



ZOOLOGICAL SURVEY OF INDIA

Ministry of Environment and Forests
Government of India



India is recognized as one of the seventeen mega diversity countries of the world sharing four of the global biodiversity hot spots - the Himalaya (northwestern and northeastern states of India), Indo-Burma (across north-eastern India, south of the Bramaputra River), Western Ghats and Sri Lanka (the Western Ghats of southwestern India) and the Sundaland (the Nicobar Islands). There are about 1.7 million living species described from all over the world and another 15 million species are expected to be discovered. In India till date nearly 92,000 species of animals have been described, but a large number of species are yet to be discovered especially from the lower invertebrate groups occurring in various ecosystems.

Faunal Resources of India

India is very rich in terms of biological diversity due to its unique biogeographical location, diversified climatic conditions and enormous ecodiversity and geodiversity. According to world biogeographic classification, India represents two of the major realms (the Palaearctic and Indo-Malayan) and three biomes (Tropical Humid Forests, Tropical Dry/Deciduous Forests and Warm Deserts/Semi-Deserts). With only about 2.4% of world's total land surface, India is known to have over 7.50% of the species of animals that the

world holds and this percentage accounts nearly for about 92,000 species so far known.

The Zoological Survey of India (ZSI) was established on 1st July, 1916 to promote survey, exploration and research leading to the advancement in our knowledge on various aspects of the exceptionally rich animal diversity of the Indian subcontinent. The survey has its genesis in the Museum of the Asiatic Society of Bengal (1814-1875) and the Zoological Section of the Indian Museum (1875-1916) in Kolkata. By gradually strengthening its staff and expanding its research programmes, the Survey has met the challenge of the past and is on its way to meet the demands of the future. It has maintained its primary objectives of taxonomic research, survey and documentation of Indian fauna from its inception. The scope and functions of ZSI have been considerably expanded, particularly in the light of the Convention on Biological Diversity, ratified by the Govt. of India in 1994. To meet the challenges of biodiversity conservation, sustainable utilization and dissemination of knowledge on faunal diversity to all stake holders, recently, the Survey acquired modern tools and techniques such as scanning electron microscopes, digital stereo zoom microscopes, GIS tools, Data basing tools and the DNA bar coding technology, augmenting the research infrastructure of ZSI.





There is an increasing interest in matters pertaining to animal life on the part of the public, and a constant stream of enquiries continue to pour in, reflecting public confidence in the Institute. The organization therefore provide regularly identification and advisory services to all research establishments including more than two hundred universities in India, free of cost. Zoological Survey of India therefore plays the role of a mother institute in the field of faunal research.

Regional Centres

Sixteen Regional Centres of ZSI were established during the various five year plans across the country. Each Centre has been assigned with the mandatory action plans and programmes for the exploration cum scientific documentation of the faunal resources in the varying ecosystems of the country.

The List of Regional Centres with their year of establishment is as given below:

1. North Eastern Regional Centre, Shillong (Estd. 1959)
2. Western Regional Centre, Pune (Estd. 1959)
3. Central Zone Regional Centre, Jabalpur (Estd. 1960)
4. Desert Regional Centre, Jodhpur (Estd. 1960)
5. Northern Regional Centre, Dehra Dun (Estd. 1960)
6. Southern Regional Centre, Chennai (Estd. 1961)
7. Gangetic Plains Regional Centre, Patna (Estd. 1965)
8. High Altitude Regional Centre, Solan (Estd. 1968)
9. Marine Biology Regional Centre, Chennai (Estd. 1973)
10. Andaman and Nicobar Regional Centre, Port Blair (Estd. 1975)
11. Freshwater Biology Regional Centre, Hyderabad (Estd. 1979)
12. Sunderbans Regional Centre, Canning (Estd. 1979)
13. Estuarine Biology Regional Centre, Ganjam (Estd. 1980)



14. Western Ghat Regional Centre, Kozhikode (Estd. 1980)
15. Arunachal Pradesh Regional Centre, Itanagar (Estd. 1983)
16. Marine Aquarium cum Regional Centre, Digha (Estd. 1989)

Headquarters

The Headquarters office of ZSI, the 'PRANI VIGYAN BHAWAN', is situated at New Alipore, Kolkata, West Bengal. Different Scientific and administrative divisions of ZSI are housed in the Headquarters office at Kolkata. Some of the scientific divisions are functioning also from the Fire Proof Spirit Building in the Indian Museum compound, Kolkata.

Technical divisions and Sections

Training and Extension Division, Information and Documentation Division, Computer Centre, Publication Division, Photography Section, Art Section and Library Section are also present in the Headquarters of ZSI.

The Principal Thrust Areas of work are, 1. Faunal inventorisation of States and Union Territories of India, 2. Faunal inventorisation of various Ecosystems of the country, 3. Faunal inventorisation of conservation areas, 4. Status survey of endangered species, 5. Ecological and Behavioral studies of selected animals and 6. Studies on the Animals Remains/fossils of India.

National Zoological Collection (NZC)

Zoological Survey of India has been declared as the Designated Repository for the National Zoological Collection as per section 39 of the National Biodiversity Act, 2002. Over four million zoological specimens including 17,000 Type Specimens are maintained in the National Zoological Collections. Many of the specimens in the collections of ZSI are more than 200 years old. Scientists from different parts of India and abroad regularly visit ZSI Headquarters to study the zoological collections. Digitization of the National Zoological Collections has been undertaken on a priority





basis, including digital imaging of the specimens. Preparation of pictorial catalogues of zoological collections, particularly of the Type Specimens has also been under taken.

Molecular Systematic Laboratory

In order to genetically characterize species and their variations in natural population, studies dealing with chromosomal mapping, Polymerase Chain Reaction (PCR) and DNA Barcoding have been taken up by ZSI. Accordingly a Molecular Systematic Laboratory has started functioning in the Headquarters office as well as in the Regional Centres of ZSI at Hyderabad, Pune, Chennai and Dehradun.



Publications

The Research contributions of scientists from ZSI and other institutes are being published regularly by the Publication Division of ZSI. Altogether 1392 volumes of Publications belonging to 16 different series have been produced by ZSI.

Training and Extension Services

ZSI arrange training programmes, symposia seminars etc. regularly on different topics like Leadership course on



Collection, Preservation and Identification of Insects and Mites of Economic Importance, Seminar on Global Warming: Climate Change and Sustainable Development, Leadership Course on Environmental Awareness of Protected areas and Conservation of Wildlife, Earth Day Celebration, Biodiversity day celebration, World Environment day celebration, Wildlife Week, Field Ornithology Training, Training Course on "Collection, Preservation and Identification of Zoological Specimens" etc.

Museum Taxidermy Activities

The zoological Galleries of the Indian Museum, Kolkata are being maintained by the trained personnel of ZSI. A large number of exhibits, both invertebrates and the vertebrates, are on display including animals from various continents. Up keeping of the museum galleries is a regular activity of the Museum taxidermy division. The museum division also regularly participates in different exhibitions related to biodiversity where audiovisuals and taxidermy specimens are being displayed to generate public awareness on biodiversity conservation.

Support to Wildlife Crime Control Bureau

Confiscated faunal materials are regularly being received by different sections of the Headquarters, through the judiciary for identification and the identification reports are provided regularly to the Judiciary for the sake of appropriate implementation of different conservation laws including the Indian Wildlife (Protection) Act, 1972.

Trichotaxonomy

This is the branch of Taxonomy which has been developed in ZSI headquarters in the recent times, where upon only a hair of an animal can provide sufficient information to justify its identity. This tool has become a great help in identifying the finished products from illegally procured mammalian materials, as seized by the law enforcing authorities, like paint brush, fur coat, ladies bag etc.

Support in Conservation

ZSI has always provided able support in the process of conservation of faunal resources by establishing the faunal components of different protected areas. Status surveys of endangered species also help largely in the process of their conservation. Recently studies were undertaken on the possible introduction of critically endangered animal species, in North Bengal. This study has been conducted in collaboration with the regional forest department.

Library Services

The largest library on the science of Zoology and related subjects is housed in the Headquarters of ZSI. The library has over 1,00,000 volumes of books, bound and unbound journals. There are 400 titles of rare books from the year 1547. 40 Indian and 24 foreign journals are subscribed. More than

120 journals are collected under the foreign and Indian exchange programme. Many rare drawings and paintings and an original volume of 'Systema Naturae' by Carolus Linnaeus are in the collection of the library. Readers are provided all support including reprography facilities. Large numbers of departmental and outside readers from all over India are benefited from the precious collections of the library. Development of an institutional Repository of ZSI publications and rare documents is under process. Procurement of e-journals for centralized e-library has been undertaken.



ENVIS

ZSI Headquarters is functioning as the host of the Environmental Information Service (ENVIS) on faunal diversity in India. The primary objectives of ENVIS are, to build up storage, retrieval and dissemination capabilities, with ultimate objective of dissemination of information speedily to the users in the field of animal diversity; to provide national environmental information service relating to the fauna of the country; to promote national and international co-operation and Liaison for exchange of information relating to the subject area; to promote exchange of information relating to the subject area amongst developing countries and to promote, support and assist education and personal training programmes designed to exchange animal biodiversity related information processing and utilizing capabilities.

ENVIS is regularly bringing out Newsletters, Bibliographic references and documents related to the faunal diversity and responding to queries by supplying substantive

information on faunal diversity in the form of published reports, extracts and other unpublished and analyzed information. Initiatives have also been taken to build a consortium of workers on faunal diversity from all corners of India, where upon all related works of all the workers shall be placed on an e-platform for easy accessibility to all the viewers which is also intended to build a network of communications amongst all such scientists throughout India.

ZSI Vision 2020

Vision 2020 is the proposed action framework of ZSI for the next 10 years, till 2020. This framework focuses on nine different areas of action and is developed to achieve better planning so as to ensure systematic implementation to achieve targets on time. This is developed in accordance with the various legislations that have been enacted and policies and action plans at the National Level and also the recommendations as well as reports of the special task force constituted at the National level, that have direct relevance with the faunal diversity of the country such as the Wildlife (Protection) Act, 1972; Biological Diversity Act, 2002; Coastal Regulation Zone Notification, 1991; National Forest Policy, 1988; National Environment Policy, 2006; National Biodiversity Action Plan, 2008; National Action Plan on Climate Change, 2008; India's Fourth National Report to the Convention on Biological Diversity, 2009; Report of the Task Force on Mountain Ecosystems and also on Grasslands and Deserts by The Planning Commission (Environment and Forests Division), 2006 and National Report on Wetlands, 2009.

Objectives of ZSI Vision 2020 :

1. Strengthening the faunal inventorying of India.
2. Studies on Invasive Alien fauna in India.
3. Development of National Faunal Databases.
4. Digitization of Natural History Collections.
5. Introduction and integration of Cyber Taxonomy.
6. Integration of DNA Barcoding studies on relevant taxa.
7. Geographical Information System Cell.
8. Launching Major Taxonomic Initiatives for Taxonomists.
9. Capacity Building Strategy in Animal Taxonomy.



For more details visit <http://www.zsi.gov.in>