

Critically endangered Indian animals

India has a staggering variety of flora and fauna, including some of the rarest species on the planet. According to the 2011 quantitative evaluation done by the International Union for Conservation of Nature (IUCN), there are 57 critically endangered species of animals in India¹.

According to the IUCN conservation status, animals are primarily divided into three main categories: lower risk, threatened and extinct. These three categories are again divided into sub-categories, e.g. the lower risk category is divided into least concern, near threatened and conservation-dependent; the threatened category is divided into vulnerable, endangered and the critically endangered, and the extinct category is divided into extinct in the wild and extinct (http://en.wikipedia.org/wiki/Critically_Endangered). Critically endangered is the highest risk category assigned by the IUCN Red List for wild species. Critically endangered means that the number of a given species has decreased, or will decrease by 80% within three generations².

On a broad scale, a taxon is critically endangered when the best available evidence indicates that it meets any of the following criteria: populations have declined or will decrease by greater than 80% over the last 10 years or three generations; have a restricted geographical range; small population size of less than 250 individuals and continuous decline at 25% in 3 years or one generation, and very small or restricted population of fewer than 50 mature individuals and a high probability of extinction in the wild.

The main reasons behind the threat to the animals are human disturbance, modification, degradation and loss of habitat, illegal hunting, pesticide pollution, drastic weather changes, natural disasters like tsunami and disturbance from tourism and recreational activities.

The Ministry of Environment and Forests (MoEF), Government of India, in collaboration with the Zoological Survey of India released a comprehensive document on critically endangered animal species of the country on 9 March 2011. Jairam Ramesh, Minister of MoEF said, 'There is so far a paucity of information for the general public on the status, biology and major threats to the endangered species of our country. This booklet on critically endangered animal species of

Table 1. Critically endangered animal species of India

Birds
Jerdon's Courser, <i>Rhinoptilus bitorquatus</i>
Forest Owlet, <i>Heteroglaux blewitti</i>
White-bellied Heron, <i>Ardea insignis</i>
White-backed Vulture, <i>Gyps bengalensis</i>
Slender-billed Vulture, <i>Gyps tenuirostris</i>
Long-billed Vulture, <i>Gyps indicus</i>
Red-headed Vulture, <i>Sarcogyps calvus</i>
Bengal Florican, <i>Houbaropsis bengalensis</i>
Himalayan Quail, <i>Ophrysia superciliosa</i>
Pink-headed Duck, <i>Rhodonessa caryophyllacea</i>
Sociable Lapwing, <i>Vanellus gregarius</i>
Spoon-Billed Sandpiper, <i>Eurynorhynchus pygmeus</i>
Siberian Crane, <i>Grus leucogeranus</i>
Mammals
Pygmy Hog, <i>Porcula salvania</i>
Andaman White-toothed Shrew, <i>Crocidura andamanensis</i>
Jenkin's Andaman Spiny Shrew, <i>Crocidura enkinsi</i>
Nicobar White-tailed Shrew, <i>Crocidura nicobarica</i>
Kondana Rat, <i>Millardia kondana</i>
Elvira Rat, <i>Cremnomys elvira</i>
Namdapha Flying Squirrel, <i>Biswamoyopterus biswasi</i>
Malabar Civet, <i>Viverra civettina</i>
Sumatran Rhinoceros, <i>Dicerorhinus sumatrensis</i>
Javan Rhinoceros, <i>Rhinoceros sondaicus</i>
Amphibians
Anamalai Flying Frog, <i>Rhacophorus pseudomalabaricus</i>
Gundia Indian Frog, <i>Indirana gundia</i>
Kerala Indian Frog, <i>Indirana phrynoderma</i>
Charles Darwin's Frog, <i>Ingerana charlesdarwini</i>
Kottigehar Bubble-nest Frog, <i>Micrixalus kottigeharensis</i>
Amboli Bush Frog, <i>Pseudophilautus amboli</i>
Chalazodes Bubble-nest Frog, <i>Raorchestes chalazodes</i>
Reptiles
Gharial, <i>Gavialis gangeticus</i>
Hawksbill Turtle, <i>Eretmochelys imbricate</i>
Leatherback Turtle, <i>Dermochelys coriacea</i>
Four-toed River Terrapin, <i>Batagur baska</i>
Bengal Roof Turtle, <i>Batagur kachuga</i>
Sispara Day Gecko, <i>Cnemaspis sisparensis</i>
Spiders
Rameshwaram Parachute Spider, <i>Poecilotheria hanumavilasumica</i>
Peacock Tarantula, <i>Poecilotheria metallica</i>
Corals
Fire corals, <i>Millepora boschmai</i>
Fish
Pondicherry Shark, <i>Carcharhinus hemiodon</i>
Ganges Shark, <i>Glyphis gangeticus</i>
Knife-tooth Sawfish, <i>Anoxypristis cuspidate</i>
Large-tooth Sawfish, <i>Pristis microdon</i>
Narrow-snout Sawfish, <i>Pristis zijsron</i>

India catalogues and shares information on these species, presented in a concise and visually appealing format. This booklet will raise the level of awareness

among people from all walks of life and strengthen our efforts at conservation.'

Out of 57 critically endangered species, MoEF has taken up interventions

for nine species and their respective habitats. Recovery programmes are ongoing for the Leatherback turtles and marine ecosystems, Malabar Civet and low elevation moist forests of the west coast, floricans and grasslands, four species of critically endangered vultures, and the Jerdon's Courser. The first meeting of the National Tri-State Coordination Committee for the Conservation of the Gharial was held recently, and a recovery programme is being formulated by leading wildlife scientists across the country.

Project Tiger, Project Elephant and Integrated Development of Wildlife Habitats are three centrally sponsored

schemes. One of the components under the Integrated Development of Wildlife Habitats provides recovery programmes to save critically endangered species and their habitats. The preparation of recovery plans involves assessing the current status of species and preparation of a year-wise five-year plan in collaboration with a reputed scientific institution.

There is an urgent need to better understand the ecological needs of the other critically endangered species in India and design relevant scientific conservation interventions. For instance, the Chala-zodes Bubble-nest Frog (*Raorchestes chalazodes*) was recently re-discovered after 135 years in February 2011. In

addition, there are many other species that have been assigned as data deficient and not listed in any of these categories. More studies are needed to obtain basic information to assess the status of these species³.

1. Report, Ministry of Environment and Forests (MoEF), Government of India and Zoological Survey of India, March 2011.
2. Black, R., *BBC News*, 1 September 2005.
3. Press Brief, MoEF, Government of India, 9 March 2011.

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Lights and shades of science

To celebrate the unique amalgamation of science and art in the medium of photography, and to look at the complex world

of science and technology with fresh eyes, so that a 'visual dialogue' could be initiated, an exhibition was organized by

Shri R. R. Mehta Educational Trust and supported by the National Council for Science and Technology Communication and the Department of Science and Technology, Government of India. The exhibition, held at the All India Fine Arts and Crafts Society in New Delhi, is a result of the only national science photography contest in India.

Apart from the first three prizes, 10 consolation prizes in each category were also awarded (Figure 1) during the inauguration ceremony on 9 April 2011, presided over by K. Kasturirangan.

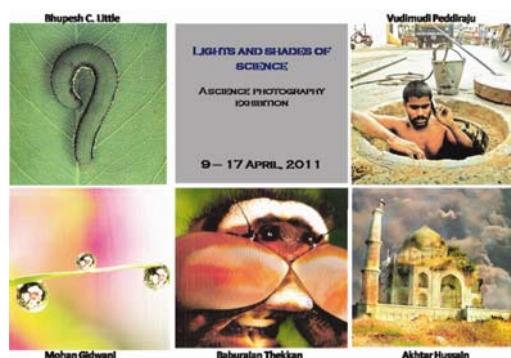


Figure 1. First prize in different categories: In the 'Science in action' category to Bhupesh C. Little for his 'caterpillar question'; in the 'Science as art' category to Mohan Gidwani for his 'A fine balance'; in the 'Science close-up' category to Baburajan Thekkan for his picture of the compound eyes of a dragonfly; in the 'Concepts' category to Akhtar Hussain for his 'Love tarnished', and in the 'Science and society' category to Vudimudi Peddiraju for his 'Wherever you go'.

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