

FAUNAL DIVERSITY IN INDIA

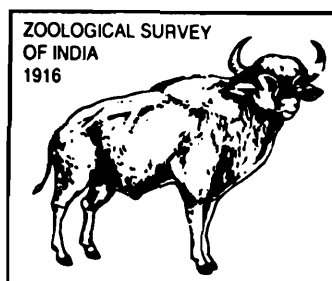
*A Commemorative Volume in the 50th Year
of India's Independence*

Edited by

J. R. B. Alfred

A. K. Das

A. K. Sanyal



**ENVIS Centre
Zoological Survey of India
Calcutta
1998**

CITATION

Editors—Alfred et. al., 1998. *Faunal Diversity In India*, i–viii, 1–495
(Published—ENVIS Centre, Zoological Survey of India, Calcutta)

Published : July, 1998

ISBN 81–85874–19–0

© Govt. of India, 1998

ALL RIGHTS RESERVED

- No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- This book is sold subject to the condition that it shall not, by way of trade, be lent, re-sold hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which it is published.
- The correct price of this publication is the price printed on this page. Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

PRICE

Indian Rs. 600.00

Foreign \$ 50 £ 40

Published at the ENVIS Centre by the Director, Zoological Survey of India
M-Block, New Alipore, Calcutta–700 053.

Faunal Diversity in India : Mammalia

V. C. AGRAWAL

Zoological Survey of India, 'M' Block, New Alipore, Calcutta – 700053





INTRODUCTION

One of the most fascinating features of the Indian biodiversity is its mammalian fauna, which encompasses species as large as whales, elephants, rhinoceroses and tigers, and as small as shrews, mice and bats. They are found in all types of habitats of the country, both terrestrial and aquatic. They may be volant, arboreal, ground dwelling, fossorial or aquatic in habits. Each species has its own unique set of characteristics enabling it to survive in its particular environment.

The term 'mammals' refers to animals possessing mammary or milk producing glands for nourishing their young ones. Another important feature of the group is the possessing of hairs on the body at least during some period of their life cycle.

STATUS OF THE TAXON

Global and Indian Status

The mammalian fauna of the world is represented by 4629 species belonging to 1135 genera, 136 families and 26 orders (Wilson and Reeder, 1993). Of these, 390 species belonging to 180 genera, 42 families and 13 orders are found in the Indian Union. Another 13 orders do not occur in our country. The egg-laying mammals belonging to the order Monotremata are found only in Australia, Tasmania and New Guinea; 7 orders of Marsupials in Australia, Indonesia and South America, orders Hyracoidea, Tubulidentata and Macroelideia in Africa; order Xenarthra in South America; and order Dermoptera in Java, Sumatra and the Philippines.

DISTRIBUTION

Mammals are found in all types of habitats, from snowy heights of the Himalayas to the plains, from thick rain forests to the arid region, and from

terrestrial to aquatic realm. The Indian aquatic mammals mainly belong to orders Cetacea and Sirenia. All the cetaceans found in India except the Gangetic Dolphin, *Platanista gangetica*, which is a freshwater form, are marine. The chiropterans (bats) are fliers. Of all the ecosystems in India, the mammalian fauna is richest in the northeastern India, followed by Western Ghats, Eastern Ghats, and the Desert. The Indian fauna is heavily influenced by the Indo-Chinese, Malayan, Ethiopian and Palaearctic elements.

The past distribution of mammals, in India, is not strikingly different from the present one, except that a few species like the Hunting Leopard (*Acinonyx jubatus veneticus*) and the lesser one-horned Rhinoceros (*Rhinoceros sondaicus*) have become extinct, and about 50% of the species have shrunk in their distributional range due mainly to destruction of habitat, and their exploitation for various purposes.

BIOLOGICAL DIVERSITY AND ITS SPECIAL FEATURES

An order-wise break up of families, genera and species found in India (*vide* Wilson and Reeder 1993) as against the total number found throughout the world is given below. However, the orders not represented in India but found elsewhere have not been mentioned here.

Table - 1

Orders	Families		Genera		Species	
	India	World	India	World	India	World
Insectivora	3	7	11	66	28	428
Scandentia	1	1	2	5	3	19
Chiroptera	6	17	36	177	110	925
Primates	3	13	6	60	15	233
Pholidota	1	1	1	1	2	7
Carnivora	7	11	33	129	55	271
Proboscidea	1	1	1	2	1	2
Sirenia	1	2	1	3	1	5
Perissodactyla	2	3	2	6	3	18
Artiodactyla	5	10	20	81	32	220
Lagomorpha	2	2	3	13	10	80
Rodentia	4	29	43	443	101	2021
Cetacea	6	10	21	41	29	78
Total	42	107	180	1027	390	4307

Introduced species

The House mouse (*Mus musculus*) and the Norway rat (*Rattus norvegicus*) have reached India through human agencies and established here. In addition, the Andaman and Nicobar Islands are the only areas where some species of mammals are said to have been introduced in the past from the mainland by human beings (Tikader & Das 1985). These species are the Crab-eating Macaque (*Macaca fascicularis*), Pig-tailed Macaque (*Macaca nemestrina leonina*), Jungle Cat (*Felis chaus*), Chital (*Axis axis*), Barking Deer (*Muntiacus muntjak*), Sambar (*Cervus unicolor*) Palm Civet (*Paguma larvata*), Wild pig (*Sus scrofa*), Elephant (*Elephas maximus*), Northern Palm Squirrel (*Funambulus pennanti*), rats and mice. Of these, the Crab-eating Macaque, Chital, Palm Civet and Wild Boar and various species of rats have established themselves well, so much so that, of late, chital became a pest of crops. However, rest of the species, could not adequately adapt themselves, and hence, in the course of time either disappeared or are present in negligible number. Some of the captive elephants escaped into the jungle and formed small herds of their own and started roaming in the wild.

Domestic species

The pariah dog (*Canis familiaris*), domestic cat (*Felis catus*), ass (*Equus asinus* and *E. caballus*), pig (*Sus domesticus*), camel (*Camelus dromedarius*), cow (*Bos frontalis*), buffalo (*Bubalus bubalis*), sheep (*Ovis aries*), goat (*Capra hircus*), yak (*Bos grunniens*) and mithun are domesticated species which occur in India.

Human-Mammal Relationship

The knowledge about the Indian mammals is very old. Descriptions of some mammals are available in the Vedas and even in the prevedic edicts. There are ethical, social, mythological and economic relationship between man and wild mammals. Authorities of Ayurvedic and Unnani medicines were aware of medicinal values of some products obtained from certain species of mammals. Some species of monkeys like the Rhesus macaques and the Norway rats are used in experiments of biomedical research. A number of species of rodents are reservoirs of many of the dreadful diseases of man and livestock.

Some species of mammals such as rats, hanuman langur, gaur (bull), elephant, tiger, lion, etc., have special mythological significance amongst Hindus. This is due to their being associated with different gods and goddesses in the Hindu mythology, and, hence, are worshipped.

Table – 2
Monotypic genera and their species found in India

Order	Species
Insectivora	<i>Anourosorex sqamipes</i> , <i>Nectogale elegans</i> , <i>Parascaptor leucura</i> and <i>Feroculus feroculus</i>
Scandentia	<i>Anathana ellioti</i>
Chiroptera	<i>Otonycteris hemprichi</i> , <i>Sphaerias blanfordi</i> , <i>Latidens salimalii</i> and <i>Scotozous dormeri</i>
Primates	<i>Loris tardigradus</i>
Carnivora	<i>Helarctos malayanus</i> , <i>Cuon alpinus</i> , <i>Melursus ursinus</i> , <i>Aliurus fulgens</i> , <i>Arctonyx collaris</i> , <i>Mellivora capensis</i> , <i>Arctogalidea trivirgata</i> , <i>Paguma larvata</i> , <i>Arctictis binturong</i> , <i>Neofelis nebulosa</i> , <i>Acinonyx jubatus</i> , <i>Lutrogale perspicillata</i> , <i>Hyaena hyaena</i> , <i>Pardofelis marmorata</i> , <i>Viverricula indica</i> , <i>Caracal caracal</i> , <i>Otocolobus manul</i> and <i>Lynx lynx</i> .
Proboscidea	<i>Elephas maximus</i>
Sirenia	<i>Dugong dugon</i>
Artiodactyla	<i>Boselaphus tragocamelus</i> , <i>Tetracerus quadricornis</i> , <i>Antilope cervicapra</i> , <i>Budorcas taxicolor</i> and <i>Pantholops hodgsonii</i>
Rodentia	<i>Biswamoyopterus biswasi</i> , <i>Eupetaurus cinereus</i> , <i>Platacanthomys lasiurus</i> , <i>Cannomys badius</i> , <i>Hadromys humei</i> , <i>Golunda ellioti</i> , <i>Dacnomys millardi</i> , <i>Diomys crumpi</i> , <i>Nesokia indica</i> and <i>Micromys minutus</i>
Lagomorpha	<i>Caprolagus hispidus</i>
Cetacea	<i>Tursiops truncatus</i> , <i>Steno bredanensis</i> , <i>Peponocephala electra</i> , <i>Delphinus delphis</i> , <i>Grampus griseus</i> , <i>Lagenodelphis hosei</i> , <i>Orcinus orca</i> , <i>Globicephala macrorhynchus</i> , <i>Ziphius cavirostris</i> , <i>Orcaella brevirostris</i> , <i>Psudorca crassidens</i> , <i>Feresa attenuata</i> , <i>Neophocaena phocaenoides</i> , <i>Physeter macrocephalus</i> and <i>Megaptera novaeangliae</i>

ENDEMICITY

Out of 180 genera of Indian mammals, 61 genera are monotypic (Table 2) and 105 are represented in India by a single species. Of these, 10 genera namely, *Scotozous* (Chiroptera), *Loris* (Primates), *Melursus* (Carnivora), *Antilope*,

Boselaphus, *Tetracerus* and *Pantholops* (Artiodactyla), *Eupetaurus* and *Golunda* (Rodentia) and *Caprolagus* (Lagomorpha) are endemic to Indian subregion, and another 4 genera, namely, *Anathana* (Scandentia), *Latidens* (Chiroptera) and *Biswamoyopterus*, and *Platacanthomys* (Rodentia) are endemic to the Indian Union. At specific level, 36 species (Insectivora—4, Scandentia—2, Chiroptera—9, Primates—3, Carnivora—4, Artiodactyla—1, Rodentia—13) are endemic, of which 9 species are localised to Andaman and Nicobar groups of islands, 14 species to Western Ghats, 7 species to peninsular India, 4 species to northeastern India and the rest two to Western Himalaya (Table – 3).

Table – 3

List of mammalian species endemic to the Indian Union

Order	Species
Andaman & Nicobar Islands	
Insectivora :	<i>Crocidura jenkinsi</i> , <i>Crocidura andamanensis</i> , <i>Crocidura hispida</i> and <i>Crocidura nicobarica</i>
Chiroptera :	<i>Pteropus faunulus</i> and <i>Rhinolophus cognatus</i>
Rodentia :	<i>Rattus stoicus</i> and <i>Rattus palmarum</i>
Scandentia :	<i>Tupaia nicobarica</i>
Western Ghats	
Chiroptera :	<i>Latidens salimalii</i> , <i>Otomops wroughtoni</i> and <i>Hipposideros hypophyllus</i>
Primates :	<i>Macaca silenus</i> and <i>Trachypithecus johnii</i>
Carnivora :	<i>Paradoxurus jerdoni</i> and <i>Viverra civettina</i>
Artiodactyla :	<i>Hemitragus hylocrius</i>
Rodentia :	<i>Funambulus tristriatus</i> , <i>Platacanthomys lasiurus</i> , <i>Millardia kondana</i> , <i>Rattus ranjiniae</i> , <i>Mus famulus</i> and <i>Cremnomys elvira</i>

Peninsular India

- Scandentia : *Anathana ellioti*
Primates : *Macaca radiata*
Chiroptera : *Hipposideros schistaceus*
Carnivora : *Martes gwatkinsii*
Rodentia : *Ratufa indica, Cremnomys cutchicus and Mus phillipsi*

Western Himalaya

- Chiroptera : *Murina grisea*
Rodentia : *Alticola montosa*

Northeastern India

- Chiroptera : *Eptesicus tatei and Rhinolophus mitratus*
Carnivora : *Herpestes palustris*
Rodentia : *Biswamoyopterus biswasi*

THREATENED SPECIES

Of a total of 390 species of mammals reported from India, 175 species are threatened with extinction, But the degree of threat varies, and on that basis 75 species have been listed in Schedule I, 73 in Schedule II, 8 in Schedule III and 19 in Schedule IV of the Wild Life (Protection) Act (Appendix III). Of the 75 species in Schedule I, two species namely, the Hunting Leopard and the Lesser One-horned Rhinoceros are supposed to be extinct from India, and 32 species are highly endangered. These species are Lion-tailed Macaque, Phayre's Leaf Monkey, Hoolock Gibbon, Chinese Pangolin, Malayan Sun Bear, Red Panda, Ratel, Malabar Civet, Desert Cat, Marbled Cat, Pallas Cat, Golden Cat, Rusty-spotted Cat, Caracal, Indian Lion, Snow Leopard, Great one-horned Rhinoceros, Indian Wild Ass, Kiang, Pigmy Hog, Musk Deer, Thamin, Hangul, Swamp deer, Four-horned Antelope, Yak, Indian Buffalo, Himalayan Tahr, Markhor, Nilgiri Tahr, Hispid Hare, and Small Travancore Flying Squirrel (Agrawal *et al.* 1991). From Table 4, it is clear that practically all the species of mammals except insectivores, tree-shrews, bats and murid rodents are threatened, of course to a varying degree.

Table - 4

Number of endangered species of mammals (order-wise) in India

Orders	Total No. of known Species from India	No. of endangered species			
		I	II	III	IV
Insectivora	28	—	—	—	1
Scandentia	3	—	—	—	—
Chiroptera	110	—	—	—	—
Primates	15	9	6	—	—
Carnivora	55	28+(1)	21+(4)	—	6+(1)
Artiodactyla	32	24	—	8	—
Perissodactyla	3	3	—	—	—
Cetacea	29	3	26	—	—
Sirenia	1	1	—	—	—
Proboscidea	1	1	—	—	—
Lagomorpha	10	1	—	—	9
Rodentia	101	2	16	—	2
Pholidota	2	2	—	—	—
Total	390	75	73	8	19

Figures within brackets denote subspecies.

VALUE

Mammals are friends as well as foes to mankind. Large scale destruction of crops is caused by rodents, monkeys, langurs, deer, antelopes, wild boars, hares, elephants, etc. Fruit-bats and squirrels cause damage to orchards. On the other hand, many of the mammalian species are exploited by human beings for their skin, fur and wool (deer, antelopes, large and small cats, sheep), horns and antlers (rhinoceros, cervids and bovids), tusks (elephants), musk (musk deer) liver and gall bladder (bears), bezoar, meat and oil (whales), etc. Above all many of the species are killed for their meat value. The bones of tigers are used in the preparation of medicine and soup in China. Whales and dolphins are captured for their oil, fins are used for soup, skin for making leather and the flesh as fish meal and manure. Tamed elephants are used for dragging logs, carrying people in difficult terrains and form part of the royal processions. The domesticated species are used as pets, beasts of burden etc., and are a good source of wool, meat and milk.

THREATS

The human population of India which is about 17% of the total humanity of the world is highly disproportionate keeping in view the land area of the country which is hardly 2% of the world's total land mass (Jairajpuri 1991). Still it is increasing with a galloping rate. This has necessitated developments in various spheres like the urbanisation, construction of dams and hydro-electric projects, encroachment of land for agriculture, industry, mining operation, etc., which have brought severe imbalances in several ecosystems particularly the forests and wetlands of the country. The result is that the forest resources of the country have declined to about 22% of the total geographical area. This, in turn, has severely effected the wildlife. Further, the undue exploitation of several species of wild animals and their parts for trade, medicinal purposes and flesh have threatened many of them to a point of no return. Competition for food and transmission of diseases by domestic livestock are other threats to herbivores, particularly to cervids and bovids.

The threats to dolphins in Indian waters are due to the prevalence of gill-net fishery along the Sri Lankan coast and their vulnerability to fishing gears, and reckless killing along the southeast coast of India. Further, fast deterioration of ecology due to anthropomorphic activities is aiding in the disappearance of whales and dolphins from the Indian coasts.

CONSERVATION

The primary concern of conservation is to maintain a balanced ecosystem. If the latter is preserved, animal species contained in these ecosystems will have greater chances of survival. To achieve this goal, a network of scientifically managed wildlife protected areas in representative biogeographical regions have been established in India where the forestry operations and other usages such as grazing by domestic livestock are completely banned. About 151, 342 sq. km. or 4.6% of the total land area of the country is proposed to be gradually brought under this network, from an area of 109,652 sq. km. or 3.3% during 1987 (Jairajpuri, 1991).

In order to conserve whatever remains of our wildlife, the Government of India has taken various steps aimed at prohibiting killing, trapping or collecting by any other means of such species of animals which are endangered or rare, and at regulating exploitation of those species which, though apparently in abundance at present, may become rare if utilised excessively (Agrawal 1989).

A general legislation was enforced in 1972 under the name of Wild Life (Protection) Act, 1972, for providing legal protection to wildlife, particularly to endangered species of mammals, birds and reptiles. Subsequently, endangered and scientifically valuable species of insects were included in the list. The Act contains a set of rules governing the protection of wild animals, and schedules I to V, naming the species of animals governed by the said Act. As mentioned earlier, depending upon the degree of threat, four levels of protection (Schedules I to IV) have been accorded to species. The Schedule V includes vermins. The preservation of wild animals and forests have been included in the concurrent list as per 42nd amendment of the Indian constitution.

To control trade in endangered species of animals in the international market, a convention has been ratified by nearly all the important countries of the world which is known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1973). India became a party to it in 1976. This convention has framed rules and regulations to control the world-wide trade in endangered species of wild animals and their products. It consists of 25 articles. Three levels of protection (Appendix I to III) have been accorded to species, depending upon the degree of threat.

The programme of translocation of the endangered species of mammals like the Greater one-horned Rhinoceros (*Rhinoceros unicornis*) from Kaziranga to Dudwa National Park in Uttar Pradesh, and the captive breeding programme as of the Manipur Brow-antlered Deer (*Cervus eldi eldi*) in some of the Indian zoos have already been taken up. Further, a comprehensive programme to breed some of the endangered species of mammals in Indian zoos has recently been finalised by the Central Zoo Authority of India.

For the conservation of endangered species of mammals, species-oriented programmes are being taken up in India by the Central and State Governments independently as well as manned and funded by WWF—I, FAO, UNDP, IUCN, etc. The foremost being the project Hangul (1970), Gir Lion Sanctuary project (1968-72), project Tiger (1973), Manipur Brow-antlered Deer project (1977), Himalayan Musk Deer project (1979), and the Lesser Cats Project (1981). Recent addition to this list is the 'Elephant Project' initiated in 1992 by the Ministry of Environment and Forests, Government of India. The main thrust of these projects was on the conservation of habitats in which these animals live in, restoration of their quality, and to eliminate all forms of exploitation (both of habitats and animals) by human-beings. The results are encouraging. These measures not only helped to improve the degraded habitats but also there is an increase in the population of both the

prey and predator-species. The main constraint of these projects is to shift the local residents from the core areas and their socio-economic upliftment.

FUTURE DIRECTION

Habitat restoration, proper management and strict implementation of the Wildlife Act, along with socio-economic development of the local community are desirable to restore wildlife, in future. Public understanding and support are crucial for conservation. Long term studies are required to determine the habitat requirements, population dynamics of animals, etc. A centre for the conservation of India's National heritage in animals may be established in the country. This could specialise in developing a DNA-library of genetic material of species under threat of extinction (Swaminathan, 1990).

SELECTED REFERENCES

- Agrawal, V. C. 1989. Conservation strategies. In : Environmental Awareness and Wildlife Conservation, pp. 135-166. Zoological Survey of India, Calcutta.
- Agrawal, V. C., Das, P. K. and Ghose, R. K. 1991. Mammals. In : Animal Resources of India, pp. 659-678. Zoological Survey of India, Calcutta.
- Jairajpuri, M. S. 1991. Animal resources of India : Protozoa to Mammalia—an overview. In : Animal Resources of India, pp i—xxvii. Zoological Survey of India, Calcutta.
- Swaminathan, M. S. 1990. Biological diversity and biofuture. In : Taxonomy in Environment and Biology, pp. 15-19. Zoological Survey of India, Calcutta.
- Tikader, B. K. and Das, A. K. 1985. Glimpses of Animal Life of Andaman and Nicobar Islands. Zoological Survey of India, Calcutta.
- Wilson, D. E. and Reeder, D. M. 1993. Mammal species of the world. 2nd ed. Smithsonian Institution Press, Washington & London.

LIST OF INDIAN EXPERTISE

PROTOZOA

- Das, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Freeliving Protozoa : Sarcodina and Ciliophora; Symbiotic Protozoa : Zoomastigophorea and Ciliophora].
- Halder, D. P., Department of Zoology, University of Kalyani-741 235, Nadia, West Bengal. [Parasitic Protozoa : Gregarina and Myxozoa].
- Kalavati, C., Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh. [Parasitic Protozoa : Microspora and Myxozoa].
- Krishnamurthy, R., Department of Zoology, Marathwada University, Aurangabad-431 004, Maharashtra. [Parasitic Protozoa : Coccidia and Zoomastigophorea].
- Mandal, A. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Parasitic Protozoa : Coccidia and Kinetoplastida].
- Mishra, K. K., Rishi Bankim College, Naihati, North 24-Parganas, West Bengal. [Parasitic Protozoa : Kinetoplastida].
- Nandi, N. C., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Parasitic Protozoa : Haemosporida and Myxozoa].
- Ray, R., Department of Zoology, Presidency College, Calcutta, West Bengal. [Parasitic Protozoa : Blood parasites of amphibia].
- Sarkar, N., Rishi Bankim College, Naihati, North 24-Parganas, West Bengal. [Parasitic Protozoa : Myxozoa].
- Tiwari, D. N., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Symbiotic Protozoa : Zoomastigophorea].

MESOZOA

- Kalavati, C., Department of Zoology, Andhra University, Visakhapatnam-530 003, Andhra Pradesh.

PORIFERA

- Khan, M. A., Department of Zoology, N. B. Science College, Hyderabad-500 002, Andhra Pradesh.
- Pattanayak, J. G., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Rao, Seshagiri, Department of Zoology, N. B. Science College, Hyderabad-500 002, Andhra Pradesh.

Soota, T. D., Retired Scientist, Zoological Survey of India, 24/4, Lake Terrace (3rd Floor), Calcutta-700 020.

Thomas, P. A., Central Marine Fisheries Research Institute Research Centre, Vizhinjam-695 521, Kerala.

CNIDARIA

Daniel, R., Marine Biological Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu.

Jasmine, S., Central Marine Fisheries Research Institute Research Centre, Vizhinjam-695 521, Kerala. [Taxonomy of corals].

Patel, M. I., Gujarat State Fisheries Aquatic Science Station, Sikka, Gujarat. [Taxonomy and ecology of corals of Gulf of Kutch].

Pillai, C. S. G., Retired Scientist, Central Marine Fisheries Research Institute, Cochin-31. [Taxonomy of corals, Anthropogenic and natural impact on reefs and reef resources, Conservation of ecosystem].

Rangarajan, K., Central Marine Fisheries Research Institute, Ernakulam, Kerala.

CTENOPHORA

Pillai, Krishnan, N., Retired Professor, Department of Zoology, University of Kerala, Trivandrum, Kerala.

Ramakrishna, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

PLATYHELMINTHES

Agarwal, N., Department of Zoology, University of Lucknow, Lucknow-226 007, Uttar Pradesh. [Monogenea].

Chauhan, B. S., Retired Scientist, Zoological Survey of India, 220, Civil Lines, Narsinghpur, Madhya Pradesh. [Monogenea, Digenea].

Ghosh, R. K., Retired Scientist, Zoological Survey of India, B-11/13 E. C. T. P. Phase-IV, Kosba, Gold Park, Calcutta-700 078. [Digenea, Cestoda].

Hafezzullah, M., Retired Scientist, Zoological Survey of India, 9/1, Ekbalpore Lane, Flat-01, Kidderpur, Calcutta-700 023. [Digenea].

Madhabi, M., Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh. [Digenea].

Mukherjee, R. P., Retired Scientist, Zoological Survey of India, CD, 292 Salt Lake, Calcutta-700 064. [Digenea, Cestoda].

- Pandey, K. C., Department of Zoology, Lucknow University, Lucknow-226 007, Uttar Pradesh. [Digenea].
- Raina, M. K., Kashmir University, Srinagar, Jammu and Kashmir. [Cestoda].
- Ramalingam, K., Annamalai University, Annamalai Nagar-608 002, Tamilnadu. [Monogenea].
- Rao, Hanumantha, Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh. [Digenea].
- Rao, V. Ramakrishna, Regional Centre, Ministry of Environment and Forests, Bhubaneswar, Orissa. [Turbellaria].
- Srivastava, C. B., Retired Scientist, Zoological Survey of India, 631/P-308/1A opposite D, 1290, Old Picnic spot Road, Indiranagar, Lucknow-226 016, Uttar Pradesh. [Digenea, Cestoda].
- Tandon, V., NEERU, Shillong, Meghalaya. [Digenea].
- Vijayalakshmi, C., Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh.

ROTIFERA

- Battish, S. K., Department of Zoology, Punjab Agricultural University, Ludhiana, Punjab. [Taxonomy and ecology].
- Chandra Mohan, P., Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh. [Taxonomy and ecology].
- Dhanapathi, M. V. S. S. S., Department of Zoology, DNR College, Bhimavaram, Andhra Pradesh. [Taxonomy, distribution].
- Gouder, B. Y. M., Department of Zoology, Karnataka University, Dharwar, Karnataka. [Taxonomy and ecology].
- Michael, R. G., Dep. C/o, School of Life Sciences, Madurai Kamraj University, Madurai, Tamil Nadu.
- Nayar, C. K. G., Department of Zoology, Christ College, Irinjalakuda, Kerala. [Taxonomy and ecology of planktonic rotifers].
- Pant, M. C., Department of Zoology, Kumaun University, Nainital, Uttar Pradesh. [Composition and ecology].
- Patil, S. G., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector 29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra. [Taxonomy].
- Rao, T. Ramakrishna, Department of Zoology, University of Delhi, Delhi-110007. [Autecology, population dynamics, production].
- Saksena, D. N., School of Studies in Zoology, Jiwaji University, Gwalior, Madhya Pradesh. [Taxonomy, ecology, polymorphism].
- Sehgal, H. S., Department of Zoology, Punjab Agricultural University, Ludhiana, Punjab. [Taxonomy and ecology].

Sharma, B. K., Department of Zoology, North-Eastern Hill University, Shillong-793 014, Meghalaya. [Taxonomy, biogeography, ecology].

Sharma, P. C., Department of Zoology, Kumaun University, Nainital, Uttar Pradesh. [Composition and ecology].

Sharma, Sumita, Eastern Regional Station, Zoological Survey of India, Fruit Gardens, Risa Colony, Shillong-793 003, Meghalaya.

GASTROTRICHA

Rao, G. C., Retired Scientist, Freshwater Biological Station, Zoological Survey of India, Hyderabad-500 020, Andhra Pradesh.

KINORHYNCHA

Rao, G. C., Retired Scientist, Freshwater Biological Station, Zoological Survey of India, Hyderabad-500 020, Andhra Pradesh.

NEMATODA

Ahmad, Wasim, Department of Zoology, Aligarh Muslim University, Aligarh - 202 002, Uttar Pradesh.

Bajaj, Harish Kant, Department of Nematology, Haryana Agricultural University, Hissar, Haryana.

Baqri, Q. H., Desert Regional Station, Zoological Survey of India, 107, Kamla Nehru Nagar, Chopsani Road, Jodhpur-342 008, Rajasthan.

Das, S. N., Department of Nematology, Orissa University of Agriculture & Technology, Bhubaneswar, Orissa.

Deshmukh, P. G., Department of Zoology, Marathwada University, Aurangabad-431 004, Maharashtra.

Dey Sarkar, S. R., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Dhanachand, Ch., Department of Zoology, Manipur University, Imphal, Manipur.

Gupta, S. P., Department of Zoology, Lucknow University, Lucknow-226 007, Uttar Pradesh.

Gupta, V., Department of Zoology, Lucknow University, Lucknow-226 007, Uttar Pradesh.

Jairajpuri, Durdana S., Department of Zoology, Aligarh Muslim University, Aligarh-202 002, Uttar Pradesh.

Jairajpuri, M. S., Maulana Azad National Urdu University, Hyderabad-500 008, Andhra Pradesh.

Kalyankar, S. D., Department of Zoology, Marathwada University, Aurangabad-431 004, Maharashtra.

- Khan, E., Division of Nematology, Indian Agricultural Research Institute, Pusa, New Delhi-110 012.
- Khan, Shahid Hasan, Department of Zoology, Aligarh Muslim University, Aligarh - 202 002, Uttar Pradesh.
- Luqman, M., Department of Nematology, Himachal Agricultural University, Solan, Himachal Pradesh.
- Majumdar, G., Department of Zoology, Burdwan University, Golapbag, Burdwan, West Bengal.
- Phukan, P. N., Department of Nematology, Assam Agricultural University, Jorhat, Assam.
- Rahman, M. F., Department of Nematology, Assam Agricultural University, Jorhat, Assam.
- Sahay, U., Department of Zoology, Ranchi University, Ranchi, Bihar.
- Sood, M. L., Department of Zoology, Punjab Agricultural University, Ludhiana, Punjab.
- Soota, T. D., Retired Scientist, Zoological Survey of India, 24/4, Lake Terrace (3rd Floor), Calcutta-700 029.
- Sultan, Sarwat, Department of Nematology, Punjab Agricultural University, Ludhiana, Punjab.
- Swarup, Gopal, Division of Nematology, Indian Agricultural Research Institute, Pusa, New Delhi-110 012.

ACANTHOCEPHALA

- Bhattacharya, S. B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.
- Fatma, S., Department of Zoology, University of Lucknow, Lucknow-226 007, Uttar Pradesh.
- George, P. V., Department of Zoology, Mar Ivanois College, Trivundrum-695 015, Kerala.
- Gupta, V., Department of Zoology, University of Lucknow, Lucknow-226 007, Uttar Pradesh.
- Jain, Mridula, Department of Zoology, Punjab University, Chandigarh-160 014, Punjab.
- Nadakal, A. M., Department of Zoology, Mar Ivanois College, Trivandrum-695 015, Kerala.
- Soota, T. D., Retired Scientist, Zoological Survey of India, 24/4 Lake Terrace (3rd Floor), Calcutta-700 029.

SIPUNCULA

- Haldar, B. P., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta- 700 016.

MOLLUSCA

- Agarwal, H. P., Retired Scientist, Central Regional Station, Zoological Survey of India, 424, New Adarsha Colony, Kamala Nehru Nagar, Jabalpur-482 002, Madhya Pradesh.
- Appukuttan, K., Central Marine Fisheries Research Institute, Cochin-31, Kerala. [Shell fisheries and marine molluscs].
- Barua, S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Mangrove molluscs].
- Das, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Wood borers].
- Dey, A., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Mangrove molluscs].
- Jothinayagam, J. T., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu. [Cephalopods].
- Kashinathan, R., Centre for Advanced Studies in Marine Biology, Porto Novo, Tamil Nadu. [Mangrove and Marine molluscs].
- Madhyastha, N. A., Poornaprajna College, Udipi-576 101, Karnataka.
- Maitra, Sipra, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Mangrove molluscs].
- Mane, U. H., Department of Zoology, Marathwada University, Aurangabad-431 004, Maharashtra. [Physiology, neurosecretion, marine molluscs, borers and foulers].
- Manna, R. N., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Mangrove molluscs].
- Mitra, S. C., Zoological Survey of India 'M' Block, New Alipore, Calcutta-700 053. [Land and Freshwater molluscs].
- Mukherjee, H. P., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Marine molluscs].
- Nagabhushanam, R., Department of Zoology, Marathwada University, Aurangabad-431 004, Maharashtra. [Physiology, neurosecretion, marine molluscs, borers and foulers].
- Rambabu, M., Department of Zoology, Nagarjuna University, Nagarjuna Nagar, Guntur, Andhra Pradesh.
- Rao, Balapameswara, Department of Zoology, Nagarjuna University, Nagarjuna Nagar, Guntur, Andhra Pradesh.
- Rao, K. V. Surya, Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Marine molluscs].

Rao, N. V. Subba, Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Marine molluscs].

Santhakumaran, L. N., Wood-Preservation Centre (Marine) C/C, National Institute of Oceanography, Dona Paula, Panaji, Goa-403 004. [Wood borers].

ECHIURA

Haldar, B. P., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Singhal, R. N., Department of Zoology, Kurukshetra University, Kurukshetra, Haryana.

ANNELIDA

Bano, Kubra, University of Agricultural Sciences, G. K. V. K., Bangalore-560 065, Karnataka.

Bhaduria, Tuneera Kumar, G. B. Pant Institute of Ecology & Environment, Kosi, Almora, Uttar Pradesh.

Chakraborty, R. K., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Chandra, Mahesh, Retired Scientist, Zoological Survey of India, High Altitude Field Station, Solan, Himachal Pradesh.

Dash, M. C., School of Life Sciences, Sambalpur University, Jyoti Vihar, Burla, Orissa.

Gaikwad, U. D., Department of Fish Hydrography, College of Fisheries, Ratnagiri-415 612, Maharashtra.

Ghosh, G. C., Retired Scientist, Zoological Survey of India, 27, J. L. Nehru. Road, Calcutta-700 016.

Haldar, K. R., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Handa, S. M., Punjab University, Chandigarh-160 014, Punjab.

Ismail, S. A., National College, Chennai, Tamil Nadu.

Julka, J. M., Retired Scientist, High Altitude Zoology Field Station, Zoological Survey of India, Solan, Himachal Pradesh.

Kale, R. D., University of Agricultural Sciences, G. K. V. K., Bangalore-560 065, Karnataka.

Krishnamoorthy, R. V., University of Agricultural Sciences, G. K. V. K, Bangalore-560 065, Karnataka.

Mishra, P. C., School of Life Sciences, Sambalpur University, Jyoti Vihar, Burla, Orissa.

Misra, A., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Raj, P. J. Sanjeeva, Department of Zoology, Madras Christian College, Tambaram, Chennai-600 059, Tamil Nadu.

Ramakrishnan, P. S., Department of Environment Biology, Jawaharlal Nehru University, New Delhi-110 067.

- Rao, C. A. N., Zoological Survey of India, Easturine Biological Station, Hill Patna, Berhampore-750 005, Orissa.
- Rao, D. Srinivasa, Noble college, Machilipatnam-521 001, Andhra Pradesh.
- Rao, R. V. S. S. R. Subba, Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh.
- Reddy, M. V., School of Environmental Studies, Kakatiya University, Warangal, Andhra Pradesh.
- Senapati, B. K., School of Life Sciences, Sambalpur University, Jyoti Vihar, Burla, Orissa.
- Singh, Janardan, Department of Entomology, College of Agriculture, Benaras Hindu University, Varanasi, Uttar Pradesh.
- Soota, T. D., Retired Scientist, Zoological Survey of India, 24/4, Lake Terrace (3rd Floor), Calcutta-700 029.
- Sreen, M. L., Punjab University, Chandigarh-160 014, Punjab.

CRUSTACEA

- Ajmalkhan, K., Centre for advanced Studies in Marine Biology, Annamalai University, Parangi pettai-608 502, Tamil Nadu.
- Chandran, Jaya, Department of Aquatic Biology Fisheries, Kerala Agricultural University, Cochin, Kerala.
- C. V. Kurian, Department of Marine Sciences, University of Cochin, Cochin-682 016, Kerala.
- Dev Roy, M. K., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.
- Jalihai, Marine Biological Research Station, Ratnagiri, Maharashtra.
- Krishna Murthy, Marine Biological Station, Zoological Survey of India, 100, Santhome High Road, Chennai 600 028, Tamil Nadu.
- Reddy, K. N., Zoological Survey of India, Sundarban Field Research Station, Canning, South 24 - Parganas, West Bengal.
- Roy, T., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.
- Sankolli, J., Marine Biological Research Station, Ratnagiri, Maharashtra.
- Venkataraman, K., Marine Biological Station, Zoological Survey of India, 100, Santhome High Road, Chennai- 600 028, Tamil Nadu.

APTERYGOTA

- Choudhuri, D. K., Department of Zoology, Burdwan University, Golapbag, Burdwan, West Bengal. [Collembola].

Hazra, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.
[Thysanura, Collembola].

Mitra, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.
[Thysanura, Diplura, Collembola].

ODONATA

Arun, Kumar, Northern Regional Station, Zoological Survey of India, 218, Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh.

Lahiri, A. R., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Madhavan, S., School of Biological Sciences, Kamraj University, Palaklai Nagar, Madurai-625 021, Tamil Nadu.

Mitra, T. R., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Prasad, M., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Raja Ram, Zoological Survey of India, Nizam Place Complex, 2nd M. S. Building, 14 Floor, 234/4, A. J. C. Bose Road, Calcutta-700 020.

Srivastava, B. K., Department of Zoology, University of Sagar, Sagar-470 003, Madhya Pradesh.

Tyagi, V. K., Road No. 7, Milkman Colony, Jodhpur-432 003, Rajasthan.

PLECOPTERA

Das, B. C., Zoological Survey of India, 'M' Block, New Alipore, Calcutta - 700 053.

Singh, R. K., Central Regional Station, Zoological Survey of India, 424, New Adarsha Colony, Kamala Nehru Nagar, Jabalpur-482 002, Madhya Pradesh.

ORTHOPTERA

Bhowmik, H. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Dey, Anita, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Halder, P., Department of Zoology, Visva-Bharati University, Shantiniketan-731 235, West Bengal.

Hazra, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Mondal, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Shishodia, M. S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Singh, Asket, Retired Scientist, Zoological Survey of India, 176, Adarsh Nagar, Jalandhar City-144 008, Punjab.

Tandon, S. K., Retired Scientist, Zoological Survey of India, Bidhan Abasan, FB Block, Salt Lake, Calcutta-700 091.

PHASMIDA

None.

DERMAPTERA

Kapoor, V. C., Punjab Agricultural University, Ludhiana, Kapurthala-144 601, Punjab.
Srivastava, G. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

EMBIOPTERA

Ananthkrishnan, T. N., Entomology Research Institute, Loyola College, Chennai-600 034, Tamil Nadu.

Ananthasubramanian, K. S., Loyola College, Chennai-600 034, Tamil Nadu.

Bradoo, B. L., Department of Zoology, D. A. V. College, Abohar, Punjab.

Joseph, K. J., Department of Zoology, University Centre, Calicut, Kerala.

MANTODEA

Hazra, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Mukherjee, T. K., West Bengal Education Service, 65 A/6, Swinho Lane, Calcutta-700 042.

BLATTARIAE

Mandal, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

ISOPTERA

Bose, Gita, Retired scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Maiti, P. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Rathore, N. S., Desert Regional Station, Zoological Survey of India, 107, Kamla Nehru Nagar, Chopsani Road, Jodhpur-342 006, Rajasthan.

Roy, P. H., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Saha, Nivedita, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Sen Sarma, P. K., Retired Scientist, Forest Research Institute, Dehra Dun-248 006, Uttar Pradesh.

Thakur, M. L., Retired Scientist, Forest Research Institute, Dehra Dun-248 006, Uttar Pradesh.

PSOCOPTERA

None.

HEMIPTERA

Agarwala, B. K., Department of Life Science, Tripura University, Agartala, Tripura. [Aphididae].

Ambrose, P. Dutson, Entomology Research Unit, Department of Zoology, St. Xaviers College, Palayamkottai-627002. [Reduviidae].

Ananthasubramanian, K. S., Loyola College, Chennai-600 034, Tamil Nadu. [Membracidae].

Bal, A., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Aquatic Bugs].

Basu, R. C., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Aphididae, Coreidae].

Bhat, H. R., National Institute of Virology, 20A, Ambedkar Road, Pune, Maharashtra. 411 001, [Cimicidae].

Biswas, B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Cercopidae, Membracidae, Reduviidae].

Chakraborty, S. P., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Pentatomidae].

Chakrabarti, S., Department of Zoology, University of Kalyani, Kalyani-741 235, Nadia, West Bengal. [Aphididae].

Chopra, N. P., Department of Entomology, Haryana Agricultural University, Hissar-125 004, Haryana. [Coreidae, Lygaeidae, Pentatomidae, Tingidae].

Datta, B., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Cicadellidae].

David, B. V., Department of Entomology, Fedrick Institute of Plant Protection and Toxicology, Padappi-601 301, Tamil Nadu. [Aleyrodidae].

Ghosh, A. K., Retired Scientist, Zoological Survey of India, 329, Jodhpur Park, Calcutta-700 068. [Aphididae].

Ghosh, L. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore,

- Calcutta-700 053. [Aphididae, Cercopidae, Cicadellidae, Cicadidae, Membracidae, Pentatomidae, Psyllidae].
- Ghosh, Maya, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Cicadellidae].
- Kandasamy, C., Montari Industries Ltd., 78 Nehru Place, New Delhi-110 019. [Psyllidae].
- Livingstone, David., Department of Entomology, Fedric Institute of Plant Protection and Toxicology, Padappi-601 301, Tamil Nadu. [Reduviidae].
- Mitra, S. C., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Coreidae].
- Mukhopadhyay, A., Department of Zoology, North Bengal University, Siliguri, Darjeeling, West Bengal. [Lygaeidae].
- Muraleedharan, N., UPASI Tea Estate, Coimbatore-642 106, Tamil Nadu. [Anthocoridae].
- Ravichandran, G., Department of Entomology, Bharathiar University, Coimbatore-641 046. Tamil Nadu. [Reduviidae].
- Raychaudhuri, D., Department, Zoology, University of Calcutta, 35, Ballygunge Circular Road, Calcutta-700 019. [Aphididae].
- Sen, G. C., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Cicadidae].
- Singh, Rajendra, Department of Zoology, Gorakhpur University, Gorakhpur-237 009, Uttar Pradesh. [Aphididae].
- Thirumalai, G., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu. [Aquatic Bugs].
- Varshney, R. K., Retired Scientist, Zoological Survey of India, Raj Bhawan, Manik Chowk, Aligarh-202 001, Uttar Pradesh. [Coccoidea].
- Viraktamath, C. A., Department of Entomology, University of Agricultural Science, Hebbal, Bangalore-560 024, Karnataka. [Cicadellidae].

THYSANOPTERA

- Ananthkrishnan, T. N., Entomology Research Institute, Loyola College, Chennai-600 034, Tamil Nadu.
- Bhatti, J. S., Hans Raj College, New Delhi - 110 007.
- Kamble, R. H., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector-29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra.
- Pramanik, N. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.
- Sen, S., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Sengupta, C. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

NEUROPTERA

Ghosh, S. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

COLEOPTERA

Basu, C. R., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Chrysomelidae].

Bhateja, B. R., S. G. N. Khalsa College, Sri Ganganagar-335 001, Rajasthan. [Curculionidae].

Biswas, D. N., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Staphylinidae].

Biswas, S., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Dytiscidae, Gyrinidae, Hydrophilidae, Scarabaeidae].

Chakraborty, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Coccinellidae, Histeridae].

Chandra, K., Central Regional Station, Zoological Survey of India, 424, New Adarsha Colony, Kamala Nehru Nagar, Jabalpur-482 002. [Scarabaeidae].

Chatterjee, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Scarabaeidae].

Chauhan, R. L., Department of Zoology, Kurukshetra University, Kurukshetra-132 119, Haryana. [Elateridae].

Ghosh, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Dytiscidae, Hydrophilidae].

Maiti, P. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Scolytidae].

Mann, J. S., Rice Research Station, Punjab Agricultural University, Kapurthala 144 601. [Chrysomelidae].

Mittal, I. C., Department of Zoology, Kurukshetra University, Kurukshetra - 132 119, Haryana. [Scarabaeidae].

Mukhopadhyay, P., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Dytiscidae, Cerambycidae, Curculionidae, Gyrinidae, Hydrophilidae, Cucujoidea].

Nandy, B. N., Zoological Survey of India, Nizam Place Complex, 2nd M. S. Building, 14 Floor, 234/4, A. J. C. Bose Road, Calcutta--700 020. [Platypodidae].

- Pajni, H. R., Department of Zoology, Punjab University, Chandigarh - 160 014, Punjab.
[Bruchidae, Curculionidae].
- Pal, T. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta- 700 053.
[Cucujoidea].
- Ramamurthy, V. V., Entomology Division, Indian Agricultural Research Institute,
Pusa, New Delhi - 110 012. [Curculionidae].
- Saha, G. N., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore,
Calcutta- 700 053. [Meloidae, Tenebrionidae].
- Saha, Nivedita, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.
[Scolytidae].
- Saha, S. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore,
Calcutta- 700 053. [Carabidae, Cicindelidae].
- Sengupta, T., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore,
Calcutta- 700 053. [Clavicornia].
- Singh, J. P., Department of Zoology, Punjab University, Patiala - 147 002-Punjab.
[Chrysomelidae].
- Singhal, S. K., Entomology Department, Haryana Agricultural University, Hissar -
125 004, Haryana. [Curculionidae].
- Vats, L. K., Department of Zoology, Kurukshetra University, Kurukshetra - 132 119,
Haryana. [Elateridae].
- Verma, K. K., Government Girls' College, Durg - 491 001, Madhy Pradesh.
[Chrysomelidae].
- Yadav, C. P. S., Agricultural Research Station, I. C. A. R., Jaipur - 302 018.
[Scarabaeidae].
- Yadav, J. S., Department of Zoology, Kurukshetra University, Kurukshetra-132 119,
Haryana. [Chrysomelidae].

STREPSIPTERA

- Chaudhury, P. K., Department of Zoology, University of Burdwan, Golapbag,
Burdwan, West Bengal.
- Dasgupta, S. K., Department of Zoology, Presidency College, Calcutta, West Bengal.

MECOPTERA

None.

DIPTERA

- Alfred, J. R. B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Chironomidae].
- Choudhuri, P. K., Department of Zoology, University of Burdwan, Golapbag, Burdwan, West Bengal. [Ceratopogonidae, Chironomidae, Sciaridae].
- Cherian, P. T., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu. [Chloropidae].
- Datta, M., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Simuliidae, Tabanidae, Syrphidae, Celyphidae, Diopsidae].
- Garg, P. K., School of Entomology, St. John's College, Agra, Uttar Pradesh. [Agromyzidae].
- Ghorpade, K. D., P. O. Box 2564, 123, Brigade Road, Bangalore, Karnataka. [Synrphidae].
- Gupta, J. P., Department of Zoology, Benaras Hindu University, Varanasi, Uttar Pradesh. [Drosophilidae].
- Ipe, M., School of Entomology, St. John's College, Agra, Uttar Pradesh. [Phlebotomidae, Agromyzidae].
- Joseph, A. N. T., Retired Scientist, Southern Regional Station, Zoological Survey of India, 100, Santhome Road, Chennai-600 028, Tamil Nadu. [Asilidae, Tipulidae].
- Kapoor, V. C., Department of Zoology, Punjab Agricultural University, Kapurthala-144 601, Punjab.
- Kaul, B. K., Department of Zoology, H. P. Krishi Visva Vidyalaya, Palampur-176 062, Himachal Pradesh. [Blephariceridae].
- Kulshrestha, A. K., Department of Zoology, Garhwal University, Garhwal, Srinagar-246 174, Uttar Pradesh. [Chironomidae].
- Nandi, B. C., Department of Zoology, Krishnanagar Government College, Krishnanagar, Nadia, West Bengal. [Sarcophagidae].
- Parui, P., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Asilidae, Tipulidae].
- Radhakrishnan, C., Western Ghats Field Research Station, Zoological Survey of India, 13/787-A, Annie Hall Road, Calicut-673 002, Kerala. [Tephritidae].
- Sehgal, V. K., Department of Entomology, G. B. Pant University of Agriculture and Technology, Pant Nagar, Nainital, Uttar Pradesh. [Agromyzidae].
- Sharma, R. M., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector 29, P.B. No. 3053, Rawot Road, Pune-411 044, Maharashtra. [Cecidomyiidae].

Singh, A., Department of Zoology, Punjab University, Chandigarh-160 014, Punjab. [Tephritidae].

Singh, B. K., Department of Zoology, Kumaun University, Nainital, Uttar Pradesh. [Drosophilidae].

LEPIDOPTERA

Arora, G. S., Retired Scientist, Zoological Survey of India, G-175, Preet Vihar, Vikas Marg, New Delhi-110 092.

Bhattacharya, D. P., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Chander, A., Forest Research Institute, Dehra Dun-248 006, Uttar Pradesh. [Geometridae, Pyralidae].

Ghosh, S. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Ghosh, Sanjit K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Gupta, I. J., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Gupta, S. L., Division of Entomology, Indian Agricultural Research Institute, Pusa, New Delhi-110 012. [Lymantriidae and allied moths].

Haribal, M., Bombay Natural History Society, Hornbill House, Shahid Bhagat Singh Road, Mumbai-400 023. [Rhopalocera].

Majumdar, M., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Maulik, D. R., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Mondal, D. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Nandi, B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Pajni, H. R., Department of Zoology, Punjab University, Chandigarh. [Pyralidae].

Radhakrishnan, C., Western Ghats Field Research Station, Zoological Survey of India, 13/787-A, Annie Hall Road, Calicut-673 002, Kerala.

Rose, H. S., Department of Zoology, Punjab University, Chandigarh-160 014, Punjab. [Pyralidae].

Singh, P., Forest Research Institute, Dehra Dun, Uttar Pradesh. [Geometridae, Pyralidae].

Varshney, R. K., Retired Scientist, Zoological Survey of India, Raj Bhawan, Manik Chowk, Aligarh-202 001, Uttar Pradesh.

TRICHOPTERA

Ghosh, S. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Majumdar, M., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

HYMENOPTERA

Chandra, Girish, Department of Zoology, K. M. College, University of Delhi, Delhi.

Farooqui, S. I., Division of Entomology, Indian Agricultural Research Institute, Pusa, New Delhi-100 012.

Gupta, R. K., Department of Zoology, Rajrishi College, Alwar-301 001, Rajasthan.

Gupta, S. K., Northern Regional Station, Zoological Survey of India, 218, Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh.

Hayat, M., Department of Zoology, Aligarh Muslim University, Aligarh-202 002, Uttar Pradesh.

Jonathan, J. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Joseph, K. J., Agricultural University, Vellanikkare, Trichur-680 654, Kerala

Mani, M. S., Department of Zoology, Presidency College, Chennai, Tamil Nadu.

Narendran, T. C., University of Calicut, Calicut-673 635, Kerala.

Nikam, P. K., Department of Zoology, Marathawada University, Aurangabad-431 004, Maharashtra.

Sharma, S. K., St. John's College, Agra-282 002, Uttar Pradesh.

Sharma, V., Department of Zoology, Jodhpur University, Jodhpur, Rajasthan.

Singh, D., Department of Zoology, Punjabi University, Patiala-147 002, Punjab.

Singh, Sudhir, Forest Protection Division, Institute of Rain and Moist deciduous Forests Research, Na-ali, Jorhat-785-001, Assam.

Sujauddin, Department of Zoology, Aligarh Muslim University, Aligarh-202 002, Uttar Pradesh.

Sureshan, P. M., Western Ghats Field Station, Zoological Survey of India, 13/787-A, Annie Hall Road, Calicut-673 002, Kerala.

Tiwari, R. N., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

MYRIAPODA

Achar, K. Prabhakar, Bhuvendra Nature Club-India, Sri Bhuvendra College, Karkala-574 104, Karnataka.

Jangi, B. S., 'Arvind', B 1/348, Janakpuri, New Delhi-110 058.

Khanna, Vinod, Northern Regional Station, Zoological Survey of India, 218, Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh.

Mary Bai., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu.

Yadav, B. E., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector 29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra.

ARACHNIDA

Bastawade, B. B., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector 29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra. [Scorpionida].

Bhaduri, A. K., Department of Zoology, Vidyasagar College, 39, Sankar Ghosh Lane, Calcutta-700 006. [Soil cryptostigmata].

Bhat, H., National Institute of Virology, Pune-411 001, Maharashtra. [Trombiculids, Ticks].

Bhattacharyya, S. K., Retired Scientist, Zoological Survey of India, Sitala Nibas, Basu Para, Sonarpur-743 369, West Bengal. [Soil mesostigmata].

Bhattacharya, T., Department of Zoology, Vidyasagar University, Midnapore-721 102, West Bengal. [Soil cryptostigmata].

Biswas, B. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Araneae].

Biswas, K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Aranene].

Chakraborty, D. K., Department of Zoology, Presidency College, Calcutta, West Bengal. [Soil cryptostigmata].

Chakrabarti, S., Department of Zoology, University of Kalyani, Kalyani-741 235, Nadia, West Bengal. [Eriophyoids].

Channa Basavanna, G. P., Retired Professor, University of Agricultural Sciences, Hebbal, Bangalore, Karnataka; 603, II Block, Rajajinagar, Bangalore-560 010, Karnataka. [Plant mites].

De, S. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Ticks].

Dutta, Ashit Kumar, Revti House, Santipara, Dibrugarh-786 001, Assam. [Soil mesostigmata].

Gajbe, U. A., Zoological Survey of India, Nizam Palace Complex, 2nd M. S. Building, 14 Floor, 234/4, A. J. C. Bose Road, Calcutta-700 020. [Araneae].

Gupta, S. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Plant, Soil, Parasitic mites].

Gupta, Y. N., Central Regional Station, Zoological Survey of India, 424, New Adarsha Colony, Kamala Nehru Nagar, Jabalpur-482 002, Madhya Pradesh. [Plant mites].

Haq, M. A., Acarology Division, Department of Zoology, University of Calicut, Calicut-673 635, Kerala. [Soil cryptostigmata].

- Hiregaudar, L. S., University of Agricultural Sciences, Dharwad, Karnataka. [Parasitic mites].
- Kaul, H. N., National Institute of Virology, Pune-411 001, Maharashtra. [Trombiculids, Ticks].
- Kulkarni, S. M., National Institute of Virology, Pune-411 001, Maharashtra. [Trombiculids, Ticks].
- Kundu, B. G., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Soil cryptostigmata].
- Majumdar, S., Zoological Survey of India, Sundarban Field Research Station, Canning-743 329, West Bengal. [Araneae].
- Mallik, B., University of Agricultural Sciences, Hebbal, Bangalore-560 024, Karnataka. [Plant mites].
- Mathur, R. B., Haryana Agricultural University, Hisar-125 004, Haryana. [Parasitic and bee mites].
- Mathur, S., Haryana Agricultural University, Hisar-125 004, Haryana. [Parasitic and bee mites].
- Misra, A. C., National Institute of Virology, Pune-411 001, Maharashtra. [Trombiculids, Ticks].
- Mittal, O. P., Department of Zoology, Punjab Agricultural University, Chandigarh-160 014, Punjab. [Araneae].
- Mohansundaram, M., Tamil Nadu Agricultural University, Coimbatore.-641 003, Tamil Nadu.[Eriophyoids, Tetranychoids, insect mites].
- Mondal, B. K., Department of Zoology, Ananda Chandra College, Jalpaiguri-735 101, West Bengal. [Soil cryptostigmata].
- Patel, B. H., Department of Zoology, P. P. Institute of Science, Bhavnagar, Gujarat. [Araneae].
- Putatunda, B. N., Haryana Agricultural University, Hisar-125 004, Haryana. [Parasitic and bee mites].
- Ramani, N., Acarology Division, Department of Zoology, University of Calicut, Calicut-673 635, Kerala. [Soil cryptostigmata].
- Rather, A. Q., Sher-e-Kashmir University, Srinagar, Jammu and Kashmir. [Plant mites].
- Sadana, G. L., Punjab Agricultural University, Chandigarh-160 014, Punjab. [Tetranychoids, Araneae].
- Saha, Gautam, Department of Zoology, Durgapur Government College, Durgapur, West Bengal. [Dust mites].
- Sanyal, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Soil mites, Ticks].
- Sarkar, P. K., Bidhanchandra Krishi Viswa Vidyalaya, Kalyani-741 235, Nadia, West Bengal. [Plant mites].

Sarkar, Sadhana, Department of Zoology, M. B. B. College, Agartala, Tripura. [Soil cryptostigmata].

Singh, J., Benaras Hindu University, Varanasi, Uttar Pradesh. [Plant mites].

Som Choudhuri, A. K., Bidhanchandra Krishi Viswa Vidyalaya, Kalyani-741 235, Nadia, West Bengal. [Plant mites].

PHORONIDA

Haldar, B. P., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

BRYOZOA

Diwan, A. P. Government Science College, University of Indore, Mhow, Madhya Pradesh.

Karande, A. A., Naval Chemical and Metallurgical Laboratory, Mumbai. [Fouling species].

Menon, N. R., Biology Department, Cochin University, Cochin. Kerala. [Taxonomy, Ecology].

Nair, K. V. K., Water and Stream Chemistry Laboratory, Indira Gandhi Centre for Atomic Research, Kalpakkam. [Fouling species].

Nair, N. B., Kerala University, Trivandrum. [Taxonomy, Ecology].

Nair, P. S. R., Centre for Advanced Studies in Marine Biology, Porto Novo, Tamil Nadu. [Estuarine Bryozoa].

Rao, K. Satyanarayana, Wood Biodegradation Division-Marine, Institute of Wood Science & Technology, C/o Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh. [Taxonomy, Fouling biology, Ecology].

Rao, K. S., School of Studies in Zoology, Vikram University, Ujjain, Madhya Pradesh.

Shrivastava, P., Bhopal University, Bhopal, Madhya Pradesh.

Swamy, B., Naval Chemical and Metallurgical Laboratory, Mumbai. [Fouling species].

Viswanadham, B., Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh.. [Taxonomy, Biology].

Wagh, A. B., National Institute of Oceanography, Dona Paula, Panaji, Goa-403 004. [Fouling species].

ENTOPROCTA

Haldar, B. P., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Rao, K. S., School of Studies in Zoology, Vikram University, Ujjain, Madhya Pradesh.

CHAETOGNATHA

Nair, Vijayalakshmi R., National Institute of Oceanography, Dona Paula, Panaji, Goa-403 004.

Srinivasan, M., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu.

TARDIGRADA

Rao, G. C., Retired Scientist, Zoological Survey of India, Freshwater Biological Station, Hyderabad-500 020, Andhra Pradesh.

Venkataraman, K., Marine Biological Station, Zoological Survey of India, 100, Santhome High Road, Chennai- 600 028, Tamil Nadu.

ECHINODERMATA

James, D. B., Tuticorin Research Centre, Central Marine Fisheries Research Institute., Tuticorin-628 001, Tamil Nadu.

Jayasree, V., National Institute of Oceanography, Dona Paula, Panaji, Goa-403 004.

Krishnan, S. Department of Zoology, Bangalore University, Bangalore-560 056, Karnataka.

Mary Bai., Southern Regional Station, Zoological Survey of India, 100 Santhome High Road, Chennai-600 028, Tamil Nadu.

Mukhopadhyay, S. K., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Rajan, P. T., Zoological Survey of India, Andaman and Nicobar Regional Station, Middle Point, Port Blair-744 101, Andaman and Nicobar Islands.

Reuben, S. Waltair Research Centre, Central Marine Fishers Research Institute, Visakhapatnam-530 003, Andhra Pradesh.

Sastry, D. R. K., Andaman and Nicobar Regional Station, Zoological Survey of India, Middle Point, Port Blair-744 101, Andaman and Nicobar Islands.

HEMICHORDATA

Azaria, Jayapaul, Department of Zoology, University of Madras, Chennai-600 020, Tamil Nadu. [Enteropneusta].

Balasubramaniam, M., Centre for Advanced Studies in Marine Biology, Porto Novo, Tamil Nadu. [Enteropneusta].

Dandapani P., Retired Scientist, Marine Biological Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu. [Enteropneusta].

PROTOCHORDATA

- Azaria, Jayapaul, Department of Zoology, University of Madras, Chennai-600 020, Tamil Nadu. [Cephalochordata].
- Bhavanarayana, P. V., Department of Zoology, Andhra University, Visakhapatnam-530 003, Andhra Pradesh. [Salpida].
- Dandapani, P., Retired Scientist, Zoological Survey of India, Marine Biological Station, 100, Santhome High Road, Chennai-600 028, Tamil Nadu. [Protochordata except ascidians].
- Ranganathan, T., Department of Zoology, Hindu College, Tuticorin, Tamil Nadu. [Ascidiacea].

PISCES

- Barman, R. P., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.
- Chatterjee, T. K., Marine Aquarium and Research Centre, Zoological Survey of India, Digha-721 428, Midnapore, West Bengal.
- Datta, A. K., Retired Scientist, Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.
- Datta, N. C., Department of Zoology, University of Calcutta, 35, Ballygange Circular Road, Calcutta-700 019.
- Dey, S. C., Department of Zoology, Guwahati University, Guwahati, Assam.
- Husain, A., Zoological Survey of India, 1-1-300/B, Ashok Nagar, Hyderabad-500 020, Andhra Pradesh
- James, P. S. B. R., Central Marine Fisheries Research Institute, P.B. No. 1912, Cochin-682 018, Kerala:
- Jayaram, K. C., Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu.
- Johal, M. S., Department of Zoology, Punjab University, Chandigarh-160 014, Punjab.
- Karmakar, A. K., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.
- Krishnan, S., Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai-600 028, Tamil Nadu.
- Kumaran, M., Central Marine Fisheries Research Institute, Calicut, Kerala.
- Luther, G., Central Marine Fisheries Research Institute, Waltair, Andhra Pradesh.
- Mehta, H. S., High Altitude Zoology Field Station, Zoological Survey of India, Jandev Nivas, Hospital Road, Solan-173 212, Himachal Pradesh.
- Menon, A. G. K., Retired Scientist, Marine Biological Station, Zoological Survey of India, Chennai-600 028, Tamil Nadu.

Mohan, R. S. Lal, Central Marine Fisheries Research Institute, Calicut, Kerala.

Ramaiyan, V., Centre for Advanced Studies in Marine Biology, Porto Novo, Tamil Nadu.

Rao, K. Srinivasa, Department of Zoology, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh.

Rao, K. V. Rama, Retired Scientist, Freshwater Biological Station, Zoological Survey of India, 1-1-300/B, Ashok Nagar, Hyderabad 500 020.

Sen, N., Eastern Regional Station, Zoological Survey of India, Fruit gardens, Risa Colony, Shillong-793 003, Meghalaya.

Sen, T. K., Retired Scientist, Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Sudarsan, D., Fishery Survey of India, Verosa, Bomaby.

Talwar, P. K., Retired Scientist, Flat No. 963, Sector-A, Pockets Vasant Kemj, New Delhi-110 070.

Tandon, K. K., Department of Zoology, Punjab University, Chandigarh-160 014, Punjab.

Yazdani, G. M., Retired Scientist, Western Regional Station, Zoological Survey of India, Vidya Nagar, Secor 29, P. B. No. 3053, Rawot Road, Pune-411044, Maharashtra.

AMPHIBIA

Chanda, S. K., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016.

Daniel, J. C., Bombay Natural History Society, Hornbill House, Shahid Bhagat Singh Road, Mumbai- 400 023, Maharashtra.

Das, Indraneil, IUCN, Amphibia/Reptilia of Indian Sub-continent, Centre for Herpetology, Madras Crocodile Bank Trust, Chennai, Tamil Nadu.

Dutta. S. K.. Utkal University, Vani-Vihar, Bhubaneswar-751 004, Orissa.

Pillai , R. S., Retired Scientist. Southern Regional Station. Zoological Survey of India, 100, Santhome High Road, Chennai - 600 028, Tamil Nadu.

REPTILIA

Acharjyo, L N., Nandankanan Biological Park, Barang-754 005, Cuttack, Orissa.

Bhaskar, Satish, Chennai Crocodile Bank, Perur, Chingleput-603 104, Tamil Nadu.

Biswas, S., Retired Scientist, Zoological Survey of India, 84, Baburanipara Road, Bhatpara, North 24-parganas-743 123, West Bengal.

Choudhury, B. C., Wildlife Institute of India, F. R. I. Campus, New Forest, Dehra Dun-248 006, Uttar Pradesh.

- Daniel, J. C., Bombay Natural History Society, Hornbill House, Shahid Bhagat Singh Road, Mumbai-400 023, Maharashtra.
- Dattatre, Shekar, Plot 40, 3rd East Street, Tiruvanmiyur, Chennai-600 041, Tamil Nadu
- Deoras, P. J., Hoffkins Institute, Parel, Mumbai, Maharashtra.
- Duda, P. L., Department of Bio-Sciences, University of Jammu, Canal Road, Jammu-180 001, Jammu and Kashmir.
- Dutta, Sushil K., Department of Zoology, Utkal University, Vani-Vihar, Bhuvaneshwar-751 004, Orissa.
- Kar, C. S., Forest Department, Government of Orissa, Bhuvaneshwar, Orissa.
- Kar, Sudhakar, Crocodile Project, Office of the Chief Wildlife Warden, 315, Kharbel Nagar, Bhuvaneshwar-751 001, Orissa.
- Khairae, Anil, Indian Herpetological Society, "Ushant", Pune-Satara Road, Pune-411 009, Maharashtra.
- Mahendra, B. C., The Academy of Zoology, Khandari Road, Agra-2, Uttar Pradesh.
- Mathew, R., Eastern Regional Station, Zoological Survey of India, Fruit Garden, Risa Colony, Shillong-793 003, Meghalaya.
- Mohanty-Hejmadi, Priyamvada, Department of Zoology, Utkal University, Vani Vihar, Bhuvaneshwar-751 004, Orissa.
- Murthy, T. S. N., Retired Scientist, Southern Regional Station, Zoological Survey of India, 100, Santhome High Road, Chennai - 600 028, Tamil Nadu.
- Rajagopalan, M., Central Marine Fisheries Research Institute, Madras Research Centre, 141, Marahsll Road, Egmore-600 008, Tamil Nadu.
- Rajendran, M. V., 31, Devaloga Street, Palayamkottai, Tirunelveli-627 002, Tamil Nadu.
- Rao, M. V. Subba, Department of Environmental Sciences, Andhra University, Vishakhapatnam-530 003, Andhra Pradesh.
- Rao, R. J., Jiwaji University, School of Zoology, Gwalior 474 011, Madhya Pradesh.
- Sanyal, D. P., Retired Scientist Zoological Survey of India, 27, J. L. Nehru Road, Calcutta - 700 016
- Sharma, B. D., Mountain Eco-Conservation and Wildlife Society of India, P. O. Box 18, Jammu- 180 001, Jammu and Kashmir.
- Sharma, R. C., Retired Scientist, Desert Regional Station, Zoological Survey of India, Pataudi House, Paota Lines, Jodhpur - 342 006, Rajasthan.
- Singh, A. K., Similipal Tiger Reserve, Khairi-Jashipur, Orissa-757 091.
- S. K. Talukdar, Zoological Survey of India, 27, J. L. Nehru Road, Calcutta- 700 016.
- Vyas, Raju, Sayaji Baug Zoo, Baroda-390 018, Gujarat.
- Vyas, Tej Prakash, Environmental Conservation Society, L-176, Housing Board Colony, Dhar-454 001, Madhya Pradesh.

Whitaker, Romulus, Chennai Crocodile Bank, Perur, Chingleput-603 104, Tamil Nadu.
M. R. Yadav, Turtle Research and Conservation Centre, 3/16, Murai Tola,
Faizabad- 224 123, Uttar Pradesh.

AVES

Abdulali, Humayun, 75, Abdul Rehman Street, Bombay-400 003, Maharashtra.

Basu Roy, S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Bhatnagar, R. K., Indian Agricultural Research Institute, Pusa, New Delhi-110 012.

Chattopadhyay, S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Dasgupta, J. M., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Dutta, B. B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Dutta, B. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Ghosal, D. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Ghosh, S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Gole, Prakash, 1B, Abhimanshree Society, Pashan Road, Pune-411 008, Maharashtra.

Grubb, Robert B., Bombay Natural History Society, Hornbill House, Shaheed Bhagat Singh Road, Bombay-400 023, Maharashtra.

Lamba, B. S. Retired Scientist, Zoological Survey of India, 2/11, Old Survey Road, Dehra Dun-248 001, Uttar Pradesh.

Mahabal, A. S., Western Regional Station, Zoological Survey of India, Vidya Nagar, Sector 29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra.

Majumdar, N., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Mathew, D. N., University of Calicut, Calicut-673 635, Kerala.

Mukherjee, A. K., Retired Scientist, Zoological Survey of India, 28/15 New Ballygung Road, Calcutta-700 039.

Naik, R. M., Saurashtra University, Rajkot, Gujarat.

Neelakantan, K. K., 26/1643, Unni's Lane, Trivandrum, Kerala.

Pittie, Aasheesh, 14-7-370 Begum Bazar, Hyderabad-500 012, Andhra Pradesh.

R. Rahmani, Asad, Bombay Natural History Society, Hornbill House, Shaheed Bhagat Singh Road, Bombay-400 023, Maharashtra.

Roy, C. S., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Saha, S. S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053.

Tak, P. C., Northern Regional Station, Zoological Survey of India, 218, Kaulagarh Road, Dehra Dun-248 125, Uttar Pradesh.

MAMMALS

Agrawal, V. C., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Rodentia, Primates, Scandentia-taxonomy, Zoogeography, ecology].

Alfred, J. R. B., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Primates-ecology, behaviour zoogeography].

Bhattacharyya, T. P., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Systematics, distribution].

Chakraborty, R., Zoological Survey of India, 27, J. L. Nehru Road, Calcutta-700 016. [Rodentia-ecology, behaviour, taxonomy].

Chakraborty, Sujit, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Rodentia, Perissodactyla, Insectivora-taxonomy, zoogeography, ecology].

Chakraborty, T. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Systematics].

Chandrashekar, M. K., Department of Animal behaviour and Biological Sciences, Madurai Kamraj University, Madurai, Tamil Nadu. [Chiroptera-chronobiology].

Das, P. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Chiroptera-taxonomy, zoogeography biology].

De, J. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Ultra-structure of mammalian hair].

Ghosh, M. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Systematics, distribution].

Ghosh, P. K., Central Arid Zone Research Institute, Jodhpur-342 003, Rajasthan. [Rodentia-physiology, control of arid zone species].

Ghose, R. K., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Lagomorpha, Carnivora, Insectivora, Rodentia-taxonomy, zoogeography, ecology].

Gopalakrishna, A., Institute of Science, Nagpur University, Nagpur, Maharashtra. [Chiroptera -embryology, breeding biology].

Ishwar, Prakash, Central Arid Zone Research Institute, Jodhpur-342 003, Rajasthan. [Rodentia, Insectivora, Chiroptera-taxonomy, ecology, biology of arid zone species].

- Jain, A. P., Central Arid Zone Research Institute, Jodhpur-342 003, Rajasthan. [Rodentia-behaviour, breeding, control of arid zone species].
- Khajuria, H., Retired Scientist, High Altitude Zoology Field Station, Zoological Survey of India, Jandev Niwas, Hospital Road, Solan-173 212, Himachal Pradesh. [Chiroptera, Primates-taxonomy, zoogeography, ecology].
- Kurup G. U., Retired Scientist, Western Ghats Field Research Station, Zoological Survey of India, 13/787-A, Annie Hall Road, Calicut-673 002, Kerala. [Primates-systematics, zoogeography, ecology].
- Lal, J. P., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Chiroptera-taxonomy].
- Mandal, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Rodentia-taxonomy, ecology].
- Mukherjee, R. P., Retired Scientist, Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053 [Primates-ecology, behaviour].
- Podder, A. K., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Systematics].
- Pradhan, M. S., Zoological Survey of India, Western Regional Station, Vidya Nagar, Sector 29, P. B. No. 3053, Rawot Road, Pune-411 044, Maharashtra. [Rodentia-chemotaxonomy, ecology, behaviour].
- Saha, S. S., Zoological Survey of India, 'M' Block, New Alipore, Calcutta-700 053. [Systematics, ecology, behaviour].
- Sati, J. P., Northern Regional Station, Zoological Survey of India, 218 Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh. [Primates-ecology, behaviour].
- Sinha, N. K., Northern Regional Station, Zoological Survey of India, 218, Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh. [Ecology].
- Sinha, Y. P., Gangetic Plains Regional Station, Zoological Survey of India, Handloom Bhawan, Rajendra Nagar, Patna-800 016, Bihar. [Chiroptera-taxonomy, distribution].
- Srihari, K., Department of Vertebrate Zoology, Agricultural University, Bangalore, Karnataka. [Rodentia-ecology, control].
- Tak, P. C., Zoological Survey of India, Northern Regional Station, 218, Kaulagarh Road, Dehra Dun-248 195, Uttar Pradesh. [Systematics, ecology].