

## Electronic catalogue of known Indian fauna

India has a rich faunal diversity. According to recent surveys, there are estimated to be about 90,000 known faunal species (including Protozoa) in less than 50% of the geographical region of the nation surveyed so far<sup>1</sup>. The diversity of Indian biota has posed considerable challenge to generations of taxonomists in India and across the world. In addition to the two hot spots of diversity, the Western Ghats and north-east India, ecosystems such as islands, oceans, deserts and mountains scattered across India are rich in flora and fauna which are yet to be explored completely. Studies of natural history in India date back to more than 200 years, but taxonomy is still in the exploratory phase, as seen from the large number of new taxa described every year. Revised checklists of some vertebrate taxa have been published fairly recently. However, for many invertebrate taxa and marine phyla, work is far from completion. The information from these studies is distributed with several organizations and individuals, making it difficult to access adequate and accurate information on a variety of aspects of biodiversity. At present, there is no single repository to provide information such as scientific names, common names, occurrence of organisms and their spatial and temporal distribution. Users such as conservationists, policy makers, environmental managers and parataxonomists feel the need for this basic information about Indian biota. Taxonomists themselves often feel the necessity of single information source on Indian biota and quick access to

literature sources. Electronic cataloguing provides the best approach to compile and to integrate or exchange information.

NCL Centre for Biodiversity Informatics has taken up the development of an electronic catalogue (ECAT) for known Indian fauna. It is a coordinated and integrated approach to collect, maintain and provide information on Indian fauna in a web-interfaced format (<http://www.ncbi.org.in/biota/fauna/>). Our aim is to document and disseminate baseline information about all known fauna of India. Multiple cultures in India, with diverse lifestyles, habits, languages and dialects provide another dimension to documentation of biodiversity as a single species is known by a variety of local or vernacular names. The electronic catalogue can help overcome the geographic and language barriers in biodiversity information.

ECAT for known Indian fauna collates information on parameters such as valid/accepted scientific names, synonyms, common/local/vernacular names, latest taxonomic status and biogeographic occurrences for each known animal species. The data are collected from published literature, including research papers, faunas, monographs and web-based databases from reputed taxonomic institutions and individuals. So far, information has been compiled for almost 50% of the 90,000 known species.

We envisage that the ECAT, when complete, would be the most important and essential knowledge-set on Indian fauna. Our experience of collating data

for this catalogue indicates that ECAT on Indian fauna would make significant contribution to the Catalogue of Life (CoL), which GBIF plans to complete by 2013 (ref. 3). Further, it would help solve several issues such as taxonomic ambiguities, inadequate documentation and gaps in information availability. More importantly, such web-based electronic catalogues would encourage communication and collaborations amongst the scientific community. We appeal to the taxonomic community to participate in this initiative by helping us identify published sources of information from which information can be collated. Their support and active participation in taxonomic scrutiny is paramount for the authentic and accurate information accessibility through this electronic catalogue on known Indian fauna.

1. MoEF, National Biodiversity Strategy and Action Plan, October 2002.
2. *Faunal Diversity in India* (eds Alfred *et al.*), Zoological Survey of India, pp. 1–495.
3. GBIF, GBIF/ECAT Work Program, 2003.

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## Stealing of Sarus crane eggs

The Sarus crane (*Grus antigone*) is the only resident crane species in India and has a wide range of distribution in the country<sup>1</sup>. Land-use changes and degradation of wetlands due to agricultural expansion and industrial development are regarded the most serious threats to the crane<sup>2–4</sup>. The other threats include mortality due to collision with high-tension electric cables<sup>5</sup>, indiscriminate use of pesticides<sup>6</sup>, hunting<sup>7</sup>, and disturbance by

farmers in agricultural fields during the nesting period<sup>8</sup>. Egg-stealing of Sarus crane is a common practice all over its distribution range. It may be the largest factor affecting reproduction in Sarus cranes, but has not been documented systematically before<sup>3</sup>.

To determine the distribution and status of Sarus crane in India during the period from June 1998 to October 1999 in Haryana, Punjab, Uttar Pradesh, Gujarat, Raja-

sthan, Madhya Pradesh, Maharashtra and Bihar, we recorded instances of egg-stealing at different places. They were used for a variety of purposes ranging from food, medicine (for eye diseases and ailment of cattle)<sup>8</sup>, etc.

During 2000 in Rajasthan, it was interesting to note that the Sarus cranes in Kota bred twice a year, first during the onset of monsoon in July–October and later during February–May when the canal

## Summer congregation of Sarus crane with subadults.

**Table 1.** Data on egg-stealing from the nests

Breeding season	Total no. of nests	Egg-stealing from nests	Age of incubation
February–May 2000	7	2	Early
July–October 2000	19	9	Early
February–October 2001	23	2	Late

supported wetlands had abundant water supply. The breeding season resulted in the discovery of only a few nesting sites due to shortfall in rains. However, in the second half of the breeding season during the same year, breeding was observed in good numbers. The nesting Sarus pairs started facing threats from the migrant labourers who were involved in stealing the eggs from the nests. The locals, however, posed no threat to the birds because of their religious attachment with Sarus. The locals when told about the egg-stealing incidences, voluntarily came up for their protection. As a result, the second year nesting season saw a steep increase in the number of the nests and even in the survival of juveniles. While studying the breeding biology of Sarus crane in Kota district from February 2000 to May 2000, a total of seven nests were observed in human-induced

wetlands (canals). Among these, egg-stealing occurred in two nests. During July to October 2000, there were 19 nests and egg-stealing occurred in nine nests. In the 2001 breeding season a total of 23 nests were recorded among which egg-stealing occurred in two nests (Table 1).

To ascertain the reasons for stealing, farmers and cattle-grazers were interviewed during our visit to the field sites. About hundred local migrants were also interviewed. It was found that during paddy-sowing, eggs were removed for diet supplement. Egg shells were also used for curing seasonal fever, for eye treatment and childhood diseases. Some farmers removed the eggs to prevent disturbance in the agricultural field. Observations in Jammu and Kashmir (Purushottam, pers. commun.), Kota, Rajasthan (pers. obs.; Anil Nair, pers. commun.), and Maharashtra (Shegaonkar in

*litt.*) have shown that egg-stealing results in total breeding failure in Sarus.

Thus it can be said that the stealing of eggs is a major problem which has resulted in the decline of the crane population. The future of the Sarus crane requires conservation steps from villagers, officials, scientists, and prevention of egg-stealing is one of them.

1. Archibald, G. W. and Meine, C. D., In *Handbook of the Birds of the World, vol. 3. Hoatzin to Auks*, Lynx Editions, Barcelona, 1996, pp. 60–89.
2. Gole, P., *The Status and Ecological Requirements of Sarus Crane: Phase I*, Ecological Society, Pune, 1989.
3. Parasharya, B. M., Mathew, K. L. and Yadav, D. N., Paper presented at the Asian Crane Congress, Rajkot, Gujarat, 1989.
4. Meine, C. D. and Archibald, G. W., *The Cranes: Status, Survey and Conservation Plan*, IUCN, Gland, Switzerland, 1996.
5. Sundar, K. S. G. and Choudhury, B. C., *J. Bombay Nat. Hist. Soc.*, 2001, **98**, 108–110.
6. Muralidharan, S., *Hornbill*, 1992, **1992**, 3–7.
7. Thapa, V. J. and Parihar, *India Today*, 2 November 1998, pp. 60–66.
8. Sundar, K. S. G., Kaur, J. and Choudhury, B. C., *J. Bombay Nat. Hist. Soc.*, 2000, **97**, 319–339.

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