

Ravi Sankaran Conservation Science Symposium, 19 October 2019
Student Conference on Conservation Science, Bengaluru

ABSTRACTS AND SPEAKERS

OPENING SESSION	
<p>Keynote Address: Bengal Florican—Still an Enigma</p> <p>Despite the pioneering ecological and behavioural studies on the Bengal Florican conducted in the 1980s by Dr Ravi Sankaran in Dudhwa National Park, Uttar Pradesh, the species still remains an enigma. Its tall grassland habitat, retiring nature, extreme difficulty to observe female, and short period of time when the male can be seen does not help in detailed study. Recent satellite tracking work in India and Nepal has revealed that the florican moves outside the protected grassland with the onset of monsoon and spends 6-8 months in agricultural fields where it is not safe. In order to devise long-term habitat conservation plans, it is necessary to know its exact habitat requirements throughout the year in the larger landscape. Female floricans need to be studied by modern technologically advance devices such as satellite tracking and/or GPS-based tracking system. Only then we will be able to study behavioural repertoire and ecological requirement of the Bengal Florican to take effective conservation measures.</p>	<p>Speaker: Asad R. Rahmani</p> <p>Dr Asad Rahmani, ex-Director, Bombay Natural History Society, has mostly worked on threatened Indian birds for the last 40 years, particularly bustards, storks, cranes. His other interests are grasslands and wetlands. He has highlighted to plight of grassland birds of the Brahmaputra floodplains such as Black-breasted Parrotbill, Swamp Prinia, Slender-billed Babbler, and others, resulting in change in IUCN Red Listing. Recently he completed a project on the Sarus Crane and wetlands of selected districts of Assam. He has written 23 books, nearly 150 scientific papers, and 350 popular articles.</p>

SESSION 1: Birds on the Brink	Moderator: Goutam Narayan
<p>Learning about birds through citizen science</p> <p>The only way to document and monitor biodiversity at large scale (eg India-wide) is through the larger citizenry. For birds, this means birdwatchers and photographers, and a diversity of groups whose focus is on birds and natural history. In this talk I will take stock of current efforts along these lines in India, with particular reference to work carried out under the Bird Count India umbrella. I will talk about how the information so generated can help conservation, and will explore how this can be built upon in the future.</p>	<p>Speaker: Suhel Quader</p> <p>Suhel is a Senior Scientist at the Nature Conservation Foundation, Mysuru. His main interest is in engaging with the larger public in better understanding the natural world and how it is changing. He works on a variety of efforts, including in nature education and citizen science, and he teaches quantitative methods in ecology.</p>
<p>Indian Bustards in Tragedy and Hope</p> <p>Indian bustards are in peril. On this point there is no confusion. How did we get to such a state? How did these large and charismatic birds, emblems of our widespread grasslands, decline to near extinction? In this talk I trace their decline, and identify key reasons for their endangerment. Are we too late, or can we still hope that Indian bustards will survive for future generations</p>	<p>Speaker: Sutirtha Dutta</p> <p>Sutirtha Dutta is a conservation biologist and Faculty at the Wildlife Institute of India, Dehradun. He is interested in applying population biology, behavioral ecology and statistical modeling to conserve</p>

<p>to admire? I sketch out some small rays of hope that brighten the overall gloomy picture.</p>	<p>endangered species in multiple-use landscapes. For his PhD and post-doctoral studies, he has extensively studied Indian bustards and associated grassland/desert fauna. His current work involves population and habitat monitoring, spatial prioritization, risk and impact assessments and conservation management (habitat restoration and conservation breeding) with endangered bustards as the study model.</p>
<p>Great Indian Bustard: A Flight to Extinction?</p> <p>This short talk is about the threats and survival challenges faced by the last few individuals of critically endangered Great Indian Bustards <i>Ardeotis nigriceps</i> in the Kutch region of Gujarat. The talk highlights various threats faced by the species, efforts taken to save the species and its habitat, some success stories of community-based conservation efforts and a way forward to save the bustards and its habitat from any further loss.</p>	<p>Speakers: Devesh Gadhavi & Kedar Gore</p> <p>Devesh Gadhavi, Deputy Director of The Corbett Foundation, has been working for the conservation of the bustards in Kutch for almost a decade. He is also a member of IUCN SSC Bustard Specialist Group. He heads TCF's different programs where the local communities are involved in bustard conservation.</p> <p>Kedar Gore, Director, Corbett Foundation, has been actively engaged in wildlife conservation and environmental protection work since 1997 and is a Member of various IUCN Commissions and Specialist Groups.</p>
<p>The Asian Vulture Crisis—Have we Saved them yet?</p> <p>Devastating vulture declines across Asia started over twenty years ago sent formerly abundant vulture species to the Critically Endangered Red List category. The primary driver, veterinary diclofenac was diagnosed in 2003 as being highly toxic to vultures feeding on the carcasses of recently treated domestic ungulates. Asian Governments have responded with veterinary bans, but a range of actions have been needed, mainly initiated by NGOs, including conservation breeding, in-situ awareness to create 'Vulture Safe Zones', and safety-testing of a range of drugs to avoid repeating the same mistakes. Orchestrating such actions across India, and also in Bangladesh, Nepal, Pakistan, Cambodia and Myanmar has been a challenge, and prompted the creation of a consortium SAVE (Saving Asia's Vultures from Extinction) as well as inter-government Vulture Regional Steering Committee. This talk will present an update on progress, and whether its going to be enough and the latest news on release plans.</p>	<p>Speaker: Chris Bowden</p> <p>Chris Bowden is Globally Threatened Species Officer for the Royal Society for the Protection of Birds (RSPB). He has wide experience in bird conservation in Africa, Asia, UK, and the Caribbean working on many bird species including the Northern Bald Ibis, Woodlark, Nightjar, Stone Curlew, and Montserrat Oriole. Since 2004, his primary role has been coordinating the Asian Vulture Programme. He is currently Programme Manager for the SAVE (Saving Asia's Vultures from Extinction) consortium. Chris is a Co-Chair of the IUCN Vulture Specialist Group (VSG) since 2011. He is currently based in Bangalore, India, with regular brief UK visits to RSPB.</p>

<p>Conservation of the Critically Endangered Jerdon's Courser and its Habitat</p> <p>Jerdon's Courser <i>Rhinoptilus bitorquatus</i> is a Critically Endangered nocturnal cursorial bird found in Andhra Pradesh, India. It was considered to be extinct from the beginning of the 20th century until its rediscovery in 1986. Field research from 2000 resulted in a few new sites for the species within about 20 km of the previously known one and described relationships between Jerdon's courser abundance and habitat characteristics. However, increased human pressure on land use has resulted in loss of scrub jungle habitat at the fringes of the Sri Lankamaleswara Wildlife Sanctuary, where the species was found. From 2005, the construction of a large irrigation canal destroyed some of the newly discovered sites and has probably led to ecological changes at others sites. There have been no verified records of Jerdon's courser since 2008. The scrub jungle habitat at that site has deteriorated, possibly because of changes in levels of grazing and woodcutting resulting from the construction of the canal nearby. However, the species may not be extinct because many potentially suitable sites in the area have not yet been surveyed. It is imperative to safeguard the existing habitat from further deterioration as well as search in other areas to re-rediscover this elusive and enigmatic bird.</p>	<p>Speaker: P. Jeganathan</p> <p>P. Jeganathan is a scientist with Nature Conservation Foundation, Mysuru. He obtained his doctoral degree (through BNHS/University of Bombay) researching the Jerdon's Courser and its habitat. He likes listening, singing, and dancing for Telugu film songs.</p>
<p>Is the Forest Owlet a Specialist Species?</p> <p>The Forest Owlet is arguably the tiger of the bird world. However, we know very little about the Forest Owlet's ecology, while the tiger is perhaps one of the best-studied wild animals in India. Most discussions on the Forest Owlet revolves around its occurrence and conservation. In this talk, along with my co-authors, we hope to provide a deeper, broader perspective on the recent updates on the species' biology. Through this process, we hope to understand how this species has been losing out. We start with the evolution of the species, and the various climatic changes that the species with its co-distributed species faced. What may future climate change hold for this species? Is it the specialist that we always thought it to be? What new insights can new bioacoustics tools provide us? How can we use this to expand on conservation strategies for this species and similar such species?</p>	<p>Speakers: V. V. Robin, Shomita Mukherjee, Prachi Mehta, Pankaj Koparde, Viral Joshi, and Amruta Rajan</p> <p>V. V. Robin has been working on birds for the last 20 years, much of it on Shola Sky Islands. His research interests broadly cover patterns and processes in ecology, behavioural ecology, biogeography and evolutionary ecology. He uses bioacoustics, genetics and remote-sensing based GIS mapping as the primary tools for his research, some of which translates to conservation action. More on his work is at www.skyisland.in</p>

<p style="text-align: center;">PANEL DISCUSSION</p>	
<p>In pursuit of science and conservation: are we forgetting the role of natural history?</p> <p>Ecology, evolution, animal behaviour, genetics, and the newer and more specialised fields of science such as conservation biology owe much of their genesis to natural history and the observations and writings of early naturalists. Indigenous people have also</p>	<p>Panelists:</p> <p>Madhuri Ramesh, APU Nandini R., IISER-Tirupati Kavita Isvaran, CES, IISc Rohit Naniwadekar, NCF Kartik Shanker, CES, IISc, and Dakshin</p>

<p>been rich repositories of natural history and traditional ecological knowledge and have contributed immensely to our scientific understanding and field research. But is natural history itself now outdated and irrelevant to contemporary biologists--whether they work in the field, in the laboratory, or with statistical models? Is natural history unscientific, subjective, and unreliable? Or does it remain relevant as a lens for deeper and nuanced perceptions of nature, as windows of opportunity to fundamental discoveries and new observations? How relevant or essential are natural history observations for understanding our study species well enough and to work for their conservation?</p>	<p>Foundation (moderator)</p>
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<p>SESSION 2: Conservation in the Islands</p>	<p>Moderator: Manish Chandi</p>
<p>Efforts to conserve the Edible-nest Swiftlet and the Narcondam Hornbill in the Andaman and Nicobar Islands: A review</p> <p>The Edible-nest Swiftlet builds its nest by exclusively using its saliva, an expensive and widely-consumed animal product. A greater than 80% decline of the wild population noted in 1998 by Dr Ravi Sankaran led to immediate conservation measures for protecting the species in the Andaman and Nicobar Islands, including non-conventional in-situ and ex-situ conservation methods. Nest collectors were engaged through local Forest Department to protect the breeding caves in situ. The ex-situ plan was to attract the edible-nest swiftlet in the human-made structures for ranching, to reduce the pressure on the wild populations of the species. Despite the initial success of the population increase through prescribed approach between 1999 and 2002, the species was included in Schedule I of Wildlife Protection Act in September 2002. After the successful demonstration of these methods and satisfactory recovery of the wild population, the species was recommended for delisting from Schedule I of the Wildlife Act. During December 2013, the species was officially delisted, which affected the conservation program both positively and negatively.</p> <p>The endangered Narcondam Hornbill is endemic to the 6.82 sq. km. Narcondam Island, India. A recent survey of the Narcondam Hornbill depicted an almost three-fold increase in a number of individuals in the last 13 years. Immediate action taken by the local Forest Department following findings of a study conducted for a continuous period of 6 months on this isolated, uninhabited island in the Bay of Bengal is believed to be the primary reason for this increase. The study suggested the removal of feral goats and an end to poaching on the remote island. Removal of feral goats resulted in habitat regeneration and improvement, which along with protection from poaching possibly allowed the Narcondam Hornbill to not only survive but become the most common species on this island. It must be one of the best examples of effective and timely collaborative efforts by scientist and local conservation authorities, leading to the survival of an endangered island species.</p>	<p>Speaker: Shirish S. Manchi</p> <p>Shirish S. Manchi is working as the Principal Scientist at Sálim Ali Centre for Ornithology and Natural History, Coimbatore. He is a conservation scientist who was initially interested in bird conservation, especially the island endemics. He has 16 years of experience in the Andaman and Nicobar Islands, working towards conservation of the endemic and threatened birds like Edible-nest Swiftlet, Narcondam Hornbill and Andaman Serpent-eagle. During this course of work, he has developed an interest in Speleology (the study of caves). Presently, he is focussing on the conservation of the commercially significant swiftlets and the cave fauna in different parts of the country.</p>

<p>The Island Dilemma: Reconciling the Conservation of the Nicobar Megapode and Development</p> <p>Megapodes are a unique group of birds on the earth as they utilise external sources of heat to incubate their eggs. Historically the Nicobar megapode <i>Megapodius nicobariensis</i> occurred on most Nicobar Islands barring Car Nicobar, Chaura and Bati Malv. This globally threatened, small, isolated populations of the Nicobar megapode, currently categorized as Vulnerable on the IUCN Red List, have declined by c. 70% in 2006. The 2004 tsunami was believed to be the major cause of this decline. I estimated from a 2006 survey that 395–790 breeding pairs of the Nicobar megapode survived on the coasts of the various islands compared to 2,318–4,056 pairs in 1994. The populations were neither increased nor declined until 2012 but it had later declined with about 310 to 620 breeding pairs in 2018. The tsunami adversely influenced nest-site selection and mound-nest ecology. Restoration of suitable habitat is critical for the long-term viability of the Nicobar megapode. However, post-tsunami impacts such as the creation of large-scale plantations in coastal areas, hunting pressures, and recent proposals of the Government of India for island development further threaten the megapodes along with several other wildlife here. Significant levels of wildlife habitats have been occupied by tribals under the leadership of the tribal chiefs (known as Village Captain). Any conservation programme with the help of these Village Captains would be useful for implementing recovery plans of declining species. Proposed projects such as transshipment port at Galathea Bay, which is detrimental to megapodes and other endemic species, should be discouraged to safeguard this biodiversity hotspot.</p>	<p>Speaker: K. Sivakumar</p> <p>K. Sivakumar, Scientist, Wildlife Institute of India, Dehradun, has been studying insular, coastal and marine biodiversity for their conservation, particularly birds and mammals of the Southern Ocean and Antarctica. Being a member of the IUCN Invasive Species Specialist Group and the Galliformes Specialist Group, he has been involved in several research programmes in these subjects. He is involved in the teaching and training of postgraduate students, in-service forest officers and Ph.D. Scholars in wildlife techniques, ornithology, fish biology and conservation biology.</p>
<p>Sirens from the Sea: An Account of the Dugong Population from the Andaman and Nicobar Archipelago</p> <p>Curiosity to know more about the animal lead to the start of our research on dugongs and their seagrass habitats in 2007. Over the years, this resulted in findings about the animals that had not been known before, but were possibly typical of dugongs surviving at low numbers. The present dugong population of the archipelago occur in small, almost isolated pockets across the island chain. Fewer than fifty individuals are present in these waters and whenever sighted, have been solitary individuals or rarely in pairs. They persistently use a few seagrass meadows and this further exposes them to threats prevailing at the sites. Entanglement in fishing nets, high-speed boats and hunting by aboriginal tribes continue to affect the animal and its habitat. Our approach to conserve dugongs and their habitats has been to emphasize voluntary compliance rather than enforcement as a means to invoke behavioural change. By assessing threats to the animal and habitat and the suitability of the habitat, we have identified ways and are working with management authorities to conserve the remnant dugong population of the archipelago.</p>	<p>Speaker: Erika D'Souza</p> <p>Erika D'Souza is a Research Associate at the Nature Conservation Foundation, Mysore. Her team has been studying the dugong population of the Andaman and Nicobar archipelago for the past twelve years. Together with the Department of Environment and Forests, Port Blair, they are developing ways to monitor and protect the remaining population of dugongs and their habitat across the island archipelago.</p>

Lenewale aur denewale: Efforts to foster inclusive conservation networks in the Andaman Islands

One of the characteristic features of Ravi Sankaran's work was the enthusiasm with which he tried to fit into the social landscape of his study areas and the diversity of people whom he befriended. Such an approach, which takes social relations seriously, continues to be an essential component of any conservation programme although it can often be a challenging journey. In this talk, I would like to share two interlinked aspects beginning with an account of how Ravi's approach to fieldwork sparked my interest in political ecology. I will follow this up with a brief overview of how some of these ideas influence the way my colleagues and I work in the Andaman Islands, and how they can help foster inclusive conservation networks.

Speaker: Madhuri Ramesh

Madhuri Ramesh is an Assistant Professor at the School of Development, Azim Premji University. She has been involved in interdisciplinary studies in the Andaman Islands along with the Dakshin Foundation. Her main area of interest is the dynamic relationship between conservation and development.

Closing Session

The Archives at NCBS and the Ravi Sankaran Collection

The Archives at NCBS (<http://archives.ncbs.res.in/>) is a public collecting centre for the history of contemporary biology in India. We like to think of archives as spaces that enable diverse stories, whether that is a play or a poem or a grant proposal or a journal article. In addition, it has three main objectives going forward: continuing to build up archives as spaces to strengthen civic commons, a focus on education through archival material, and to build a broader consortium of science archives with a discovery layer for the public to find, describe and share archival material and stories. The Archives at NCBS is also home to the Ravi Sankaran papers. We'll give a short overview of what's in the collection, how it has been used and how it can connect to other histories within and beyond the Archives.

Speakers: Venkat Srinivasan & Sangeeta Dharmarajan

Venkat Srinivasan is a visiting researcher and archivist at the Archives, National Centre for Biological Sciences in Bangalore. Prior to this, he was a research engineer at the SLAC National Accelerator Laboratory, Stanford University. He is an independent science writer, with work in *The Atlantic* and *Scientific American* online, *Wired*, and *The Caravan*.

Sangeeta Dharmarajan was born and raised in Thiruvananthapuram. She is pursuing her undergraduate studies in History from the Madras Christian College, Chennai. She is passionate about history and all things old. She was an intern with the Archives at National Center for Biological Sciences, Bengaluru.