that 88% of NSAIDs were vulture-safe, while 12% were toxic in vulture nesting areas of Uttarakhand, Rajasthan and Madhya Pradesh. Satellite-tagged vultures mostly ventured on the periphery of the protected areas, Gujjar khattas/Cattle camps, and carcass dumping sites in Terai of Uttarakhand.