

ANNUAL REPORT 2012-2013



ZOOLOGICAL SURVEY OF INDIA



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2012–2013



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SOME IMPORTANT RESEARCH STUDIES UNDERTAKEN BY THE SCIENTIST OF ZSI HEADQUARTERS AND REGIONAL CENTERS

1. Abundance and diversity of soil nematodes in Agro-ecosystems of Dehradun, Uttarakhand, India (DST). (Funded by Department of Environment and Forests, Andaman and Nicobar Administration)
2. Ecological study of bird hazards at Airport in Andaman (INS-Utkrosh, C/o. Navy, Ministry of Defense, Government of India)
3. Ecology and habitat modelling of wetland birds in the tsunami inundated wetlands of South Andaman (SERB, Department of Science and Technology, Ministry of Science and Technology, Government of India)
4. EIA for Runway Extension in Shibpur, North Andaman and Campbell Bay, Great Nicobar (Funded by Indian Navy, Ministry of Defense, Government of India)
5. Molecular study of *Ratufa indica* (Erxleben), *Ratufa macroura* (Pennant), *Ratufa bicolor* (Sparrman), *Petinomys fuscocapillus* (Jerdon), *Funambulus palmarum* (Linn.), *Funambulis pennantii* Wroughton, *Petaurista petaurista* (Pallas), *Petarista philippensis* (Elliot) (Mammalia: Rodentia: Sciuride).
6. Preparation of Dolphin Management plan of Vikramshila Gangetic Dolphin Sanctuary from Sultanganj to Kahalgaon in Bihar. (March–September, 2013) (funded by Department of Environment and Forests, Government of Bihar)
7. Preparation of Management Plan for Lohabarrack Crocodile Sanctuary
8. Rapid EIA on the alignment of road in Great Nicobar Island (Funded by Border Road Organization, Ministry of Defense, Government of India)
9. Status survey on Sea cucumbers in Andaman and Nicobar Islands (Funded by Department of Environment and Forests, Andaman and Nicobar Administration)
10. Strengthening of facilities at arine aquarium–cum–regional centre (MARC), ZSI, DIGHA.
11. Taxonomic Revision of Indian Pyralinae (Pyralidae: Lepidoptera) (funded by Science and Engineering Research Board (SERB), DST, New Delhi)

NEW SPECIES DESCRIBED BY THE ZSI SCIENTISTS

Corals: One new species of coral *Ctenactis triangularis* sp. nov., *Favites monticularis* sp.





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nov. (Family: Faviidae) from Andaman and Nicobar Islands as a new coral species;

Nematoda : *Rhabdias dehradunensis* Rizvi, Bhutia and Bursey, 2013, *Rhabdias himalayanus* Rizvi, Bhutia and Bursey, 2013, *Labronema neodiversum* Mondal, Manna and Gantait, 2012 (Dorylaimida: Qudsianematidae), *Labronema neodiversum* sp. n., *Coomansinemoides wasimi* n. gen., n. sp. and *Paraxonchium maximus* sp. n., under the order Dorylaimida have been added as new to science. One new genus and three new species (*Coomansinemoides wasimi*, *Paraxonchium maximus*, and *Labronema neodiversum*) belonging to order Dorylaimida are being added as new to science. *Paraxonchium maximus* sp. n. (Dorylaimida, Aporcelaimidae) and *Dorylaimoides (Dorylaimoides) geraldii* sp. n. (Dorylaimida, Mydonomidae) has been added to the Science. One new species *Zonorchis sanglaensis* Chakrabarti et al. 2012 (Digenea: Trematoda).

Coleoptera: *Bolbohamatum achanakmarini* Chandra and Gupta, 2012.



Lepidoptera: *Cyana psedoeffracta* Kirti Joshi and Singh, 2013.



Dermaptera: One new species of the Genus *Euborellia* Burr, 1909 has been described from Nainital district of Uttarakhand State.

Hymenoptera: *Copidosoma eurystomum* Kazmi and Hayat, 2012, *Aprostocetus arunachalicus* Narendran and Sureshan,



2012, *Aprostocetus namdaphicus* Narendran and Sureshan, 2012, *Aprostocetus neovanilae* Narendran and Sureshan, 2012, Hymenoptera: *Calliscelio rugosus* Rajmohana and Abhilash, *Fidiobia nagarajae* Veenakumari, Buhl and Rajmohana, 2012, *Fidiobia viraktamathi* Veenakumari, Buhl and Rajmohana, 2012, *Mantibaria kerouaci* Rajmohana, *Neoduta serrata* Rajmohana and Abhilash, *Plutomerus*





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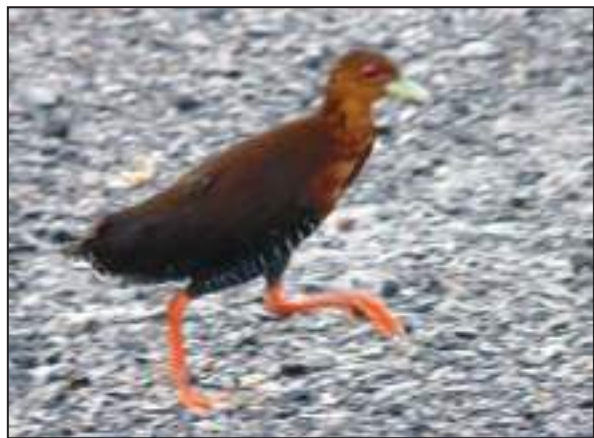
veereshi Veenakumari, Buhl and Rajmohana, 2012, *Aprostocetus barnallicus* Narendran and Sureshan, 2012, *Cyrtoptis wayanadensis* Sureshan, *Tetrastichus anamikicus* Narendran and Sureshan, 2012 and *Tetrastichus ramakrishnae* Narendran and Sureshan, 2012.

Centipede: *Cryptops malabarensis* Dhanya and Sureshan;

Fishes: Two new species belonging to the Sisorid genus *Glyptothorax* is discovered. Nemipteridae: *Scolopsis igcarensis* Mishra *et al.*, 2013 (Class: Actinopterygii; Order: Perciformes), One new species belonging to the



genus *Scolopsis* (Nemipteridae) is discovered and is being described. *Aborichthys waikhomi*, a new species of fish (Teleostei: Nemacheilidae) from Arunachal Pradesh, India. *Scolopsis igcarensis* Mishra *et al.*, 2013 belonging to the



family Nemipteridae as new to science from Southern Coasts of India and Sri Lanka.

Birds: *Rallina* crane from Great Nicobar Island, India.

NEW RECORDS TO INDIA AND STATES and UTs.

Corals: 19 species of opisthobranchs, 4 species of polyclads and 3 species of echinoderms were new records to India; 3 species of opisthobranchs, 9 species of polyclads and 6 species of corals were new records to India; 2 species of corals and 1 species of nemertean were new records to India.



Nematode: One soil nematode, *Laimydorus istvani* Sen, Chatterjee and Manna, 2012 (Family: Dorylaimidae, Order: Dorylaimida) has been discovered from West Bengal, India, collected from soil associated with guava orchard.

Trematoda : *Allocreadium mehrai* Gupta 1956 and *Opegaster* sp (Platyhelminthes: Trematoda: Digenea) has been reported as new records from Himachal Pradesh.





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Pegosomum egretti Srivastava, 1957 of Cattle egrete from Renuka, Himachal Pradesh. (Reg. No. w 9285/1), *Paramphistomum cervi* (Stunkard, 1790) Fiscoeder, 1901 of Cattle from Solan, Himachal Pradesh, *Anchitrema sanguineum* (Sonsino, 1894) Looss, 1899 of *Calotes versicolor* from Rampur, Himachal Pradesh. (Reg. No 9287/1), *Cyclocoelium elongatum* Harrah, 1921 of *Cissa chinensis* from Solan, Himachal Pradesh. (Reg. No. w 9289/1.) has been added as new records. Three species, *Plerogenoides gastroporus* Luhe, 1901 (Reg. No. W9294/1-W9296/1) (Family: Lecithodendriidae, Subfamily : Plerogeninae); *Halipegus mehransis* Srivastava, 1933 (Reg. No. W9297/1-W9298/1) (Family : Hemiuridae, Subfamily: Halipeginae) and *Mesocoelium sociale* (Luhe, 1901) (Reg. No. W9299/1-W9300/1) (Family: Brachycoeliidae, Subfamily : Mesocoelinae) were identified as new records from Himachal Pradesh.

Collembolan: Eighteen species of collembolan under 11 genera of 3 families were recorded for the first time from Andaman and Nicobar Islands. 1 species of Archeognatha and 1 species of Zygentoma were first time recorded from Aand N Islands.

Coleoptera: New records of *Scarites semirugosus* Chaudoir (Insecta: Coleoptera: Carabidae) has been made from Karnataka. 3 new records belonging to Family Carabidae (*Siagona pumila* Andrewes, *Siagona atrata* Dejean and *Siagona baconi* Chaudoir) to the State of Uttar Pradesh has been made. Six species of the scarab beetles (Coleoptera: Scarabaeidae) are recorded for the first time from Central India. *Opistognathus macrolepis* Peters, 1866 (Perciformes: Opistognathidae)

recorded for first time from Indian coast (Kalpakkam, Tamil Nadu). 7 new records belonging to Darkling Beetles (Coleoptera: Tenebrionidae) to the State of Maharashtra has been made.

Diptera: 6 species under 2 genera of Diptera have been recorded for the first time from the state of Uttarakhand. 8 species under 8 genera of Diptera have been recorded for the first time from the state of Arunachal Pradesh.

Hymenoptera: *Ropalidia brevita* Das and Gupta (Hymenoptera: Vespidae), *Delta conoideum* (Gmelin) (Hymenoptera: Vespidae) and *Xenorhynchium nitidulum* (Fabricius) (Hymenoptera: Vespidae) (Hymenoptera: Vespidae) are being reported for the first time from Gujarat. *Macroglenes herbaceous* (Graham, 1969) (Hymenoptera: Pteromalidae), a new record from India and new record to Oriental region. *Dirhinus auratus* Ashmead, 1905 (Hymenoptera: Chalcididae), *Euplectrus euplexiae* Rohwer, 1921 (Hymenoptera: Eulophidae), *Euplectrus manjericus* Narendran, 2011 (Hymenoptera: Eulophidae), *Euplectrus zandanus* Narendran, 2011 (Hymenoptera: Eulophidae), *Aprostocetus gala* (Walker,





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1847) (Hymenoptera: Eulophidae) and *Macroglenes herbaceous* (Graham, 1969) (Hymenoptera: Pteromalidae) are new record from Maharashtra state. *Dirhinus auratus* Ashmead, 1905 (Hymenoptera: Chalcididae), *Euplectrus ceylonensis* Howard, 1896 (Hymenoptera: Eulophidae), *Euplectrus euplexiae* Rohwer, 1921 (Hymenoptera: Eulophidae), *Euplectrus manjericus* Narendran, 2011 (Hymenoptera: Eulophidae), *Euplectrus zandanus* Narendran, 2011 (Hymenoptera: Eulophidae), *Aprostocetus gala* (Walker, 1847) (Hymenoptera: Eulophidae), *Neotrichoporoides beonus* Narendran, 2006 (Hymenoptera: Eulophidae), *Tetrastichus tunicus* Narendran, 2007 (Hymenoptera: Eulophidae) and *Macroglenes herbaceous* (Graham, 1969) (Hymenoptera: Pteromalidae) are new record from Bor Wildlife Sanctuary. Nine species of Eulophidae, viz., *Aprostocetus microcosmus* (Girault), *A. kuriani* (Husain and Khan), *A. vatiata* Narendran, *Neotrichoporoides arunima* Narendran, *N. beonus* Narendran, *N. doproides* Narendran, *Tetrastichus epilachnae* (Giard), *T. taprobanensis* Ranaweera and *T. tunicus* Narendran, 2 species of Eupelmidae, viz., *Eupelmus (Eupelmus) testaceiventris* (Motschulsky) and *Neanastatus cinctiventris* Girault and 4 species of Pteromalidae, viz., *Mesopolobus harithus* Sureshan and Narendran, *Sphegigaster anamudiensis* Sureshan and Narendran, *S. reticulata* Sureshan and Narendran and *S. stepicola* Boucek are reported here for the first time from Maharashtra state. One species belonging to Formicidae (Hymenoptera) found to be new record from India. The species *Delta dimidiatipenne* (de Saussure, 1852) (Hymenoptera: Vespidae: Eumeninae) is newly recorded from

Chhattisgarh, Himachal Pradesh, Jammu and Kashmir, Jharkhand and Rajasthan. The species *Oreumenoides edwardsii* (de Saussure) (Hymenoptera: Vespidae; Eumeninae) is newly recorded from Sunderbans Biosphere Reserve and also from Delhi, Jharkhand, Karnataka, Madhya Pradesh and the Union territory Pondicherry.

The genus *Oomyzus* Rondani, *Notanisomorphella* Girault and *Eupelmus* Dalman and the species *Neotrichoporoides viridimaculatus* (Fullaway), *Oomyzus scaposus* (Thomson), *Notanisomorphella flaviventris* (Girault) and *Eupelmus australiensis* (Girault) were reported for the first time from Rajasthan.

Twenty species of Chalcidoid wasps viz., *Aprostocetus microcosmus* (Girault), *Aprostocetus kuriani* (Husain and Khan), *Aprostocetus vatiata* Narendran, *Neotrichoporoides arunima* Narendran, *Neotrichoporoides beonus* Narendran, *Neotrichoporoides doproides* Narendran, *Tetrastichus epilachnae* (Giard), *Tetrastichus taprobanensis* Ranaweera, *Tetrastichus tunicus* Narendran, *Elasmus viridiscutellatus* Verma and Hayat, *Eupelmus (Eupelmus) testaceiventris* (Motschulsky),





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Neanastatus cinctiventris Girault, *Chlorocyrtus amaravathicus* Narendran and Girish Kumar, *Colotrechnus melghaticus* Narendran and Girish Kumar, *Homoporus maharashtriensis* Narendran and Girish Kumar, *Mesopolobus harithus* Sureshan and Narendran, *Propicroscyrtus mirificus* (Girault), *Sphegigaster anamudiensis* Sureshan and Narendran, *Sphegigaster reticulata* Sureshan and Narendran, *Sphegigaster stepicola* Boucek are being reported as new record from Melghat Wildlife Sanctuary. Eleven species of Eulophidae, viz., *Chrysonotomyia postmarginaloides* (Saraswat), *Pseudosecodes calicuticus* Narendran, *Elachertus nigrithorax* (Girault), *Elasmus anticles* Walker, *Hemiptarsenus varicornis* (Girault), *Sympiesis striatipes* (Ashmead), *Aprostocetus benazeer* Narendran, *Aprostocetus dala* Narendran, *Aprostocetus kuriani* (Hussain and Khan), *Neotrichoporoides idukkiensis* (Narendran) and *Neotrichoporoides viridimaculatus* (Fullaway) are recorded for the first time from West Bengal state. Thirteen species of Eulophidae, viz., *Chrysonotomyia postmarginaloides* (Saraswat), *Pseudosecodes calicuticus* Narendran, *Elachertus nigrithorax* (Girault), *Elasmus anticles* Walker, *Hemiptarsenus varicornis* (Girault), *Sympiesis*

striatipes (Ashmead), *Aprostocetus benazeer* Narendran, *Aprostocetus dala* Narendran, *Aprostocetus kuriani* (Hussain and Khan), *Neotrichoporoides galia* Narendran and Santhosh, *Neotrichoporoides idukkiensis* (Narendran), *Neotrichoporoides viridimaculatus* (Fullaway) and *Tetrastichus epilachnae* are recorded for the first time from Sunderbans Biosphere Reserve. One genus namely *Phalerimeris* Betrem and 3 species namely *Phalerimeris madurensis* (Betrem), *Scolia (Discolia) binotata binotata* Fabricius and *Scolia (Discolia) cyanipennis* Fabricius (Hymenoptera: Scoliidae) are new records from the Maharashtra state. One new record of *Polistes (Polistella) strigosus* Bequaert (Hymenoptera: Vespidae: Polistinae) has been made from South India.

Orthoptera: 5 species of Grasshoppers (Orthoptera: Tettigoniidae) recoded for the first time from India and 9 species of Grasshoppers (Orthoptera: Tettigoniidae) were recorded for the first time from State Arunachal Pradesh.

Crabs: (*Trapezia septata* Dana, 1852; *Tetralia nigrolineata* Serene and Dat, 1957; *Macromedaeus orientalis* (Takeda and Miyake, 1969); *Metopograpsus quadridentatus* Stimpson, 1858; *Thalassograpsus harpax* (Hilgendorf, 1892); *Petrolisthes asiaticus* (Leach, 1820); *Petrolisthes hastatus* Stimpson, 1858 New Records to Indian waters. One species of the order Isopoda, *Livoneca ovalis* is being recorded new to West Coast and also to the Odisha Coast of India.

Pisces: 11 New Records from Tamil Nadu coast (*Torpedo sinuspersici* Olfers: Family Torpedinidae, *Himantura gerrardi* (Gray): Family Dasyatidae, *Gymnothorax meleagris*



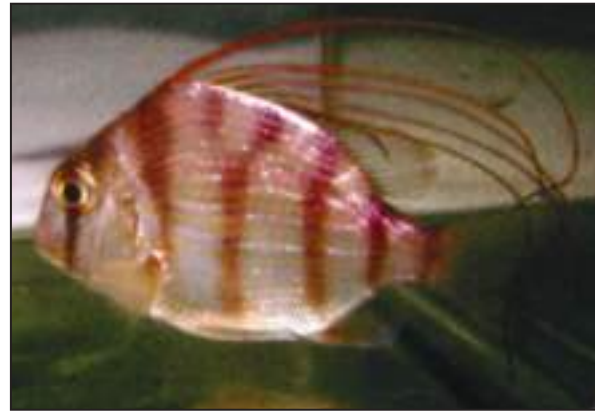


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(Shaw): Family Muraenidae, *Scorpaenodes guamensis* (Quoy and Gaimard): Family Scorpaenidae, *Seriola rivoliana* Valenciennes : Family Carangidae, *Caesio cuning* (Bloch): Family Caesionidae, *Nemipterus zysron* (Bleeker): *Parascolopsis eriomma* (Jordan and Richardson): Family Nemipteridae, *Abudefduf sordidus* (Forsskal): Family Pomacentridae, *Istiblennius edentulus* (Forster and Schneider): Family Blenniidae and *Canthigaster solandri* (Richardson): Family Tetraodontidae. First Record from East coast of India (*Enchelynassa canina* (Quoy et Gaimard, 1824): Family Muraenidae, *Entomacrodus vermiculatus* (Valenciennes, 1836): Family Blenniidae, *Apogon fleurieu* (Lacepède, 1802), *Archamia fucata* (Cantor, 1849) and Family Apogonidae).

17 species of marine fishes belonging to 5 different families have been recorded new from (MGMNP) Andaman and Nicobar islands. *Gerres macracanthus* Bleeker recorded for first time and *Acanthopagrus pacificus* Iwatsuku, has been found first time from Indian Ocean, Odisha coast. *Heteroconger tomberua* Castle



and Randall, *Opistognathus macrolepis* Peters. *Heteroconger tomberua* Castle and Randall, 1999, recorded for the first time from Indian Ocean. *Bathymyrus echinorhynchus* Alcock recorded first time from Tamil Nadu coast.

Amphibia: First Record of the Terai Reed Frog, *Polypedates taeniatus*) has been made from West Bengal (Behala Aerodrome, Kolkata). One new record of *Xenophrys* (Amphibia) has been made from Khasi hills, Meghalaya. *Echistoma minimum* Verma, 1936 (Trematoda : Digenea : Echinostomatidae) has been added as new record.





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HEADQUARTERS

Zoological Survey of India Headquarters office, Kolkata, apart from scientific divisions and sections has Library, Publication, Identification and Advisory, ENVIS centre, Field Survey, Training and Extension, Museum and Taxidermy Divisions, Photography section, Art section, Scanning Electron Microscopy Unit and Data centre. These units support research work of the scientists.



The Scientific Divisions and Sections at ZSI Headquarters undertaking scientific studies on various animal groups from Protozoa to Mammals. The largest division is Entomology followed by Protozoology, Nematelminthes, Platyhelminthes, Arachnology, Malacology, General Non-Chordata, Crustacea, Marine and Fresh water Fish, Amphibia, Reptilia, Bird, Mammals and Osteology, Animal Behaviour, Wildlife Conservation, Animal population and Antarctica Unit.

Training and Extension Division, ZSI, Kolkata has organized and conducted two days Training programme on GIS in Faunal



Studies, Data basing and Digitization of Faunal Collections on 21-22nd January, 2013 at ZSI Headquarters to impart hands on training to fifteen Officers/officials from ZSI Headquarters and Regional Centers.



Organized a training Programme on Collection, Maintenance, and Identification of Zoological Specimens with Special Reference to the Scheduled Mammals by the Training and Extension Division at Annandale Hall, ZSI, Headquarters from 6th-8th March, 2013 for capacity building of the Frontline Staffs of the Wild Life Enforcement Department and newly joined Zoological Assistants in ZSI, Headquarters.





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A one-day workshop on “Wetlands and Waterfowls” organized at the Centre on 7th March 2013 jointly with Kerala Forest Department. 30 students from various colleges of Calicut were participated. Talks were delivered by Scientists of the Centre and outside specialists. A field trip also was undertaken to Kadalundi (Calicut Dt.) wetlands and observed wetland birds.

Library Division holding collection of books and journals on zoology in India and Asia. During the year 178 books, 389 Indian journals, 286 issues of foreign journals has been added.



Molecular Systematics Division: Dr Nandita Chatterjee, I.A.S., Additional Secretary, MoEF, New Delhi inaugurated the “Centre for DNA Taxonomy (CDT)”



for DNA Barcoding and Integrated Animal Taxonomy (IAT) in Molecular Systematics Division. Zoological Survey of India (ZSI), Kolkata has entered a new phase on May 19th 2012 with the inauguration of “Centre for DNA Taxonomy (CDT)” for DNA Barcoding and Integrated Animal Taxonomy (IAT) in Molecular Systematics Division. Dr. Nandita Chatterjee, Additional Secretary, Ministry of Environment and Forests (MoEF), New Delhi inaugurated the lab by lighting the lamp, and said that many fundamental changes are expected in the Animal taxonomy in near future





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Online Foreign Journals – 23 titles of foreign scientific journals uploaded in the I.P. address of Z.S.I. Headquarter, Kolkata.

SL NO	TITLE	SEARCH TERM ON GOOGLE	JOURNAL ISS FROM (YEAR)	ACCESS TYPE
1	AQUATIC SCIENCES and FISHERIES ABSTRACT	asfa proquest- Then Click Begin your Research Tab	1971 - CURRENT	ABSTRACT
2	ENTOMOLOGY ABSTRACTS	asfa proquest- Then Click Begin your Research Tab	1982 - CURRENT	ABSTRACT
3	BIOSCIENCE	Bioscience Jstor	1999 - CURRENT	FULL TEXT
4	BULLETIN OF ENTOMOLOGICAL RESEARCH	Bulletin of Entomological Research	1999 - CURRENT	FULL TEXT
5	PARASITOLOGY	Parasitology Cambridge	1997 - CURRENT	FULL TEXT
6	ENVIRONMENTAL CONSERVATION	Environmental Conservation journal	1997 - CURRENT	FULL TEXT
7	BULLETIN OF MARINE SCIENCES	Bulletin of Marine Sciences Ingenta	1951 - CURRENT	FULL TEXT
8	MAMMALIA	Mammalia Walter	1936 - CURRENT	FULL TEXT
9	CRUSTACEANA	Crustaceana Ingenta	1960 - CURRENT	FULL TEXT
10	BEHAVIOR	Behavior Ingenta	1948 - CURRENT	FULL TEXT
11	HYDROBIOLOGIA	Hydrobiologia Springer	1997 - CURRENT	FULL TEXT
12	JOURNAL OF ORNITHOLOGY	Journal of Ornithology Springer	1997 - CURRENT	FULL TEXT
13	PRIMATES	Primates Springer	1997 - CURRENT	FULL TEXT
14	JOURNAL OF MAMMOLOGY	Journal of Mammology	2000 - CURRENT	FULL TEXT
15	JOURNAL OF MOLLUSCAN STUDIES	Journal of Molluscan Studies	1996 - CURRENT	FULL TEXT
16	ZOOL JOURNAL OF LINNEAN SOCIETY	zool journal of the linnean society wiley	2008 - CURRENT	FULL TEXT
17	ECOLOGICAL MONOGRAPH	Ecological Monograph	1997 - CURRENT	FULL TEXT
18	JOURNAL OF EUKARYOTIC MICROBIOLOGY	Eukaryotic Microbiology	2008 - CURRENT	FULL TEXT
19	HERPETOLOGICA	Herpetologica and Herpetological Monographs	2002 - CURRENT	FULL TEXT
20	COPEIA	Copeia	2000 - CURRENT	FULL TEXT
21	THE JOURNAL OF PARASITOLOGY	Journal of Parasitology	2000 - CURRENT	FULL TEXT
22	HELMINTHOLOGICAL ABSTRACTS	Cabidirect	1932 - CURRENT	ABSTRACT
23	NEMATOLOGICAL ABSTRACTS	Cabidirect	1936 - CURRENT	ABSTRACT





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with a combined approach of morphology and molecular biology techniques. Mr. R. Mehta, advisor (CSII), Mr. Ashish Kumar, Deputy Director (CSII), MoEF, and Dr. JRB Alfred (Former Director ZSI), have graced the inaugural function.



About 24 modern and sophisticated instruments like Real Time PCR, PCR, Deep freezers (-80^o C, -20^o C), Picodrop, spectrophotometer, refrigerated centrifuges, etc. have been installed at this centre with the aid of special grant from MoEF. This is the first lab of its kind in India where expertise both on



traditional taxonomy and molecular biology is available. This modern “Centre for DNA Taxonomy” will apply combined approaches of molecular biology and traditional systematics to foster a clear understanding of faunal diversity of India ranging from Protozoa to Mammals.

Genomic DNA of two Dipteran (*Bengalia bezzii* and *Culicoides schultzei*) and 14 Crab species was extracted using Macherey-Nagel NucleoSpin Tissue Kit. Polymerase Chain Reaction (PCR) was successfully performed with mtCOI (LCO-M13T and HCO-M13T) primers in Eppendorf Thermal Cycler. PCR products were purified using Macherey-Nagel PCR and Gel clean-up Kit. The purified PCR products will be sequenced shortly.





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Museum and Taxidermy Division is supervising and maintaining the Insects, Fish, Amphibia, Reptilia, Mammal and Ecological Gallery of Zoological Survey of India at Indian Museum.

Division was assigned one programme namely Studies on mites infesting herbs used as spices and oil seeds in India with special reference to Western Ghats, Ms submitted on collection of mites infesting herbs used as spices and oil seeds in India with special reference to Western Ghats area.

Number of specimens cleaned, repaired, retouched: 129nos. Birds, 116 nos of mammals and in the showcases have been cleaned, repaired and retouched. All the Crocodiles and turtles were polished. Exhibits



of 41 Reptiles and 21 Amphibians were filled with fresh preservative. 35 examples (7 species) of amphibian fauna under four families and 8 genus have been identified from the unnamed collections of Amphibia section. Computerisation: Data entry of 317 no. of exhibits of the gallery has been carried out during the period.



Protozoology Section was assigned two programmes (1) Moss inhabiting Protozoa fauna of Assam: Under this programme, one survey was conducted to Assam in six districts, North Lakhimpur, Sonitpur, Udalgiri, Darrang and Barpeta, Kamrup and protected areas Nameri NP, Sona Rupai NP and Manas NP. About 250 moss, soil and water samples were collected during the second survey conducted to Assam for six districts. 24 species belonging to 7 genera and 5 family of rhizopods have been identified from Assam. (2) Studies on the diversity of protozoans from various ecosystems of Himachal Pradesh: Under



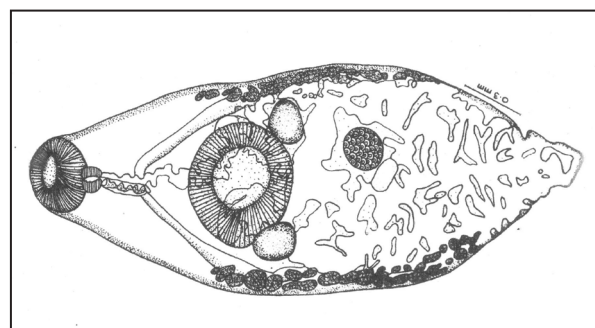
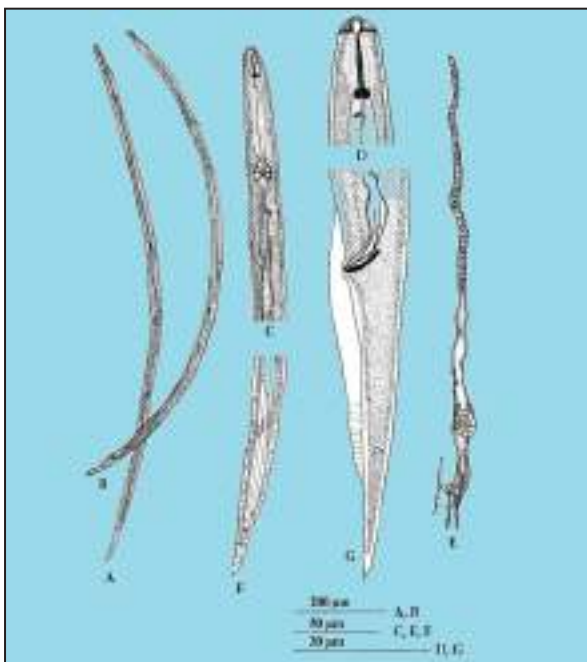


this programme, One survey was conducted to Himachal Pradesh, Four districts and few protected areas of Himachal Pradesh were surveyed viz., Una, Bilaspur (Gobind Sagar lake WLS), Shimla (Shimla water catchment WLS, Dharanghati WLS, Kufri National Park), Solan (Chail WLS and Majathal WLS). 126 samples from corn vegetation, rock moss, soil moss, brick moss, tree moss, grassland, leaf litter, plants associated and water were collected during the first survey conducted from Himachal Pradesh. 80 permanent slides were prepared and 14 species; 6 genera; 4 family; 2 order of rhizopods were recorded and 20 slides were identified and registered.

Nemathelminthes Section was assigned two programmes (1) Soil and Plant Parasitic Nematodes (Order Dorylaimida and Tylenchida): Under this programme, 09 species under 6 genera, 5 families belonging

to the order Dorylaimida and 8 species under 7 genera, 5 families belonging to the order Tylenchida have been identified. (2) Arthropod parasitic Nematodes of Maharashtra: Under this programme, Wardha, Nagpur and Amaravati of Maharashtra were surveyed. Three new species of nematodes belonging to dorylaimida were identified from Maharashtra. Added 03 Type specimens (Reg. No. WN 1358-WN 1360) *Labronema neodiversum* Mondal, Manna and Gantait, 2012, *Paraxonchium maximus* Sen, Manna and Chatterjee, 2012 and *Dorylaimoides (Dorylaimoides) geraldii* Sen, Manna and Chatterjee, 2012. 797 Registered specimens have been computerized. 119 old registered specimens have been digitized with images.

Platyhelminthes Section was assigned two programmes (1) Fauna of Himachal Pradesh: Trematodes of vertebrates: Project completed. Manuscript submitted based on 41 species under 24 genera under 15 families. (2) Checklist of Indian Trematode parasites of Amphibian hosts: Manuscript and Technical report submitted. (3) Checklist of Cestodes of Indian Birds: Technical report submitted. (4) Platyhelminthes Parasites of Fishes of Economic Importance from Diamond Harbour, West Bengal,





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India: Under this programme, surveys were undertaken to Diamond Harbour and its surrounding areas and 15 vials of trematode parasites from different fish hosts, three soil samples and three water samples have been collected. 12 species under 10 genera and nine families have been identified. 4199 data entry has been done in this year; altogether 7188 data entry has been done.

Acarology Section has undertaken one programme, State Fauna of Maharashtra: Oribatid Mites(Acari: Oribatida): Under this programme, one Survey conducted in the districts Akola, Nashik, Pune, Ahmednagar, Aurangabad and Mannad of Maharashtra state, 22 species under 17 genera belonging to 15 families have been identified from the entire survey collection, identified specimens are registered in National Zoological Collection,



21 species of soil oribatid mites from the state Maharashtra among which 3 are newly recorded to India.

Arachnida Section was assigned (1) Fauna of Himachal Pradesh, under this programme, 24 days' Survey tour was conducted on Dec.03-Dec.26, 2012 covering 5 Districts of Himachal Pradesh, 435 spider specimens of 22 families along with 415



other faunal sample are being collected, 350 specimens received from different survey team have been identified. (2) Ecology and Diversity of Spider fauna in Bivuti Bhushan Sanctuary, Parmadan, Bongaon, W.B. One extensive survey of 7 days to Bethua Dahari WL Sanctuary has been conducted and collected 250 examples of Spider specimens from the conservation area with related fauna.

Apterygota Section was assigned programme (1) Studied on the diversity of Collembolan fauna from Jharkhand: One survey conducted (Ranchi, Hazaribagh, Koderma, Latehar and Palamou districts), and collected 1309 examples, 86 nos. of slides





prepared for identification of Collembola. Identified 12 species of collembolan under 8 genera of 5 families from Jharkhand. Altogether 474 data entered and corrected and during this period 30 species of collembola data entered. (2) Studies on diversity and distribution of Soil micro-arthropods fauna w. s .r. to Collembola in Sajnakhali Wild Life Sanctuary, South 24 Pgs, W.B.: Four seasonal surveys to Sajnakhali Wild Life Sanctuary, Sundarban, West Bengal were undertaken and 48 soil cores drawn and 32 soil samples collected. Soil edaphic factors analysed. Altogether 250 exs of collembola were collected (3) Collembola Fauna from Himachal Pradesh: Three surveys completed (One in Mar-April, 2010, Oct-Nov, 2010 and Oct.-Nov. 11). Collembola consisting of 21 species under 20 genera distributed over 8 families recorded from different districts of Himachal Pradesh. Out of 21 species, 13 species were recorded for the first time from Himachal Pradesh.

Central Entomology Laboratory is National repository of insects and engaged in research programme, (1) Formicidae (Hymenoptera) of Andhra Pradesh; during

this programme conducted survey for 19 days from 18.02.2013 to 08.03.2013 covering the districts of Krishna, E. Godawary, W. Godawary and Vishakhapatanam, collected 3194 exs. of insects, 1371 exs. of Hymenoptera and 28 species of Formicidae identified. 1200 data entry and digitization of 145 examples of Thysanoptera have been made during the period under report. All the Thysanoptera Type specimens were computerized with image and slides properly arranged in an alphabetical order, subfamily, genus and species.

Hymenoptera Section was assigned a programme, (1) Studies on Odonata and Lepidoptera fauna of Desert Ecosystem of Rajasthan: In this programme Two field surveys were conducted from 3-14 December, 2012 and 18th to 27th February, 2013 and collected around 318 specimens of Odonata and Lepidoptera and explored different localities of eight districts of Rajasthan *i.e.* Jodhpur, Pali, Barmer, Bikaner, Jaisalmer, Ajmer, Jaipur and Churu and survey reports submitted.

Identified 52 species of Lepidoptera and 28 species of Odonata, in that 2 species of Odonata and 3 species of Lepidoptera are New Records from Rajasthan state. (2) Pictorial





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Handbook on Damselflies and Dragonflies (Odonata: Arthropoda) of Rajasthan: Final Technical Report on Pictorial Handbook prepared included 46 species of Odonata and 25 photoplates of habitats and Odonata. (3) Environmental Impact Assessment and Faunal diversity studies of Lignite Mining, Village Gurah (West), Dist. Bikaner, Rajasthan for Rajasthan State Mines and Minerals Ltd.: Three faunistic Surveys were conducted in that two conducted in 2011-12 and last survey conducted from 5-9 April, 2012. Final Project Report prepared and report submitted Director, ZSI; MoEF (EIA Division), New Delhi and M/s. Rajasthan State Mines and Minerals Limited, Jaipur. Identified and recorded 114 species of different faunal groups, in that 34 species belongs to Insecta, 6 species of Reptiles, 63 species of birds and 11 species of Mammals. Out of total 114 species, 8 species are listed in 'Schedule I' of the Indian Wildlife (Protection) Act, 1972 has been recorded from the study area. (4) Faunal diversity studies in and around NMDC Kirandul and Bachel Complex Iron Ore Mines, South Bastar, Distt.-Dantewada, Chhattisgarh: One faunistic survey conducted from 7-16 January, 2013 and report submitted to Director, ZSI and The Chairman "*Indian Institute of Bio-Social Research and Development (IBRAD)*" Kestopur, Kolkata. Identified and recorded 208 species of different faunal groups, in that 18 species belongs to Mollusca; 1 species of Crustacean; 19 species of Odonata; 41 species of Lepidoptera; 3 species of Hymenoptera; 8 species of Fishes; 4 species of Amphibians; 7 species of Reptiles; 92 species of Birds and 15 species of Mammals first time from study area. Out of total 208 fauna species



recorded study area, 70 species (*i.e.* 1 species of Lepidoptera, 57 species of Birds and 12 species of Mammals) are listed in different Schedules of Indian Wildlife (Protection) Act, 1972. (5) One faunistic survey conducted from 21-25 March, 2013 and report submitted to Director, ZSI and the Chairman "*Indian Institute of Bio-Social Research and Development (IBRAD)*" Kestopur, Kolkata. Identified and recorded 103 species belongs to 9 Faunal Groups recorded from the study sites, in that 5 species belongs to Mollusca; 9 species of Odonata; 12 species of Lepidoptera; 2 species of Hymenoptera; 12 species of Fishes; 1 species of Amphibians; 2 species of Reptiles; 50 species of Birds and 10 species of Mammals. Out of total 103 fauna species recorded from the study area, 61 species (*i.e.* 1 species of Butterfly, 1 species of Fish, 49 species of Birds and 10 species of Mammals) are listed in different Schedules of Indian Wildlife (Protection) Act, 1972 and IUCN Red List of Threatened Species. (6) Migratory Birds study in and around East Kolkata Wetland and Ambuja site initiated for Ambuja Group, Kolkata on request of West Bengal Forest Department:





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Four Surveys were conducted from January, 2013 to March, 2013 and report submitted to the Project Coordinator, ZSI for compilation and onward submission to Director, ZSI and In-Charge, Ambuja Group, Kolkata.

Isoptera Section was assigned two programmes namely (1) Studies on Termite Fauna (Order: Blattaria; Infra order: Isoptera) of Assam: survey undertaken in Sonitpur District (Sonai and Rupai WLS), Darrang Dist. (Mangaldoi, Orang NP), Barpeta Dist. (Manas NP), Silchar Dist. (Borail WLS, Arunachal) and Kamrup dist. (Basistha and Jahlukbari forest area) and collected Isoptera-88 vials (2800 exs. approx.), Hymenoptera (Termite Associates): ca 750 exs. Coleoptera: 10 exs., Lepidoptera:3 exs., Diptera:15 exs., Hemiptera:3exs., Orthoptera: Odonata:1Ex. Arachnida: 11 exs. Identified 15 species (7 genera and 2 families) based on about ca. 3000 examples in 70 vials in hand. Out of 15 species 5 species being first records from the state. Numerous new locality records made. (2) Studies on Termite Fauna (Order: Blattaria; Infra order: Isoptera) of Himachal Pradesh: One survey undertaken in the districts of Shimla District (Shimla, Shimla Water Catchment WLS, Chail WLS, Tapta Pani and Mashobra), Solan District (Solan, Different Valleys along the Nalagarh road), Bilaspur District (Bilaspur, Govind Sagar WLS, Hrisikesh Village, Jeoripattan Village, Brahmapukhar, Naina Devi WLS), Hamirpur District (Hamirpur, Nelti Village, Masiana Forest Area), Una District. 120 vials (2626 exs), Hemiptera- 115 exs. Orthoptera-22 exs., Diptera- 08 exs., Lepidoptera- 18 exs. Odonata- 25 exs., Coleoptera-112 exs.,

Hymenoptera- 135 exs., Dictyoptera-1ex. and Arachnida-10 exs.12 species (7 genera and 3 families) identified based on about ca.2800 examples in 60 vials with four new records. Six species have been dealt with regard to their synonymies, diagnostic characters and distribution.

Coleoptera Section was assigned scientific programme namely (1) Fauna of Himachal Pradesh : conducted a survey tour in Himachal Pradesh and collected 1406 examples of Coleoptera. (2) Fauna of Uttar Pradesh: conducted a survey tour in Uttar Pradesh and 2585 exs. of Coleoptera were collected. Identified 32 species belonging to Gyrinidae, Dytiscidae and Noteridae, 29 species of Staphylinidae, 15 species of Tenebrionidae and 31 species Carabidae.



Miscellaneous Insect Order: one lecture delivered Dr. K. A. Subramanian, Scientist-C in the 2nd Asia Regional Conference of the Society for Conservation Biology: Geographic Distribution of dragonflies and damselflies of the (Insecta: Odonata) of the Western Ghats and conservation priorities; Training on animal taxonomy to post graduate students. Southern Regional Centre, Chennai. May, 2012 and Training of GIS and Databasing for faunal



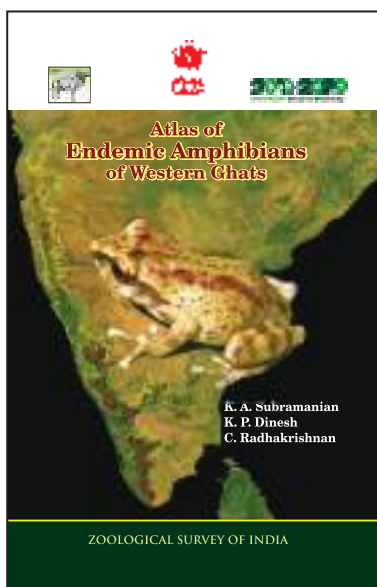


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diversity studies. ZSI, Kolkata. January, 2012.

During the period two books edited and written on “Invertebrate Diversity and Conservation in the Western Ghats. ATREE, Bangalore. ISBN:10:81-902338-5-8” and “Atlas of Endemic Amphibians of the Western Ghats” (Accepted for publication).



Hemiptera Section was assigned programme, (1) State Fauna series: Fauna of Himachal Pradesh: under this programme, One survey in Himachal Pradesh has been conducted for 21 days from 07.05.2012 to 27.05.2012 and overall collected 1064 examples from the Sirmour (Nahan, Renuka Sanctuary, Ranital, Pacca tank), Solan (Kumarhatti, Saproon, Hukkal), Bilaspur (Gobind Sagar, Rishikesh, Brahmapukur), Una (Mehatpur, Amb, Basoli, Dehlan), final report submitted based on 52 Spp. under 27 genera belonging to 11 families of Water bugs, 33 Spp. under 21 genera belonging to 10 Sub families of Cicadelloidea, 13 Spp. under 13



genera belonging to 6 families of Fulgoroidea and Cicadoidea, 33 spp. 21 gen. of 10 families of Pentatomoidea, 18 spp. 12 gen. of the family Reduviidae and 22 spp. 15 gen. of the families Lygaeidae and Pyrrhocoridae. (2) State Fauna series: Hemipteran Fauna of Maharashtra: Two surveys were conducted, overall 1832 exs. of insect fauna of which 545 exs. of Hemipteran fauna.

General Non-chordate Section was assigned research programme namely (1) State Fauna : Karnataka : Marine Sponges: First time the marine Sponges of Karnataka state were surveyed and studied and with this other groups were also studied. (2) Mangrove associated fauna of Orissa: This is the first time the mangrove associated fauna of Orissa were surveyed and studied and three papers submitted for publication: Diversity and distribution of sea-anemones in the estuaries and mangroves of Odisha, India, 2. Mangrove associated sipunculids [sipuncula: phascolosomatidae] from Orissa coast and Mangrove associated echiuroid





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(echiura: thalassematidae) from Orissa coast, India. (3) State Fauna : Arunachal Pradesh: Freshwater Sponges and Bryozoa: Freshwater Sponges and Bryozoa of Arunachal Pradesh were surveyed and studied and with this other groups were also studied. Studied “First record of Freshwater Bryozoa from Arunachal Pradesh”, “Freshwater sponges of Arunachal Pradesh” and “On the first record of two species of Freshwater Leech (Hirudinea) from Arunachal Pradesh. (4) State Fauna: Maharashtra coastal Districts: Three surveys conducted. Studies on the endemic annelids of Darjeeling district (WB) has been conducted research paper entitled “Endemic Annelids (earthworms) of Darjeeling district, West Bengal, India” submitted.



(4) Scleractinian diversity in the coast of Orissa and Andhra: New reef regions along east coast marked. Two Manuscripts in the final stages of submission in lieu of some expert identification of azooxanthellate new records. (5) Scleractinian diversity in the West coast of India: Two Surveys along Maharashtra and Kerala coasts were conducted. In the recent survey to Kerala few zooxanthellate and many azooxanthellate groups were collected (about 35 examples) and few species were studied underwater. (5) Optical Characterisation of Corals (Collaborative project with Space Application Center, Ahmedabad) : Three major reef areas (Andamans, Gulf of Mannar and Gulf of Kachchh) were surveyed, studied spectral characteristics of live and dead corals, recorded spectral characteristics for atleast 36 species of stony corals with varied characteristics and spectral characteristics (completed on March 2013). (6) Improvement of the quality of Reefs through Coral Transplantation/Restoration of Corals at Gulf of Kachchh – A community based Sustainable Approach (Collaborative project with Marine National Park, Gulf of Kachchh, Gujarat Forest Department: Under this programme identified suitable areas for establishing coral nurseries in Marine National Park Area. 3 Biodiversity Surveys completed. One tour to Gujarat undertaken and the local population including the fishermen of Poshitra and Narara villages were made aware of the project objectives and the utility of the project. Fishermen interacted very well and gave their inputs pertaining to the catch, topography and even drawn maps themselves to show the distribution of various fauna around the islands.





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Mollusca Section was assigned research programmes namely (1) Diversity and distribution of Cephalopods along West Coast of India: Undertaken two surveys of Maharashtra and Gujarat Coast and collected 268exs. and 456exs. respectively. Identified 45 species of mollusc. (2) Species diversity and richness of mollusca fauna of Himachal Pradesh: Undertaken one survey of Himachal Pradesh and collected 148exs. belonging to mollusc. Identified 25 species of mollusc. 119 species were identified collected by other survey parties and NZC.



Marine Fish Section was assigned (1) Studies on the Cardinal Fishes of East Coast of India: 15 species of cardinal fishes were collected from east coast of India out of 25 species known. Two species, viz., *Ostorhinchus fleurieu* and *Archamia fucata*, are recorded for first time from this stretch of coast. It has been observed that *Apogon aureus*, recorded by Day (1875), is an erroneous determination of *O. fleurieu* specimens. (2) Pictorial Handbook on Sweetlips and Grunts (Haemulidae) of India: A manuscript detailing 28 species (*Diagramma* – one species; *Plectorhinchus* – 17 species and *Pomadasys* – 10 species) has been prepared.



Plectorhinchus rayi, described from Andamans by Menon and Talwar (1973), is treated as valid species. *Pomadasys hasta* (Bloch), a synonym of *Pomadasys argenteus* (Forsskål) (McKay, 2001), was found to have frequently misapplied to *Pomadasys kaakan* (Cuvier) specimens in Indian waters.

Curatorial work / maintenance: Total 2141 containers filled with spirit, 185 labeled, 150 species cards prepared and 190 specimens registered. 190 specimens were identified under 22 orders belonging to 62 families, 92 genera and 104 species.

Freshwater Fish Section was assigned programme namely (1) Freshwater fish fauna of North Bengal: Under this, three surveys conducted and a total 50 species of fishes have been identified (2) Revision of Indian Cyprinoid Genus *Barilius*: About 130 fish specimens of the Genus *Barilius* housed at WGRC, Kozhikode and SRC, Chennai, have





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been studied. Specimens of genus present in ZSI, Kolkata have also been shorted out and 15 species studied (3) Species data entry of non-types: A total of 172 data entries were made. A total 50 species of fishes have been identified from the collection of the North Bengal. The fish fauna of the study area consists of endemic, hill stream, flood plain waters, and widely distributed species. Curatorial work/maintenance: specimens registered (453), Type material added (38), containers filled with preservatives (315), labels written (130), specimen cards prepared (25) and new jars/containers added (58).

Amphibia Section was assigned (1) Amphibia Fauna of Himachal Pradesh: One survey completed and 21 Anurans of 5 genera and 7 species were collected. Manuscript on State Fauna of Himachal (Amphibia) has been submitted containing 16 species of amphibians in Himachal Pradesh belonging to 10 genera and 5 families. (2) Amphibian Fauna of Eastern Ghats : Surveys completed and a manuscript on the Amphibian Fauna of the Eastern Ghats has been submitted for publication containing data on 99 Anuran examples belonging to 24 species, 11 genera and 5 families of Anurans (3

species of Bufonidae, 5 species of Microhylidae, 9 species of Dicroglossidae, 3 species of Ranidae and 4 species of Rhacophoridae). This includes the Sacred Groves Bush Frog (*Raorchestes sanctisilvaticus*) which is a re-discovery of the species after its original collection in 1962 from Kapildhara waterfalls, Amarkantak, Madhya Pradesh and is a range extension of the species by a distance of about 600 km to the south-east. IUCN considers this species as Critically Endangered due to its previously known restricted distribution and it was considered as one of the Lost Amphibians of India. Collections of the Aloysi Skittering Frog (*Euphlyctis aloysii*) from Horsley Hill, Andhra Pradesh in September, 2011 and of the Orissa Cricket Frog (*Fejervarya orissaensis*) from Renigunta, Andhra Pradesh also in September, 2011 are new records for the State of Andhra Pradesh. Our collection of a species of *Hylarana* from Tirupati hills, Andhra Pradesh in September, 2011 is of a new species to Science. Maintenance and Development of National Zoological Collections: 183 specimens and 21 Type material added during the Year, 183 specimens registered, 92 literature cards prepared and 56 new glass jars/containers added during the year.





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Reptilia Section was assigned programme namely Reptilia Fauna of Himachal Pradesh: under this one survey completed and 4 Lizards and 3 Snakes were collected. A Compact Disc containing images of Tokay Gecko was send by Deputy Field Director, Buxa Tiger Reserve, West Bengal on 31.08.2012. One specimen of Chameleon was send by Divisional Forest Officer (Wildlife), Headquarters, Bikash Bhawan, Salt Lake, Kolkata and 2 live Tokay Gecko lizards from Inspector In-charge, New Town Police Station, Bidhannagar Police Commissionerate, Kolkata.

Maintenance: 247 Containers filled with preservatives, 23 species cards prepared and 18 new glass jars/containers have been added. Dr. B.H.C.K. Murthy reviewed 2 papers for records of ZSI. Dr. Indraneil Das, Associate Professor, University of Malaysia, Sarawak, Malaysia was contacted for the identification of zoological collections as expert.

Mammals and Osteology Section was provided identification services on “*Taxonomic identification of Flying Squirrel*” to Dr. Stephen Jackson, Associate Senior Lecturer, University of New South Wales, Sydney, Australia during his visit to Mammals and Osteology Section. Received some hair samples of the



genus *Petaurista* from Dr. A. Choudhury, Dy. Commissioner of District Magistrate, Lakhimpur, Assam for confirmation of the identity of the hair samples. It is under process of Tricho-taxonomy. Provided identification services to Dr. Ajanta Birah, Sr. Scientist, ICAR, Andaman and Nicobar Islands for identification of four specimens of Rodents, which were identified as *Bandicota bengalensis* (2 nos.), *Rattusrattus* (1 no.), *Musmusculus* (1 no.).

Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has co-ordinated and organized “*Workshop on Revision of Schedule species in Wildlife (Protection) Act, 1972*” held at ZSI (Hqs.), Kolkata on 20th November, 2012

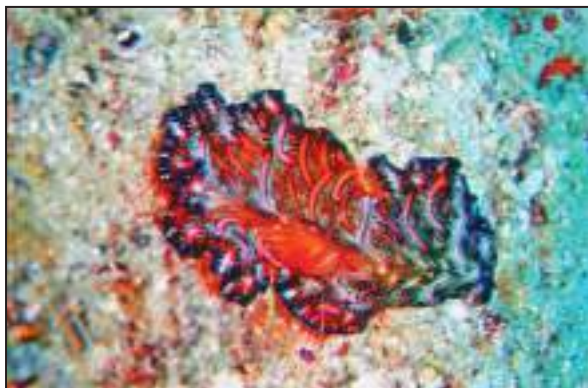




REGIONAL CENTRES

1. ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

(1) Reef Associated Macrofauna fauna of Rutland Island, South Andaman: The reef associated macrofauna identified from the present study along Rutland Island was 307 species belonging to 5 groups such as corals (114 sp.), echinoderms (104 sp.), gastropods (46 sp.), bivalves (6 sp.), opisthobranchs (33 sp.) and polyclads (4 sp.).



(2) Littoral faunal diversity of Campbell Bay and Indira Point, Andaman Sea: The littoral macrofauna identified from the present study along study area in Great Nicobar Island was 254 species belonging to 10 groups such as Corals (85 sp.), Soft corals (12 sp.), sponges (6 sp.), polyclads (3 sp.), gastropods (57 sp.), bivalves (10 sp.), polyplacoporans (2 sp.), opisthobranchs (21 sp.), echinoderms (49 sp.) and crustaceans (9 sp.)

(3) Faunal studies in Saddle Peak National Park and its adjoining sea, North Andaman: During the reporting period, A total of 137 species comprised of corals,



echinoderms, crabs, opisthobranchs and gastropods have been identified. Among them, 32 species of corals, 63 species of gastropods, 27 species of echinoderms, 11 species of opisthobranchs and 4 species of crabs were identified.

(4) Status of corals and its associated macrofauna in Landfall Island Sanctuary, North Andaman: A total of 108 species including 50 species of corals, 17 species of echinoderms, 13 species of opisthobranchs,





21 species of gastropods, 5 species of crabs, 1 species of nemertean and 1 species of whale were identified. The density of corals was 10-13 colonies/ 10m² area while it was 12-18 ind./ 10m² area. Reported the mass stranding (40 individuals) of short-finned pilot whales *Globicephalus macrorhynchus* Gray 1846 in Elizabeth Bay.

(5) Survey of faunal resources in the Dugong Sanctuary, Andaman: under this programme 43 species of Odonata belongs to 9 families and 28 genera, 84 species of butterflies, belong to 5 families and 58 genera, 74 species of moths belong to 11 families, 26 species of Reptiles and Amphibians belong to 12 families, 136 species of birds belongs to 15 orders and 40 families, 13 species of Mammals belong to 11 families were recorded.

(6) Status survey of Wetland Birds in the Rutland Island, Andaman: 160 species under 7 faunal groups were recorded under



this project (Spiders: 18 species belongs to 8 families and 14 genera, Odonata: 12 species belongs to five families, Butterflies: 63 species belongs to five families and 46 genera, Reptiles: 25 species of reptiles belongs to eight families, Amphibians: One species, Birds: 73 species belongs to 26 families under 12 orders and Mammals: 2 species).

(7) Faunal studies in Saddle Peak National Park and its adjoining sea, North Andaman: Total of 228 species under six faunal groups were identified (Spiders - 18 species belongs to 8 families and 13 genera, Odonata - 25 species belongs to 5 families and





20 genera, Moths - 75 species belongs to 12 families and 66 genera, Butterflies - 47 species belongs to 5 families and 38 genera, Birds - 61 species belongs to 10 Orders and 30 families and Mammals - 2 species belongs to 2 families and 2 genera). The endemic butterflies such as Andaman Mormon (*Papilio mayo*), Andaman Viscount (*Tanaecia cibaritis*), Andaman Crow (*Euploea andamanensis*), Common Birdwing (*Troides helena*) were recorded during the survey of period.

(8) Survey and Monitoring of the Fauna (Corals and Fishes, etc.) of North Bay Reef: Two local surveys have been conducted to North Bay, South Andaman to study the coral reefs. A total of 159 species under 33 genera and 10 families of which 68 species are new records to Indian waters.

(9) Octocorallian diversity in the coral reefs of Andaman and Nicobar waters : Six reef areas in three Islands (Havelock, Henry Lawrence and Outram) were surveyed. 14 species (9 species of Soft corals, 2 Gorgonians, 1 Stolonifera, 1 Heliopora and 1 Millepora) have been identified from the underwater

photographs of the specimens on these field studies.

(10) Studies on Macroenthos – Corals and other key species, and monitoring diversity changes of coral reefs in Protected Areas of North Andaman Islands: Analyses of the previous survey results (reef areas in 11 islands in North Andaman were surveyed in the year 2006-07) are completed. It is observed that 11 fringing reefs in North Andaman Islands due to landmass uplift (~1m) following the earth quake on December 25, 2004. LIT survey revealed that exposed area possessed high coral cover i.e., 89.8% as against the 37.92% in the unexposed/existing reef zone.

The uplift caused the reef crest and part of reef slope has been permanently exposed resulting the 30% of live coral reef area. Survey has been conducted to Landfall Island, Ross and Smith Islands, Table Island Reef Island and Paget Island during April 2010.

(11) Status survey of Coral Reefs in South Andaman and Nicobar Islands: Status assessment on 9 South Andaman reefs





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(Mahatma Gandhi Marine National Park) and 6 reef areas in Havelock group of Islands have been studied. The Scleractinian species identified were 47 Nos from Havelock Island, 18 from Henry Lawrence, 22 from Outram Islands. 295 underwater photographs taken from the 9 reef areas in Mahatma Gandhi Marine National Park were examined, which yielded 49 Species under 13 genera and 7 families of Scleractinians. Besides two non-zooxanthellate corals were identified and added into the list.

(12) Studies on Ichthyofauna and Major Entomofauna of MGMN Park, Wandoor, South Andaman: A total of 151 species of Ichthyofauna belonging to 10 different orders and 38 families have been identified. In Entomofauna 59 species belonging to 6 orders and 19 families have been identified.

(13) Studies on Ichthyofauna and Major Entomofauna of MGMN Park, Wandoor, South Andaman: The present study is being undertaken for preparing a general account of these faunal groups from

the study area. 59 species of entomofauna were identified.

(14) Computerization of named registered collections of ZSI/ANRC, Port Blair: Total of 11662 entries have been made. Among them 8617 belongs to marine fauna and 3045 under terrestrial animals.

(15) Monitoring the Coral Reefs of Andaman and Nicobar Islands: Status of corals was studied in 11 permanent monitoring plots and it revealed that about 47% of the corals were recovered since mass bleaching event - 2010. Besides, 320 species of corals, 227 species of molluscs, 40 species of sponges, 120 species of opisthobranchs, 30 species of polyclads and 220 species of fishes were recorded. Density of corals (19.32 – 28.40 Colonies/10m²), Echinoderms (14.65 – 56.72 ind./10m²) and Gastropods (20.00 – 40.00 ind./10m²) has also been estimated. 51 species of crabs were identified under 32 genera and 16 families. Among them 7 species of crabs were recorded as New Record to Indian Waters and 4 species of crabs were recorded first time from Andaman and Nicobar Islands. 105 scleractinian coral species under 14 families and 47 genera, 106 species





of opisthobranchs, 11 species of polycalcs and 83 species of fishes, 129 species of class gastropoda, 11 species of class bivalvia, and 1 species of class cephalopoda, 93 species of echinoderms belongs to 55 genera, 30 families were identified.

(16) Faunal Diversity of Great Nicobar Biosphere Reserve (Funded by Ministry of Environment and Forests, Government of India): A total of 30 groups, including 619 individuals, were sighted in 28 transects covering a distance of 128 km. Macaque group size varied from 4 to 44 (mean \pm SD = 20.63 \pm 8.95) monkeys. A total of 38 species of birds were reported from Campbell Bay and East-west Road. Among them, 26 species reported from the Campbell Bay while 37 species identified from east-west road. 34 species of echinoderms, 96 species of gastropods, 21 species of opisthobranchs, 318 reef associated fishes, 83 species of corals and 8 species of soft corals were reported from four stations in Great Nicobar Island.

(17) Rapid EIA on the alignment of road in Great Nicobar Island (Funded by Border Road Organization, Ministry

of Defense, Government of India): One survey was conducted in Great Nicobar Biosphere Reserve under EIA study for road alignment project (Phase III) for Border Roads Organization (BRO) for the 25km long stretch. The distribution of endemic mammals such as macaque, Nicobar tree shrew and other faunal communities along the road alignment site and its adjoining area were assessed.

(18) Status survey on Sea cucumbers in Andaman and Nicobar Islands (Funded by Department of Environment and Forests, Andaman and Nicobar Administration): The study encountered 30 species of holothurians belonging to 10 genera, against the 100 species reported earlier in literature. Among them maximum of 23 species reported from Ritchie's Archipelago and minimum of 11 species at Great Nicobar Island with the species diversity (H') of 1.21 and 0.80 at these two areas respectively. Out of 30 species reported, 14 species are commercially important. Among the 14 species, only 6 species viz. *Actinopyga mauritiana*, *Actinopyga miliaris*, *Holothuria atra*, *Holothuria (Halodeima) edulis*, *Bahadschia marmorata* and *Stichopus horrens* were found at all the regions of the studied.





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(19) Preparation of Management Plan for Lohabarrack Crocodile Sanctuary (Funded by Department of Environment and Forests, Andaman and Nicobar Administration): Two surveys have been conducted to the Lohabarrack Crocodile Sanctuary. The preparation of management plan for the period of ten years i.e. 2012-2021 has been completed and submitted to Department of Environment and Forests. The management plan contains, conservation zone, multiple use zone and tourism zone. Strategies for each zone have been elaborately given while a plan for eco-development also been furnished in detail.

(20) EIA for Runway Extension in Shibpur, North Andaman and Campbell Bay, Great Nicobar (Funded by Indian Navy, Ministry of Defense, Government of India): Three surveys have been conducted in Campbell Bay, Great Nicobar Island to assess the feasibility for the extension of existing runway. Report with necessary recommendation has been submitted to the Indian Navy.

(21) Ecology and habitat modelling of wetland birds in the tsunami inundated wetlands of South Andaman (SERB, Department of Science and Technology, Ministry of Science and Technology, Government of India): 10 surveys have been conducted during the month of October 2012 – March 2013 to Sippighat, Whimberlighunj, Soalbay, Choldari, Stewardgunj and Wandoor and total of 51 species of birds, belongs to 17 families and 9 orders were recorded.

(22) Ecological study of bird hazards at Airport in Andaman (INS-Utkrosh, C/o. Navy, Ministry of Defense, Government of India): Four surveys have been conducted during the month of March 2013 to Airport, Sippighat, Wandoor, Manjeri, Stewardgunj, Whimberlighunj and Shoal Bay. 46 species of birds belongs to 21 families and 11 orders were recorded.



2. ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

(1) Small mammals (rodent, shrews and lagomorphs) of Arunachal Pradesh: Under this programme 25 species recorded. Malayan Giant Squirrel *Ratufa bicolor* (Sparrman, 1778) was the most abundant species followed by the Hoary-bellied Himalayan Squirrel *Callosciurus pygerythrus* (I. Geoffroy Saint-Hillaire, 1831). Pellets of Indian Hare *Lepus nigricollis* Cuvier, 1823 were also collected from the Seijosa river banks and a few pellets of the same species were also collected from the forest roads within the Reserve.





(2) Water birds of Arunachal Pradesh w.r.t. to high altitude lakes and wetlands: 82 species of water and water dependent species recorded.

(3) Bird communities study at Pakke Tiger Reserve, Arunachal Pradesh: 230 species recorded.

(4) A study of Ichthyofauna of Lower Subansiri district w.s.r. to river Ranga and paddy-cum-fish cultivation: Five surveys conducted, More than 2000 Exs. collected. 87 species belonging to 28 genera and 14 families identified. 185 specimens registered, computerized and digitized. 2 new species of fish from the collections made during the surveys under the project.



(5) Taxonomy and diversity of zooplankton in Lower Arunachal Pradesh in the Eastern Himalayas: Eight surveys covering 8 districts of lower Arunachal Pradesh have been undertaken. 111 number

of water samples collected. 21 rotifers, 17 cladocerans and 15 species of copepods have been identified. 53 specimens computerized and registered.

Museum development: Two wooden showcases for museum display have been purchased. Around 200 specimen jars of different capacity, 25 L formaldehyde, 5 kg Silica gel and few other minor laboratory accessories were procured. White washing and painting of wet lab-cum-museum, plastic flooring of museum, all racks were washed, all specimen bottles were washed, broken ones replaced, new and modified labeling of about 150 registered specimens were done. Face based time attendance system was procured. The Honda Genset was repaired and brought into use.

3. CENTRAL ZONE REGIONAL CENTRE, JABALPUR

(1) Taxonomic studies on the Geometrid (Lepidoptera: Geometridae) fauna of Madhya Pradesh: First faunistic survey of Geometrid (Lepidoptera) fauna undertaken in three districts of Madhya





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Pradesh viz., Betul, Chhindwara and Hoshangabad w.e.f. 28.06.2012 to 12.07.2012 and collected 917 specimens of various groups of insects including Geometrids. Second faunistic survey of Geometrid (Lepidoptera) fauna undertaken in three districts of Madhya Pradesh viz., Mandla, Balaghat and Seoni w.e.f. 01.09.2012 to 12.09.2012 and collected 932 specimens of various group of insects including Geometrids. Third Faunistic survey of Geometrid (Lepidoptera) fauna undertaken in three districts of Madhya Pradesh viz., Panna and Chhaterpur, Umaria and Mandla, w.e.f. 03.12.2012 to 14.12.2012 and collected 431 specimens of various faunal groups including Geometrids. Fourth faunistic survey of Geometrid (Lepidoptera) fauna was undertaken in and around of Madhav National Park, Shivpuri district, Madhya Pradesh w.e.f. 09.03.2013 to 17.03.2013 and collected and registered 243 specimens of fourteen faunal groups including Geometrids.

(2) Taxonomic studies on the small mammals (rodents, shrews and bats) of Madhya Pradesh: During the period 2012-

13, conducted two faunistic surveys w.r.t. Taxonomic studies of small mammals of M.P. and collected about 656 examples belonging to different faunal groups.

(3) Faunal Diversity of Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh: Reported 35 species of scarabaeoid beetles belonging to 20 genera,



13 tribes, 08 subfamilies and 03 families of Coleoptera; 60 species of moths belonging to 54 genera under 10 families of Lepidoptera; 25 species under 12 families, 19 genera and 7 orders of Pisces; 8 species belonging to 8 genera and 4 families of Neuroptera; 9 species belonging to 4 genera, 4 families of Protozoa; 16 species of Cladocera belonging to 10 genera 6 families under 2 orders of Cladocera;





12 species belongs to 9 genera, 2 families of Ostracoda; 06 species belonging to 05 genera under 03 subfamilies of Coccinellidae and 28 species of Odonata

(4) Faunal Diversity of Veerangana Durgavati Wildlife Sanctuary, District Damoh, Madhya Pradesh: During the period, 40 species of Coleoptera, 74 species



of Lepidoptera, 19 species of Pisces, 4 species of Nuroptera, 22 species of Cladocera, 26 species of Rotifera, 36 species of Mammals were identified. About 24,588 identified Zoological specimens of various faunal groups of the centre were computerized in data sheet.

4. DESERT REGIONAL CENTRE, JODHPUR

(1) Faunal Exploration of Sitamata Wildlife Sanctuary, Udaipur: Final project report submitted including 181pp. + 4 Maps and 9 photo plates of habitats and fauna. *Mesodorylaimus subtiloides* (Paetzold, 1958) Andrassy, 1959 *Aporcelainellus adoxus* Tjepkema, Ferris and Ferris, 1971 *Sicorinema sericatum* Siddiqi, 1982 *Sclerostylus karri* Goseco, Ferris and Ferris, 1971 are new records.



(2) Taxonomical study of aquatic nematodes of lakes of Udaipur: A Total of 78 species belonging to 6 orders of nematodes have been identified. Final report submitted in February, 2012. 12 species of nematodes as new records from India. 2 species identified as new to science.





(3) Pictorial Hand Book on Damselflies and Dragonflies (Odonata: Arthropoda) of Rajasthan: Pictorial Handbook on Odonata of Rajasthan is prepared. Total 46 species recorded from Rajasthan. Photographs and Brief Description of 46 species is prepared. The different habitats and fauna plates prepared. The final report will be submitted up to March, 2013.



6 new records from India and 26 new records from state Rajasthan has been made.

(5) Exploration of Vertebrate Diversity of Chambal River in Rajasthan State: Two surveys conducted, 18 lots of



(4) Taxonomic study on wet nematode collection present at DRC, ZSI, Jodhpur: Overall 80 species have been identified from Jaipur and Dausa districts belonging to 38 genera under 15 families of Orders Tylenchida, Aphelenchida, Dorylaimida and Mononchida.





specimens comprising of one Amphibian and 191 fishes were collected, 49 species of fishes, 4 species of amphibians, 16 species of reptiles, 153 species of aves and 30 species of mammals were identified and recorded. 72 species of avian winter migrants identified and recorded from the river and its vicinity. 16 species of raptors belonging to families Accipitridae, Pandionidae and Falconidae identified and recorded from the river area. 14 species of aves recorded breeding in the vicinity of the wetland. 5 species of reptiles, 9 species of aves and 14 species of mammals under conservation status recorded from River wetland and its vicinity.



(6) Studies on Vertebrate Faunal Diversity of Kachchh Biosphere Reserve (KBR), Gujarat: Two surveys conducted, 7 lots of specimens comprising of 75 fishes, 11 crustaceans (crabs) and one reptile were

collected, 16 species of fishes, 18 species of reptiles, 189 species of aves and 19 species of mammals identified. 112 species of avian winter migrants identified and recorded from the KBR. 21 species of raptors belonging to families Accipitridae, Pandionidae and Falconidae identified and recorded from the KBR. 17 species of aves recorded breeding in the KBR. 14 species of aves and 7 species of





mammals under conservation status recorded from KBR.

(7) Environmental Impact Assessment Studies: Fauna of Gurah (West) Lignite Mine Block, Bikaner, Rajasthan: 34 species of Insects identified belonging to 4 orders *i.e.* 25 species of Lepidoptera (Butterflies and Moths); 5 species of Odonata (Damsel and Dragonflies); 2 species of Hymenoptera (Bees) and 1 species each of Coleoptera (Beetles) and Orthoptera (Grasshoppers) recorded from the study site. A total of 11 species of mammals belonging to 13 genera, 7 families and 5 orders have so far been reported from Gurah (West) lignite mining study area. 63 species of birds have been recorded from Gurah (West) lignite Mining lease and study area of district Bikaner, Rajasthan. 5 species of reptiles belonging to four genera, four families and single order has



been sighted in the Hadla lignite mining area. Final project report is submitted.

Participation in Exhibition: Dr. H.S. Banyal, Scientist-C and DRC staff has participated in “Kissan-Mela” on 12-09-12 at CAZRI, Jodhpur. A stall highlighting achievements and work done by DRC, ZSI, Jodhpur was installed at the exhibition; participated in “Bharat Nirman Jan Suchana Abhiyan” organized by Press Information Bureau (Ministry of Information and Broadcasting, GOI), Jodhpur held at-Borunda, District- Jodhpur, Rajasthan from 20-22 November, 2012. A stall depicting fauna and work done by the centre was installed; participated on 23 November, 2012 in exhibition organized by Rajasthan state forest department on the eve of inauguration of their new building at Jodhpur; a stall depicting fauna of the jurisdiction area was installed on this occasion and participated as an exhibitor and installed a stall depicting fauna in National Science Day Exhibition (28-02-2013 to 04-03-2013) at Nawalgarh in Jhunjhunu district of Rajasthan.





5. ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR

(1) **Morphological and molecular characterization of Genus Anopheles (Diptera: Culicidae) of Ganjam District, Orissa, India:** Project completed and manuscript submitted. 250 examples of *Anopheles* mosquitoes are identified under one Genus two Subgenus and 24 species. Molecular Characterization of 11 species has been carried out using Molecular Biology Techniques (Wilkerson., 1993)



(2) **Studies on the estuarine fauna of Bhudabalanga River, Baleswar Dist., Orissa: Ichthyofauna, crabs and prawns:**



Project completed, The studies revealed the occurrence of 121 species of fish, 31 species of Crustaceans (17 species prawns; 14 species crabs), 15 species of gastropods and 6 species of bivalves in the estuary. About 24 species of fishes are found to be first distributional record to the estuaries

(3) **Studies on the fauna of Narmada and Tapi Estuaries w.s.r. to Ichthyofauna, malacofauna, aquatic insects, crabs and prawn:** Surveyed Narmada estuary, Bharuch and Tapi Estuary, Surat, Gujurat and collected 677 examples (*Insecta*, Crustacean, Mollusca and Fishes) A total of 20 example of fishes, 7 examples of crab and 164 exx of Moluscs





were examined. Identified 7 species, 7 genera and 6 families of Pisces, 2 species belongs to 2 genus one family of Crustacea and 17 species of Bivalve Mollusca which belongs to 8 genera and 5 families of Mollusca.

(4) Malaco fauna and ecology of Pennar estuary, Andhra Pradesh: Under this programme, surveyed Pennara Estuary, Nellore District, Andhra Pradesh and collected



441 examples. A total of 889 examples of molluscs were examined. 81 mollusca species under 48 genera and 22 families collected from the Pennara estuary were identified.

(5) Brackish water ornamental fishes of Orissa: Under this programme Subhadra Estuary, Ganjam District, Odisha was surveyed and collected 30 samples of Live ornamental estuarine fishes were collected. A local survey

was conducted on 27.06.2012 to Bahuda Estuary, Ganjam District, Odisha to collect brackish water ornamental fishes and other faunas. A total of 211 specimens are collected. During the survey the team was unable to spot ornamental species of fishes from the study site. More than 30 ornamental fishes were examined, 9 species of fishes identified under 7 genera and 7 families were identified.

6. FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

(1) Limnological and faunistic studies of Palair lake, Khammam District, Andhra Pradesh: Reported Rotifers: 25 species, Cladocera: 12 species; Prawns: 2 species, Crabs: 3 species; hemiptera: 25 species; Coleoptera: 21 species; Mollusca: 10 species; Amphibia: 6 species; Birds: 28 species. Final manuscript submitted.





(2) **Studies on the estuarine fauna of Budabhalang river, Balasore Dist., Odisha wrst Ichthyofauna and Crustaceans:** Programme completed and manuscript submitted. A total 121 species of fish, 17 species of prawns, 14 species of crabs, 15 species of gastropods and 6 species of bivalves reported in the manuscript.

(3) **Studies on the Hydrobiology and faunal diversity of Cumbum Lake, Prakasham Dist., AP w.s.r.t. Plankton, aquatic insects, mollusks and Ichthyofauna:** Examined 216 examples of fishes and identified as 20 species; rotifers: 15 species, cladocera: 04 species and aquatic insects 13 species.



(4) **Studies on the Hydrobiology and faunal diversity of Krishnaraja Sagar, Mandya Dist., Karnataka w.s.r. to Plankton, aquatic insects, mollusks and Ichthyofauna:** Over 180 fish samples examined and identified as 36 species. About 100 aquatic insects examined and identified as 18 species. Analised zooplankton samples and identified as 21 species of rotifers and 10 species of cladocerans.

(4) **Aquatic coleopteran of India w.s.r. to molecular characterization of Dytiscidae:** Seven local tours conducted and a total of 160 exs. of Aquatic Insects collected. Identified 12 spp. from 117 exs of aquatic beetle collections. DNA isolation: Isolated DNA samples from five species of aquatic insects.

Total 2,815 data entry of named collection made so far. During 2012-13, 210 entries of various species computerized.

7. GANGETIC PLAIN REGIONAL CENTRE, PATNA

(1) **Taxonomic study of Insect of Dalma Wildlife Sanctuary Jharkhand, w.s.r. to Lepidoptera:** Final Ms submitted (Completed Projects)



(2) **Status, Habit and Habitat preference of Mouse deer (*Moschiola meminna* Erxleben, 1777 Artiodactyla) in Dalma Wildlife Sanctuary, Jharkhand:** Three individuals of mouse deer observed, four preferred habitats were studied and recorded, population size recorded and Manuscript will be submitted shortly.





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(3) Study of aquatic faunal diversity (Mollusca, Zooplanktons and river dolphins) in the entire stretch of river Damodar in the Jharkhand and West Bengal: All scheduled surveys completed, altogether 30 species of Mollusca (under 13 families), 62 species of aquatic insects (under 48 families), and 32 species of zooplankton were studied.



(4) Taxonomic studies on family Noctuidae from Bihar and Jharkhand: A total of 815 examples of family Noctuidae have been collected during the year. 45 species of family Noctuidae have been identified

including 01 new record from India, 450 examples have been registered to the National zoological collections.

(5) Mollusca and zooplankton of temporary and permanent water bodies in and around Valmiki Tiger Reserve, Kusheshwa Asthan, Saraiyaman Lake and Gogabil Pakhsi Vihar (IBA-sites) in Bihar: Altogether 1645 exs. of Mollusca and 48 culture tubes of Zooplankton (for qualitative and quantitative study) were collected during the year. 21 species of Mollusca and 26 species of zooplankton were identified.

(6) Taxonomic Revision of Indian Pyralinae (Pyralidae: Lepidoptera): Junior Research Fellow (JRF) was appointed, literature survey is in progress.



(7) Preparation of Dolphin Management plan of Vikramshila Gangetic Dolphin Sanctuary from Sultanganj to Kahalgaon in Bihar: Sanction letter from the Department of Environment and Forests, Government of Bihar has been received and the fund transfer is in progress.





8. HIGH ALTITUDE REGIONAL CENTRE, SOLAN

(1) Fauna of Pangi Valley, Distt. Chamba, H.P. and Churdhar Wildlife Sanctuary, Distt Sirmour, H.P. has been completed and Mss published.



(2) Kalatop Khajjiar Wildlife Sanctuary, Distt Chamba, H.P.: Two Surveys conducted; one in 2nd quarter and second in 4th quarter. Mammals: 14 species, Oligochaeta: 11 species Lepidoptera: Rhopalocera: 52 species, Orthoptera: 36 species, Pisces: 15 species, Amphibia: 02



species Reptiles : 06 species and Aves:71 species are being collected.

(3) Chail Wildlife Sanctuary Distt Solan, H.P.: Local Surveys conducted, and collected Oligochaeta: 02 species, Lepidoptera: Rhopalocera: 36 species, Orthoptera: 24 species, Pisces: 05 species, Amphibia: 03 species, Aves: 48 species and Mammals: 05 species.



(4) Faunal resources of Spiti Valley and Chandertal lake, Distt. Lahul and Spiti, HP: surveys conducted in 2nd quarter. Oligochaeta: 04 species, Lepidoptera: Rhopalocera: 25 species, Orthoptera: 04 species, Pisces: 02 species, Amphibia: 01 species, Aves: 28 species and Mammals: 05 species.





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9. MARINE AQUARIUM CUM REGIONAL CENTRE, DIGHA

(1) Study of Ornamental fauna along east Coast of India: Under this programme, 4 surveys were undertaken, Survey -1: (399 specimens were collected from the survey which includes 123-Fish, 253-Molluscs and 23-Crustaceans); Survey-2: (456 specimens



were collected from the survey which includes 267 specimens of molluscs, 142 specimens of fish, 42 specimens of crustaceans and 2 brachiopods, one sea anemone and one sea urchin; Survey-3 (188 Specimens were collected from the survey which includes 21-

specimens of fish, 163 molluscs, crustacean-3 nos., sea pen-1 no., and Survey-4: (926 examples were collected which includes 548 fishes, 358 molluscs, 3 echinoderms and 17 numbers of crabs).

(2) Study of behavior, growth, breeding and survival of marine ornamental fauna under captivity: Undertaken 44 days local Surveys, all 73 species were identified, 1637 live examples liberated in aquarium.

(3) Strengthening of facilities at Marine Aquarium-cum-Regional Centre (MARC), ZSI, Digha: Training programme has been organised for State Govt. Officials and coastal community



10. MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

(1) Reef associated Bryozoans of Gulf of Mannar Marine Biosphere Reserve: Two field surveys were conducted to Mandapam, Seeniyappa Dharka (rocky shore), Shingle island, Kurusadai island and Hare island and collected (Bryozoa - 44,





Porifera – 15, , Cnidarian – 15, Annelida – 21, Mollusca – 109, Polycladida – 6, Echinoderm – 15, Pisces – 8, Echiura – 1, Crustacea – 96, Nemertea – 1 and Polychaeta – 1), one species each of Polychaeta, Pisces, two species of mollusks, three species each of polyclads and of echinoderms were identified.

(2) Faunal diversity in the mangroves of Bhitarkanika, Orissa (One survey): One survey has been undertaken to Gupti, Dangmal, Habalikhati, Sattabaya, Krishnapriyapur and Bhitarkanika mangrove. Collected 59 examples (Arthropoda – 18, Mollusca – 9, Pisces – 32), One species of mollusca, two species each of nematodes, crustaceans, reptiles and fishes, three species of mammals and 85 species of birds were identified.

(3) Studies on the Free-living protozoan fauna of estuaries in various coastal zones of Tamilnadu: Extensive surveys were undertaken to Ramnad, Nagapattinam, Chidambaram, Pondicherry

and Thiruvallur districts, identified 21 species under 8 genera from water samples.

(4) Meio fauna of Palk Bay with special reference to Free-living Marine Nematodes and Tardigrada: Surveys conducted in the areas of The Palk Bay region of Ramnad and Nagapattinam and Thanjavur districts and 36 species of marine nematodes as belonging to 27 genera have been identified from soil samples.



11. NORTH EASTERN REGIONAL CENTRE, SHILLONG

(1) Taxonomic studies of the unidentified Ephemeroptera (Nymph) collection of Meghalaya present in ERS/ZSI, holdings Shillong: Under this programme, 252 specimens identified up to 6 genera and 4 families.

(2) Nemacheiline loaches of North East India present in the Collections of NERC/ZSI, Shillong: 400 specimens identified into 18 species under 7 genera, final report submitted.

(3) Taxonomic studies of the family Cerambycidae under the order Coleoptera in East Khasi Hills District, Meghalaya: Technical Report submitted.





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(4) **Studies on the Reptilian and Amphibian fauna of Loktak Lake and Keibul Lamjao National Park and its adjoining areas, Manipur:** Final Report dealing with 45 species of reptiles and 29 species of amphibia submitted.



(5) **Fishes of N.E. India:** Manuscript dealing with over 408 species submitted.



(6) **Taxonomic and Ecological studies on the Earthworms (Annelida: Oligochaeta) of West Khasi Hills and South Garo Hills districts of Meghalaya:** Technical Report is being finalized.

(7) **Taxonomic study on Anuran Amphibians of North East India present in the collections of NERC/ZSI, Shillong:** 73 exs. identified under 14 species, 8 genera, 5 families.

(8) **Taxonomic study on aquatic and semi-aquatic Hemiptera of West Khasi Hill and Ri-Bhoi districts, Meghalaya:**

Survey conducted in IIIrd and IV quarters, collected 1847 examples.

(9) **A documentary on the mass migration of earthworms in Mawlyngot area, Meghalaya:** Final Report is being finalized.

(10) **Taxonomic study on Ichthyofauna of Nongkhylllem Wildlife Sanctuary, Meghalaya:** Surveys conducted in the I, II, III and IV qrtr. Besides the general faunal



collections, about 700 specimens of fishes were collected 689 exs identified into 26 species belonging to 16 genera, 11 families.

Computerization of vertebrate and invertebrate data: Aves-58; Amphibia-1960; Cladocera-860; Coleoptera-1697; Crustacea-253; Dermaptera-214; Ephemeroptera-51; Pisece-7493; Hemiptera-1221; Hymenoptera-1520; Lepidoptera-3275; Mallophaga-437; Mammalia-687; Mollusca-542; Myriapoda-115; Odonata-1185; Reptilia-1096; Rotifera-666; Scorpion-57





**12. NORTHERN REGIONAL CENTRE,
DEHRADUN**

(1) Fauna of Jhilmil Jheel Conservation Reserve, Haridwar: 410 species belonging to nine animal groups: Mammals (24 Species), Birds (191), Reptiles (23), Amphibia (7), Pisces (35), Soil nematodes (47), Helminth parasites of Amphibia (9), Acridoidea (24), and Lepidoptera (50) has been identifies.



(2) Fauna of Dehra Dun District: Identified 42 species of Acridoidea and 50 species of Lepidoptera 46 species of reptiles, 18 species of Amphibia. 30 species of soil nematodes.

(3) Trichotaxonomy of the species of Logomorpha (Mammalia: Rodentia): Mss. (1-131 p, 32 plates and 199 figs.) was submitted.

(4) State Fauna of Punjab: Three surveys conducted in Feb. and March 2013; covering 12 districts, namely, Jalandhar, Amritsar, Taran Taran, Firozpur, Ludhiana, Patiala, Sangrur, Muktsar, Batinda,

Gurdaspur, Nawan Shahar and Pathanckot. 4305 exs belonging 23 faunal groups including helminthes collected from amphibian hosts. Soil samples collected from eucalyptus, Sheesham (*Dalbergia sissoo*) and keekar (*Prosopis* sp) for nematodes. Identified 7 exs. of Amphibia, 3 species of Reptilia and 9 species of Lepidoptera, 35 species of Acridoidea.



(5) Fauna of Sultanpur NP and Bird Sanctuary, Gurgaon, Haryana: Two Surveys conducted: Five days each. Collected 385 exs belonging to 16 faunal groups in August Survey and 329 exs belonging to 16 in December Survey. In addition, Seven Soil Samples collected for Nematodes Studies. Observed 90 species of Birds and 4 species of Mammals.

(6) Molecular Characterization of Common Butterflies of District Dehradun: 5 local intensive surveys were conducted for collection of Butterflies and identified 35 species of butterflies. DNA extracted by Phenol-Chloroform method (Sambrook and Russel, 2001) of 10 species of Nymphalidae family, 10 species Pieridae family and 4 species of Schedule II W (P) Act.





(7) **Trichotaxonomy and molecular Study (from ZSI collections) of species Lesser Cats (Mammalia: Carnivora: Felidae) listed under Wildlife Protection Act, 1972:** Sequences of 12S rRNA of *Prionailurus Viverrinus*, Fishing cat received after getting amplification of 12S rRNA gene. Hair analysis for fishing cat completed including slides preparation for medulla, cross section and cuticular (through light microscopy and scanning electron micrograph). Amplicons of 12srRNA, Cyt b gene of fishing cat and Leopard cat obtained. Sequences of 12S rRNA gene of fishing cat obtained.

(8) **Taxonomic study on Lycaenidae Lepidoptera: Rhopalocera) of Uttarakhand:** Conducted one survey of



District Uttarkashi and Tehri Garhwal and Collected 460 exs. of Lepidoptera.

(9) **Diversity of Nematodes in Govind WLS and NP, Uttarakhand:** Two survey Conducted (17.6.2012 to 21.6.2012) and Collected 174 soil samples from Taluka, Netwar, Satta, Sankri and Jakhol. Sieved all samples collected from GWLS and prepared 102 permanent slides of soil nematodes. Identified 34 species nematode belonging to order Dorylaimida: families Dorylaimidae, Aporcelaimidae, Qudsianematidae and Nygolaimidae. Identification of other specimen is in progress.

(10) **Taxonomic Study of Encyrtidae (Hymenoptera: Chalcidoidea) of Uttar Pradesh (H.Q. Project):** Mss submitted on the sub family: Tetracneminae and Encyrtinae.

Computerisation: About 16,304 entries of all identified and Registered collection; E-Granthalaya 8900 entries have been made, 194 specimens digitized.

(11) **Abundance and diversity of soil nematodes in Agro-ecosystems**





of Dehradun, Uttarakhand, India: 18 localities were surveyed and collected 180 soil samples around the root-zones of wheat, rice, masoor dal, potato, tomato mustard, jowar amla, sugarcane, litchi, and mango. Soil parameters like P^H , organic C, Total N etc analysed from Central Soil Conservation, for all the soil samples. Permanent slides of 1200 exs of soil nematodes prepared. Identified 800 exs belonging to 29 genera of soil-inhabiting nematodes.

(12) **Molecular study of *Ratufa indica* (Erxleben), *Ratufa macroura* (Pennant), *Ratufa bicolor* (Sparrman), *Petinomys fuscocapillus* (Jerdon), *Funambulus palmarum* (Linn.), *Funambulis pennantii* Wroughton, *Petaurista petaurista* (Pallas), *Petarista philippensis* (Elliot) (Mammalia: Rodentia: Sciuride):** DNA Isolation: Total DNA was isolated from dried skin and hair of museum samples, using kit method and

Phenol: chloroform (Sambrook *et al* 1989). DNA Quantification: Quantification was done using Qubit Fluorometer II (Invitrogen). The quantity of DNA varies from 40ng/ml to 92µg/ml depending upon the sample and isolation protocol used. Standardization for PCR: Protocol for amplification of 2 genes i.e. cyt b and 12S rRNA have been standardized. Standardization of PCR protocol was done by titration reaction for $MgCl_2$ concentration and primer concentration. Partial sequence of 12SrRNA gene obtained for *Petinomys fuscocapillus*. Species studied: *Ratufa indica* (Erxleben): Schedule II under WPA *Petaurista petaurista* (Pallas): Schedule II under WPA *Petinomys fuscocapillus* (Jerdon): Schedule I under WPA.





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13. SOUTHERN REGIONAL CENTRE, CHENNAI

(1) **State fauna of Andhra Pradesh:** Survey conducted in Andhra



Pradesh (Srikakulam, Vizianagaram and Visakhapatnam Districts), collected **2224 examples** (Arachnida-4, Crustacea-136, Millipede- 12, Centipede- 16, Scorpionida-15, Orthoptera-118, Odonata- 35, Diptera-134, Coleoptera-759, Homoptera-60, Dictyoptera-13, Grillidae-6, Hymenoptera- 276, Lepidoptera-142, Isoptera-17, Mollusca- 187, Amphibia-31, Reptilia- 35 and Pisces-124; Villupuram and Trichy districts, collected 2353 examples (including 108 lots of zooplankton samples); Thiruvannamalai district, collected 1620 (including 49 lots



of zooplankton samples), Middle Eastern Ghats part of Chittoor. Cuddapah, Kurnool, Prakasam and Guntur districts, collected 2743 examples of different faunal groups. Another survey in Karnool, Kadappah, Ananthapur, and Chithoor Districts was undertaken and collected 3340 examples of various faunal groups.



(2) **Non Marine Molluscs of Southern Western Ghats:** Non Marine Mollusca survey was conducted in Nilgiri, Palani and Anaimalai Hills and overall 1792 examples were collected. 1041 examples were collected in Nilgiri district of Tamil Nadu.



14. SUNDERBAN REGIONAL CENTRE, CANNING

(1) **Present Status of Reptiles (*Varanus bengalensis*, *V. flavescens* and *V. salvator*)**





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in Sundarbans (Completed): Sighted 12 exs. of *Varanus bengalensis*, 2 exs. of *V. salvator*, and 4 ex. of *V. flavescen*. More than 128 burrows of monitor lizards were sighted. Bakkhali and Sagar Islands provided suitable habitat for these species. Final Technical Report has been submitted.



(2) Vertebrate fauna of Bakkhali, Sagar and Halliday islands of Sunderbans (Completed): One survey was conducted in Sagar Island in 2009. Observed 2 species of Mammals, 32 species of Birds, 7 species of Reptiles and 3 species of Amphibia. 12 species of fishes from 28 examples were collected.

(3) Taxonomy and ecology of Brachyuran crabs in Sunderbans (completed): The survey focused on the Brachyuran crabs in both coast and off-shore marine. A total of 1356 specimens were collected among which 52% contributes

Brachyuran crabs. Identified 405 examples of Brachyuran crabs, from 5 families, 7 genera, and 14 species. Identified 1 speceis of Prawn from 1 family, 1 genera, from 1 ex.



(4) Preliminary studies on the faunal diversity in the fish landing centres of Sunderbans (Completed): A total of 954 specimens were collected pertaining to different groups including Brachyuran crabs, Anomuran Crabs, Prawns, Lobsters, Stomatoods, Gastropods, Bivalves, Fishes, and Reptiles. Identified the following: 1 species of Brachyuran crab from 22 exs. belonging to 1 order, 4 families, and 5 genera. 1 species of Prawn from 1 ex. 1 order, 1 family and 1 genera. Identified 1 species of lobster, from





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1 ex., belonging to 1 order, 1 family and 1 genera. Identified, 72 sp. of fishes from 161 exs., belonging to 10 order, 41 family and 64 genera. Identified, 1 sp. of reptile from 1 ex. belonging to 1 order, 1 family and 1 genus.

(5) Biodiversity of Acridoidea: Orthoptera of Sunderbans, WB: Two surveys were undertaken in and around Sunderban. 1st Survey: Kaikhali, Attasthalla, in and around Herobanga, Dakshin Baikhantapur, Pathar Pratima area, Dhanchi Beat, Kalas camp, Katamari village, in and around Kella and Piyali areas. 2nd Surey: Ganga Sagar, Ghoramora island, Kakdwip,

Namkhana, Bakkhali, in and around Patharpratima area, and collectd 955 examples of various faunal groups including Acridoidea. 132 examples of Orthoptera were identified.

15. WESTERN GHAT REGIONAL CENTRE, KOZHIKODE

(1) Fauna of Conservation Area: Faunal resources of Bhadra Wildlife Sanctuary and Tiger reserve, Karnataka: The document on Bhadra WLS, Karnataka published which includes 11 papers on various faunal groups dealing with the descriptions of two new species of Hymenoptera (Insecta), 171





new distributional records for the sanctuary and 16 new records for the state Karnataka (Completed programme).

(2) Atlas of Odonata of the Western Ghats: The data-basing, geo-referencing and mapping of Western Ghats Odonata is completed. Currently the data base holds 5315 records of 180 species from 1011 localities. The Manuscript has been submitted for publication. (Completed programme).

(3) Atlas of Endemic Amphibians of the Western Ghats: The data-basing, geo-referencing and mapping of the endemic Amphibia of Western Ghats is completed. The data base holds distributional records of 159 species. The Manuscript has been submitted for publication. (Completed programme).



(4) Fauna of Conservation Area: Faunal resources of Malabar Wildlife Sanctuary, Kerala: Conducted five local surveys to the sanctuary and collected representative faunal samples. Of these collections, 8 species of Pteromalidae



(Hymenoptera), a new species of *Trichopria* Ashmead (Diapriidae: Hymenoptera), 18 species of butterfly, 16 species of Odonata, 14 species of Centipedes and 5 species of Reptilia were identified.

(5) Taxonomic Studies: Systematic Studies on Telenominae (Scelionidae: Hymenoptera: Insecta) of Southern Western Ghats: 30 species have been described and digital images taken. 15 species are described as new to science.

(6) Interactive Identification and Information System for the Indian genera





of **Diapriidae (Insecta: Hymenoptera: Proctotrupoidea)**: Work completed. Generic description and images of all the 15 Indian genera have been compiled.

(7) **Taxonomic studies on the Pteromalid fauna (Insecta: Hymenoptera) of Southern Western Ghats**: Two intensive surveys to various localities of southern Western Ghats conducted. A good collection of Pteromalidae samples collected. 26 species identified including 3 new species, *Cyrtoptyx wayanadensis* sp. nov., *Dipara ponmudiensis* sp. nov. and *Cleonymus indicus* sp. nov. were described from southern Western Ghats of Wayanad, Kollam and Idukki districts, Kerala and submitted for publication. Besides, description of one new species from Silent Valley NP and another new species of *Cleonymus* Latreille from Idukki district, Kerala completed. *Trigonoderus pulcher* Walker, first record of genus and species from the Oriental Region and *Solenura ania* (Walker), first record of the species from Western Ghats and Kerala were identified.

(8) **Systematic studies on Scelioninae**



(**Hymenoptera: Platygasteridae**) of **Southern Western Ghats**: Conducted two intensive survey tours to southern Western Ghats ecosystem of Idukki and Kannur district. Identified 12 species of Scelioninae, including 5 new species. Besides genus *Dvivarnus* has reported for the first time from Kerala. Genus *Titta* and genus *Styloteleia* Kieffer has been recorded for the first time from India. A manuscript on morphological and molecular characterization of a new species of *Telenomus* from the eggs of mirid bugs on cashew has been finalized for publication. DNA barcoding also was done for the species with the collaboration of National Bureau of Agriculturally Important Insects (NBAIL, Bangalore). Visited ATREE (Bangalore) to sort the specimens belonging to Platygasteridae from their Western Ghats Insect Inventory (WII). About 150 specimens from parts of Western Ghats in Tamilnadu and Karnataka have been sorted and taken for loan for study.

(9) **Biosystematic studies on the lesser-known Reptilian fauna of Southern Western Ghats**: Conducted two intensive





surveys to the various localities of southern Western Ghats. Collected a good number of representative Reptilian samples. 16 species identified from the collections. One paper was published and three submitted for publication.

(10) Taxonomic studies on the Dermoptera (Insecta) fauna of southern Western Ghats: Conducted two intensive survey tours to various areas of southern Western Ghats and collected 150 samples. A part of the samples were sorted into generic level and further identified into 8 species under 6 genera including two new record to Kerala. Undertaken a tour to HQ, Kolkata to study the identified collections of Dermoptera.



(11) Database: Database on fauna of Western Ghats: 4946 data entries on various identified faunal elements (Invertebrata and Vertebrata) made. In addition to the routine databasing, work was initiated to develop a total web served, information system “The Primary Type Information System” (PTIS) separately for the primary types at the WGRC, Calicut.

16. WESTERN REGIONAL CENTRE, PUNE

(1) Faunistic Survey of Radhanagari Wildlife Sanctuary, Kolhapur and Chandoli National Park, Sangli: 13 chapters of Radhanagari WLS and 14 chapters of Chandoli NP were submitted after corrections in the light of referee’s comments to PPO, Kolkata.



(2) Riverine Fauna of Northern Western Ghats (Maharashtra State): Manuscript submitted. Programme completed.





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(3) **A study of Coccinellid (Insecta: Coleoptera: Coccinellidae) fauna of Northern-Western Ghats:** Progress: More than 500 specimens were collected. Out of 50 examples of 4 species of 4 genera were identified. Further identification is in progress.

(4) **The Collembola (Arthropoda: Insecta: Collembola) of Northern Western Ghats:** More than 500 specimens were collected. 106 examples of 8 species belonging to 7 genera and 6 families have been identified.



(5) **Amphibia of Northern Western Ghats:** 120 specimens were collected. Of which, 10 species of 10 genera belonging to 4 families were identified. Further identification is in progress.

(6) **A study of Coccinellid (Insecta: Coleoptera: Coccinellidae) fauna of Northern-Western Ghats:** Faunistic survey of Phansad Wildlife Sanctuary, district Raigad has been conducted and collected 1544, 1639, 2042, 1674 examples belonging to different faunal group. Database on Fishes of Peninsular India (1550) and Georeferenced database on Odonata of India (3817) are digitized.





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IDENTIFICATION OF CONFISCATED MATERIALS OF GOVT. OFFICES/ LAW ENFORCING DIRECTORATES / POLICE DEPARTMENT

Confiscated materials received from Govt. Offices/ law enforcing directorates / police department by Amphibia Section, General Non-chordate Section, Mammal Section, Marine Fish Section, Mollusca Section, Reptilia Section, Andaman and Nicobar Regional Centre, Port Blair, Central Zone Regional Centre, Jabalpur, Marine Biological Research Centre, Chennai and Western Ghat Regional Centre, Calicut were identified.

1. 28 confiscated reptile scales received from the Additional Chief Metropolitan Magistrate Egmore, Chennai were identified as the Indian Pangolin *Manis crassicaudata* Gray by Dr. R. Aengals, Sci. 'C'. Dr. R. Aengals, also attended and deposed evidence in the Additional Chief Metropolitan Magistrate Court at Egmore, Chennai on 22.10.2012 regarding its identification.
2. Centre for DNA Taxonomy (CDT) has received seized wildlife material (cooked meat) from Buxa Tiger Reserve (West Bengal) for species detection through DNA analysis. Mis. Swagata Mondal of Zoology Department, Calcutta University visited Nematelminthes Section for identification of nematode specimens.
3. Confiscated mollusca (Freshwater Bivalves and Sea Shell) identified sent by Regional Deputy Director of Wildlife Crime Control Bureau (NR), New Delhi
4. Confiscated mollusca (seashell) identified sent by Regional Deputy Director of

Wildlife Crime Control Bureau (NR), New Delhi as these mollusca samples are sometimes protected under the Laws and helpful in proceeding of legal cases under the IWLPA.

5. Dr R. Aengals, Scientist-C identified two turtle juveniles as Red eared sliders *Trachemys scripta elegans* (Wied Neuwied, 1839) brought by the Range officer of Tamil Nadu Forest, Department from Velacherry, Chennai.
6. Dr Rajkumar Rajan identified seized 'live rocks' for confirmation of its origin was given to Dr. S. David Raj, Forest Range Officer, Head Quarters Range (WL), Chennai – 600032.
7. Dr. C. Venkatraman identified seven species, *Lambis lambis* (Linnaeus, 1758) for Shri. P. S. Kushwah Additional Deputy Commissioner of Police, South Distt, New Delhi. (FIR no: 409/2011, dated 28.12.2011), four species were identified for The Station House Officer, Police Station, Kotwali, North Delhi (memo no: DD. 19A, dated 14.02.2012), four species were identified for The Station House Officer, Police Station, Tilak Marg, New Delhi. (FIR no: 02/11, dated 22.11.11).
8. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified seized animals scales as belongs to Pangolin, *Manis crassicaudata* Gray pertaining to





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- WCCB Reg. No. 427 received from Sh. C. Behara, Regional Deputy Director, Wildlife Crime Control Bureau, Eastern Region, Nizam Palace, Kolkata.
9. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified two samples of seized Deer- Antlers as belongs to White tailed deer, *Odocoileus virginianus* Zimmermann received from Sh. Arbind Kr. Jha, Reg. Dy. Director, WCCB, N.R., MoEF, Bikaner House, Shajahan Road, New Delhi.
 10. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified some samples of scales of animal pertaining to W.C.C.B. Reg. No. 456 received from Shri. C. Behera, Reg. Dy. Director, W.C.C.B., E.R., Nizam Palace, Kolkata and identified it as belongs to Pangolin, *Manis crassicaudata* Gray.
 11. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified one sealed jar containing one specimen of Bat received from S.I. Vinit Kumar, Delhi Police, D-4947, P.S. G.T.B., Enclave, Delhi and identified it as belongs to Bat, *Rhinopoma hardwickii* Gray.
 12. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified one seized sample of Rhino Horn received from Shri. C. Behera, Reg. Dy. Director, Wildlife Crime Control Bureau, E.R., Nizam Palace, Kolkata and identified it as belongs to Indian Rhinoceros, *Rhinoceros unicornis* Linnaeus.
 13. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified some seized animal scales received from Sh. Rajiv Kr. Verma, Inspector, Customs Preventive Circle, Purne and identified it as belongs to Indian Pangolin, *Manis crassicaudata* Gray.
 14. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified wildlife material received from the Divisional Forest Officer, Wildlife III Cooch Behar and identified the Hoof belongs to Indian Bison, *Bos frontalis* Lambert.
 15. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified wildlife material received from the Range Officer, Basirhat Range, Sundarban Tiger Reserve, Kumirmari, Gosaba, 24-Parganas (S) for its identification and identified it as belongs to the Chital, *Axis axis*.
 16. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified one Ramus of mandible received from Mr. Goutam Roy, S.I. of Police, Officer-in-Charge, Itahar Police Station, Utter Dinajpur, West Bengal and identified it as belongs to Cattle.
 17. Dr. Gaurav Sharma, Scientist-C and Officer-in-Charge, Mammals and Osteology Section has identified a cut





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- piece of skin (with 4 photographs) from Mr. Samir Bose, Forest Ranger, Jhalda Range, Purulia Division, Purulia, West Bengal and identified it as belongs to Indian Wild Boar, *Sus scrofa*.
18. Fifty four live turtles received for identification from Assistant Conservator of Forest, Thane. Identified as *Melanochelys tricarinata* and *Geoclemys hamiltoni*.
 19. Fish photographs received for identification from Shri. S.P. Khodake, Department of Zoology, A.M.P. College, Pimpalner, Dist. Dhule.
 20. Fish specimen received for identification from Central Zone Regional Central, Jabalpur.
 21. Fish specimen received for identification from Mr. Sachin Tayade, Sr. Research Fellow, Dept. of Zoology, R.A. College, Washim. Identification: *Ophisternon cf. bengalensis* McClelland.
 22. Five specimens of Rodents were identified as *Rattus rattus* (Linnaeus) received from Ajanta Birah, Sr. Scientist I.C.A.R., Andaman and Nicobar Islands.
 23. Identified one shark specimen brought from the Basirhat Range Office, Sundarband Tiger Reserve, West Bengal as *Carcharhinus sorrah* (Muller and Henle, 1839) and 2 nos. of Shark teeth which were belongs to Porbeagle shark, *Lamna nasus* (Bonnaterre, 1788) for the Deputy Commissioner of Customs (Prev.), Indira Gandhi International Airport, New Delhi. Identified 3 species of Sharks, one species of Guitar fish and 3 species of Sting Rays for the Beat Officer, Haldibari Beat, N.P.W. Range, Sundarban Tiger Reserve, West Bengal.
 24. Library Section has added 21 Nos. of Books, 29 issues of Journals by Purchase, 54 issues of Journals by Exchange and 225 volumes as Bound Journals.
 25. Library Section has added 4 Nos. of Books, 26 issues of Journals by Purchase, 31 issues of Journals by Exchange and 601 volumes as Bound Journals.
 26. One confiscated sting ray skin have been received from the Regional Deputy Director, Wild Life Control Bureau (NR), New Delhi vide Letter F. No. 10-10/WN/12/644 dated 15-11-2012. The material has been identified as a genuine processed and black coloured skin of a Sting Ray belonging to the species *Himantura gerrardi* (Gray, 1851) and the report sent.
 27. One dead turtle specimen received for identification from RFO, Lonavala, Pune. Identification: *Trionyx* sp. 1 ex. (Damaged and decaying).
 28. One formalin-fixed seized material which was suspected as Wild Boar has been received from Forest Department, Government of West Bengal through Mammal and Osteology section for species confirmation using DNA sequence. DNA for this sample was extracted from Skin, Muscle and Hair follicles. Further, PCR was performed with DNA from Skin, Muscle and Hair follicles separately with





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mammal's specific Cyt-b primers to amplify about 480 bp fragments (fig.-1). PCR-products were purified and will be sequenced shortly to confirm the species.

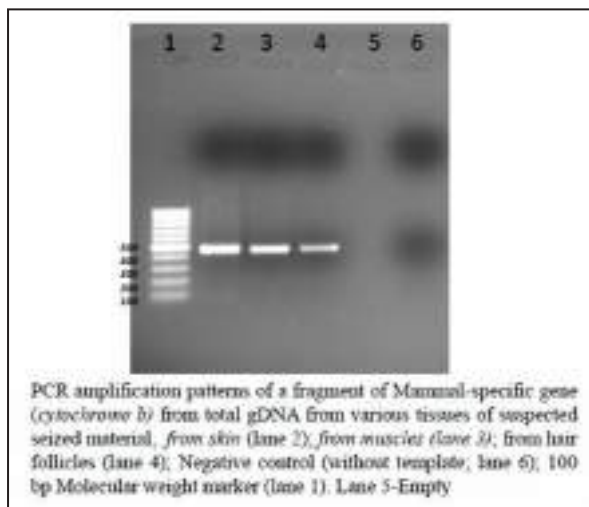


Fig.-1

29. One horn sample received for identification from Local Crime Investigation Branch, Sangli, Maharashtra. Identification: *Cervus* sp. (Sambhar).
30. One horn sample received for identification from Roha Police Station, Maharashtra Identification: A horn of Sambhar (*Cervus unicolor*) which is in Schedule III of Wildlife Protection Act, 1972.
31. One Improvised Iron made Trap snare with spot of blood and some body hairs of Deer has been received for confirmation of its identity from D.F.O., Wildlife, Division-III, Cooch-Bihar. In addition to that confiscated mollusca (seashell) was identified sent by Regional Deputy

Director of Wildlife Crime Control Bureau (NR), New Delhi.

32. One live turtle specimen received for identification from Deputy Conservator of Forest, Nashik (East) Division, Nashik. Identification: Star Tortoise.
33. One lot of Skates and Ray (Confiscated) received from the Divisional Forest Officer, 24 Parganas South Division, Alipore, Kolkata containing 7 specimens with letter No. Camp-14/15 dated 03-12-2012. All the 7 specimens have been identified under 6 species belonging to 4 genera and 3 families and identification report sent.
34. One plaster of paris cast received for identification from Forest Dept., Pune. Plaster of Paris cast which appears closer to Panther (*Panthera pardus*).
35. One seized horn sample received for identification from Forest department, Koyna, Maharashtra. Identification: Horn of *Cervus* sp. (Sambhar).
36. One skin sample received for identification from Crime Branch, Pune City and identified as Skin of Leopard, *Panthera pardus* (Mammalia: Carnivora: Felidae: Pantherinae), Schedule I of Wildlife Protection Act, 1972.
37. One skin sample received for identification from Forest Dept., Malegaon, Maharashtra. Identified as Skin of leopard, *Panthera pardus*.





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38. One skin sample received for identification from Forest Dept., Narayangaon, Maharashtra. Identified as Skin of leopard, *Panthera pardus*
39. One skin sample received for identification from Jalgaon Forest Department, Maharashtra. Identification: Skin of *Panthera pardus* (Leopard) under Schedule I of Wildlife Protection Act, 1972.
40. One skin sample received for identification from Police Department, Mumbai, and identified as fake skin of Tiger.
41. One skin sample received for identification from Police Dept., Kolhapur. Identified as Skin of leopard, *Panthera pardus*.
42. One skin sample received for identification from Police Dept., Panchagani, Maharashtra. Identified as Skin of leopard, *Panthera pardus*.
43. One specimen of shark received from Basirhat Range Office, Sundarban Tiger Reserve, West Bengal has been identified as *Carcharhinus sorrah* (Muller and Henle) and reports sent.
44. One truck load of confiscated shark specimens at Diamond Harbour Range Office has been visited on 11-07-2012 and examined the contents of the gunny bags under request of the Divisional Forest Officer, 24-Parganas South Division, Alipore, Kolkata. At least 07 species of sharks and rays were identified and the identification report submitted.
45. Received a wildlife material from the Divisional Forest Officer, Wildlife III Cooch Behar for its identification and it is identified as the Hoof of Indian Bison *Bos frontalis* Lambert.
46. Received a wildlife material from the Range Officer, Basirhat Range, Sundarban Tiger Reserve, Kumirmari Gosaba, 24-Parganas (S) for its identification and it is identified as the Chital (*Axis axis*), the samples of Cooked Deer-meat from Range Officer, Basirhat Range, Sundarban Tiger Reserve, 24-Parganas (S) for its identification and it is identified on the basis of hair with sample as the Chital (*Axis axis*), one Ramus of mandible from Mr. Goutam Roy, S.I. of Police, Officer-in-Charge, Itahar Police Station, Utter Dinajpur, West Bengal for its identification and it is identified as belonging to Cattle and a cut piece of skin along with 4 photographs from Mr. Samir Bose, Forest Ranger, Jhalda Range, Purulia Division, Purulia, West Bengal for its identification and it is identified as Indian Wild Boar, *Sus scrofa* Juvenile.
47. Received from The Div. Forest Officer, Jalpaiguri Division, Jalpaiguri and advised to bring the large piece of Elephant tusk for the purpose of scientific examination.
48. Received one sealed jar containing one specimen of Bat from S.I. Vinit Kumar, Delhi Police, D-4947, P.S., G.T.B, Enclave, Delhi for its identification and it is identified as I *Rhinopoma hardwicki* Gray.





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49. Received one seized sample of Rhino Horn from Shri. C. Behera, Reg. Dy. Director, Wildlife Crime Control Bureau, E.R., Nizam Palace, Kolkata-700020 for its identification and it is identified as Indian Rhinoceros, *Rhinoceros unicornis* Linnaeus. Also received some seized animal scales from same for its identification and it is identified as Scales of Pangolin *Manis crassicaudata* Gray.
50. Received some hair samples of the genus *Petaurista* from Dr. A. Choudhury, Dy. Commissioner, Lakhimpur, Assam for confirmation of the identity of the hair samples. It is under process of Trichotaxonomy.
51. Received some seized animal scales from Sh. C. Behera, Regional Deputy Director, Wildlife Crime Control Bureau, Eastern Region, Nizam Palace, Kolkata-700020 for its identification and it is identified as scales of Pangolin, *Manis crassicaudata* Gray.
52. Received some seized animal scales from Shri. C. Behera, Reg. Dy. Director, Wildlife Crime Control Bureau, E.R., Nizam Palace, Kolkata-700020 for its identification and it is identified as Scales of Pangolin *Manis crassicaudata* Gray.
53. Received some seized animal scales from Shri. Rajiv Kr. Verma, Inspector, Customs Preventive Circle, Purnea for its identification and it is identified as Scales of Pangolin *Manis crassicaudata* Gray.
54. Received some seized animal scales pertaining to W.C.C.B., (Reg. No. 456) from C. Behera, Reg. Deputy Director, W.C.C.B., E.R., Nizam Palace for its confirmation and it was identified as Pangolin *Manis crassicaudata*. Also received two samples of seized Deer-Antlers from Shri. Arbind Kr. Jha, Reg. Deputy Director, W.C.C.B., N.R., MoEF, Bikaner House, Shajahan Road, New Delhi, for its identification and identified as White tailed deer, *Odocoileus virginianus* Zimmermann
55. Received some seized Wildlife material in 17 sealed containers from Shri. Pankaj Tomar, S.I. of Police G.T.B. Enclave P.S. Delhi, 6 sealed assorted containers from Addl. Deputy Commissioner of Police, North East Dist., Delhi and one Sculpture made of bone from C. Behera, Reg. Deputy Director, WCCB, E.R., Kolkata for confirmation. Confiscated mollusca (Freshwater Bivalves and Sea Shell) identified sent by Regional Deputy Director of Wildlife Crime Control Bureau (NR), New Delhi as these mollusca samples are sometimes protected under the Laws and helpful in proceeding of legal cases under the IWLPA.
56. Received two samples of seized animal scales from Shri C. Behera, Reg. Dy. Director, Wildlife Crime Control Bureau, E.R., Nizam Palace, Kolkata-700020 for its identification and it is identified as Scales of Pangolin *Manis crassicaudata* Gray.
57. The Officer in Charge of the Section visited the Vidya Range Office under N.P.W. Range, Sundarban Tiger Reserve





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- to identify about 27 specimens received from Haldibari Beat, Sundarban Tiger Reserve, West Bengal. Sharks of three species (10 ex.), Sting Rays of three species (14 ex.) and one species (2 ex) of Guitar fish identified and report sent.
58. Two confiscated fish specimens received from P.S. GTB Enclave, Delhi has been identified and report sent.
59. Two confiscated shark specimens received from P.S. Shahdara, North East Delhi has been identified and report sent.
60. Two live specimens and two photographs of Reptiles received for identification from A.C.F., Khamgaon. Identification: *Naja naja* (Linnaeus), *Daboia russeli* (Shaw and Nodder), *Hypnale hypnale* (Merrem) and *Trimersus malabaricus* (Jerdon).
61. Two skin samples received for identification from Forest department, Chiplun, Ratnagiri, Maharashtra. Identification: Fake Skin of Tiger.
62. Two skin samples received for identification from Police department, Gandhinaga, Kolhapur, Maharashtra. Identification as follows: Two skin samples, which were not of Tiger (*Panthera tigris*)





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IDENTIFICATION AND ADVISORY SERVICES

1. One vial received from Dr. Radhakrishnan, Western Ghat Regional Centre, Calicut, identified as *Hospitalitermes monoceros* (Konig).
2. Dr. H. S. Banyal, Scientist-C provided scientific information on the fauna displayed in the museum of DRC, ZSI, to 68th Forest Guards trainee group of the Forest Dept. of Rajasthan State on 24th August, 2012.
3. Dr. H. S. Banyal, Scientist-C provided scientific information on the fauna displayed in the centre's museum to a group of 52 students and 4 teachers from Phaloudi, under "Doosra Dashak Baap Scheme" on 08-09-2012.
4. Mrs. Neena Tak, Assistant Zoologist has provided scientific information to three naturalists from Rao Jodha Desert Rock Park on 26.9.2012 and to a group of 32 forest guards and an Instructor from Rajasthan Forest Training Centre, Alwar on 27.9.2012.
5. Dr. H. S. Banyal, Scientist-C has provided scientific information and delivered a lecture on the fauna displayed in the centre's museum to a group of 18 M.Sc. (Environmental Science) students and 4 teachers from Kachchh University, Bhuj, Gujarat on 29-10-2012.
6. Dr. H. S. Banyal, Scientist-C has provided scientific information and delivered a lecture on the fauna displayed in the centre's museum to a group of 60 students and teachers from Satyam Public School near Jhalamand Circle, Jodhpur on 07-11-12.
7. Smt. Neena Tak, Assistant Zoologist provided scientific information on the fauna displayed in the DRC, ZSI, museum to a group of 50 persons from Maharishi Arsh Gurukul, Rishi Udyan, Pushkar road, Ajmer on 26-11-2012.
8. Dr. Sanjeev Kumar, Scientist-C provided scientific information on the fauna displayed in the DRC, ZSI, museum to 18 students of class XI and XII of Govt. Sr. Sec. School, Rohat, District Pali, Rajasthan on 10th Dec., 2012 .
9. Dr. Sanjeev Kumar, Scientist-C has delivered lecture to 25 students of M.Sc. (Environmental Science) Deptt. of Environmental Sciences, MGS University of Bikaner, Rajasthan on their visit to the centre and also given information on fauna displayed in the Museum on 24th January, 2013.
10. Dr. H.S. Banyal, Scientist-C has delivered lecture and also provided scientific information on the fauna displayed in centre's museum to a group of 22 (B. Sc.) students and teachers of MDM College, Jodhpur on 2-2-2013.
11. Dr. H.S. Banyal, Scientist-C has delivered lecture and also provided scientific information on the fauna displayed in centre's museum to a group of to a group of 69th forest guard's trainee group of





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- Rajasthan State Forest Department on 06-02-2013.
12. Dr. Sanjeev Kumar, Scientist-C has provided Scientific Information on snakes of Rajasthan especially on a popular myth on presence of Peevna snakes in Rajasthan was given to Shri Rewat Singh, Food Safety Officer, and Office of the CM and HO, Jaisalmer, and Rajasthan on 27th April, 2012.
 13. Dr. H.S. Banyal, Scientist-C has provided scientific information on the fauna displayed in centre's museum to a group of of M.Sc. (Zoology) students from A.M.U. Aligarh on 25-02-2013.
 14. Dr. H. S. Banyal, Scientist-C delivered lecture and also provided scientific information on the fauna displayed in centre's museum to a group of students and teachers of L.D.Vidyapeeth, Jodhpur on 13-03-2013.
 15. Dr. Sanjeev Kumar, Scientist-C has attended meeting for discussion regarding appointment of recognized private medical practioner as Authorised Medical Attendant (AMA) for Central Govt. Employees at Defence Lab, Jodhpur under the Chairmanship of Commissioner of Income Tax, and Jodhpur on 17th April, 2012.
 16. Four vial received and identified from Dr. K.P. Jaynath, Vice President, Pest Control (India) Pvt. Ltd., Bio Control Research Lab, Bangalore, Karnataka. 2 species identified namely *Odontotermes horni* (Wasmann) and *Odontotermes obesus* (Rambur).
 17. Four vials received from Department of Entomology, College of Agriculture, Indira Gandhi Krishi Viswavidyalaya, Raipur (Chattisgarh)-492009, from Professor S.K. Srivastava, identified under two species *Odontotermes horni* (Wasmann) and *Odontotermes obesus* (Rambur).
 18. Dr. Sanjeev Kumar, Scientist-C has given information on the fauna displayed in the museum of DRC, ZSI, Jodhpur and delivered a lecture on *Faunal Wealth of Rajasthan state and Gujarat and work done by ZSI* to 39 students of class XII of Central Academy School, Jodhpur on 9th May, 2012.
 19. Dr. Sanjeev Kumar, Scientist-C has provided scientific information on species richness of bats to Ms. Amarpreet Kaur and Ms. Preeti Soni, Ph. D. students of Dr. Ashok K. Purohit, Head Deptt. of Zoology, JNV University, Jodhpur on 09.07.2012.
 20. Dr. Sanjeev Kumar, Scientist-C has provided scientific information on raptors of Jodhpur to Shri K.K. Rawal, Govt. Advocate, Rajasthan High Court, Jodhpur on 20.07.2012.
 21. 7. Dr. H.S. Banyal, Scientist-C provided scientific information on the fauna displayed in the museum of DRC, ZSI, to a group of M.Sc. (Zoology) students from J.N.V. University Jodhpur on 25.07.2012
 22. Eight vials received and identified from Dr. Meena Vankudre, Dept of Zoology, Sinhgad College of Science, Ambeguan





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- (BK), Pune-41. 1 species identified namely *Odontotermes obesus* (Rambur).
23. Dr. Sanjeev Kumar, Scientist-C has provided advisory services on reptiles and birds of Rajasthan to Shri Kanwar Lal Genwa, Project Fellow UGC-DRS-I (SAP) on Diversity and Physiology of Desert Fauna under programme coordinator Prof. Ashok K. Purohit, Head-Deptt. of Zoology, JNV University, Jodhpur on 9th August, 2012.
24. Nine vials received and identified from Dr. Parthibha Basu, Associated Professor, Ecology Research Unit, Dept of Zoology, University of Calcutta, 35, Ballygunge Circular Road, Kol-19. 5 species identified under 4 genus namely *Microcerotermes beesoni* Snyder, *Dicuspiditermes incola* (Wasmann), *Odontotermes feae* (Wasmann), *Odontotermes obesus* (Rambur) and *Microtermes obesi* Holmgren
25. A manuscript entitled 'Report of *Dissosternus pertii* Hope (Coleoptera: Cerambycidae : Prioninae) from Pune, Maharashtra by H.V.Ghate was reviewed for the publication in ZSI online journal 'Promalia'
26. A report on the status of King Cobra, South Andaman Krait and Hawksbill Sea Turtle has been submitted to the Principal Chief Conservator of Forests (WL), Andaman and Nicobar Administration on request.
27. Advisory services on Birds of Uttarakhand were provided to Mr. Amit Pandey, Research Associate, Natural Heritage Division, Indian National Trust for Art and Cultural Heritage (INTACH), Lodhi Estate, New Delhi.
28. Advisory services rendered to Dr. Rathinamala, M. D (s) with regard to identification of coral specimens *Corallium rubrum* (Linnaeus, 1758), Ph.D. Scholar, National Institute of Siddha, (Ministry of Health and Family Welfare, Government of India), Tambaram, Chennai – 97.
29. Antler specimens have been identified for Divisional Forest Officer, Diglipur Division, North Andaman.
30. Confiscated elephant tusk for Central Crime Station, Port Blair has been identified on request and report submitted.
31. Dr J. Thilak, Scientist-C identified *Allenbatrachus grunniens* Linnaeus, 1758 from the specimens of fishes for Dr. Vijayakumari, K.N, Associate Professor, Dept of Zoology, Maharajas college, Ernakulam, Kerala on 22-8-2012.
32. Dr Navneet Singh, Scientist-C guided Mr. Rahul Joshi, Research Scholar, Department of Zoology and Environmental sciences, Punjabi University, Patiala (PB) regarding his compilation of Ph. D work. He visited ZSI, Patna twice, i.e. from May 03 to June 19, 2012 (for 48 days) and from November 02 to 30, 2012 (for 29 days).
33. Dr Navneet Singh, Scientist - C identified the insect collections of M.Sc. entomology students of Department of Zoology, Patna





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- University, Patna. The students visited ZSI, Patna on 25.01.2013.
34. Dr Navneet Singh, Scientist-C gave practical demonstration to M. Sc students of Department of Zoology, Patna University, Patna regarding Insect collection, preservation and identification on November 08, 2012.
35. Dr Navneet Singh, Scientist-C gave practical demonstration to M. Sc students of Department of Zoology, Patna University, Patna regarding Insect collection, preservation and identification on November 08, 2012.
36. Dr R. Babu, Scientist-C identified 15 species under 13 genera of three families from specimens of Odonata received from Dr. A.G. Murugesan, Principal Investigator, DAE-BRNS Project, Manonmaniam Sundaranar University, Alwarkurichi-627412.
37. Dr Rizvi reviewed paper on "Marine Nematodes" and sent back to PPO, ZSI, Kolkata.
38. Dr. A. K. Jaiswar, Sr. Scientist, CIFE, Bombay, Dr. R. K. Manna, Sr. Scientist, Mr. C. M. Rosith, Scientist, Mr. Roy Choudhry, Technical Officer of CIFRI, Barrackpore visited Crustacea Section.
39. Dr. Andrey A. Lissovsky Curator of Lagomorph and Osteological collection Zoological Museum of Moscow State University, Russia visited Mammal and Osteology Section to study of Pika and Hispid hare on 05.02.2013.
40. Dr. Animesh Bal, Additional Director and Scientist-F, reviewed two scientific papers on Aquatic Bugs (Hemiptera) as a referee for their suitability for publication in ZSI Journals. The comments have been submitted to P.P.O. on 14th August, 2012. He has also attended Honorable Chief Justice, Shri Naidu, Judge, NGT, Kolkata Bench and retired Judge, Supreme Court of India while his visit to ZSI, Headquarters.
41. Dr. Animesh Bal, Scientist- F and Additional Director reviewed one scientific paper submitted for publication in an outside Journal. Report submitted on 1st June, 2012 online.
42. Dr. Annemarie Ohler, Curator of Vertebrate Collections at the Paris Museum of Natural History, Paris, France visited Amphibia and Protochordata Section and studied specimens of Himalayan hill-stream frogs from 27-31, August, 2012.
43. Dr. Bikramjit Sinha attended the technical meeting for grant of research permission in PAs and Forest areas of Arunchal Pradesh as a member of the research board in the office of the PCCCF, Arunachal Pradesh on 28th June 2012.
44. Dr. Bikramjit Sinha rendered advisory services on documentation and scouting of grassroot innovations to Sh. Rajiv Milli of National Innovation Foundation-India, Arunachal Pradesh Unit, Doying Gumin College, Pasighat, East Siang, Arunachal Pradesh.





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45. Dr. Bikramjit Sinha was invited and attended as an expert in the meeting of the State Forest Research Committee for Wildlife Protected Areas in the office chamber of the PCCF (WL and BD), Itanagar on 13th March 2013 for technical evaluation of research proposals received from various organizations for granting research permission in Protected Areas under the provisions of Wildlife (P) Act, 1972.
46. Dr. Bikramjit Sinha, Scientist-C of APRC, Itanagar has rendered advisory services to Ms. Rangini N, Research Scholar of G B pant Institute of Himalayan Environment and Development, North East Unit, Itanagar on her task of preparing a report on existing information on faunal resources of Dehang-Debang Biosphere Reserve.
47. Dr. Bikramjit Sinha, Scientist-C of APRC, Itanagar has rendered advisory services on analysis of gut contents of fish fauna to Mr. Shivaji Choudhury, Technician (B) and Mr. Lakpa Tamanag of G B pant Institute of Himalayan Environment and Development, North East Unit, Itanagar.
48. Dr. Ch. Satyanarayana participated in a two day workshop on CITES meting and Revision of Schedule Species in the Wildlife (protection) Act, 1972 from 20th-21st November and provided inputs pertaining to the workshop theme on different animal groups in general and Invertebrate groups (Cnidaria, Porifera and Echinodermata) in particular. Information available with Dr. Sharma, Scientist "C", Headquarters.
49. Dr. Gopal Sharma Scientist-C has given demonstration to the M.Sc. students of Zoology Department, Patna University, patna for collection and preservation of Zooplankton on river bank on 20th Jan 2013.
50. Dr. Gopal Sharma Scientist-C has given demonstration to the Ph.D. students of Bettiah College Bettiah, Bihar for collection and preservation of Benthic macro-invertebrates
51. Dr. Gopal Sharma, Scientist-C guided Mr Vidya Shankar, Research Scholar under Prof. S.K Srivastava of Zoology Dept., Patna University for his compilation of Ph. D work on identification of Zooplankton of a Pond in and around Patna from December 5 - 18, 2012.
52. Dr. Jayasree Thilak, Scientist-C rendered identification services to Sreejamol, Research Scholar, Maharajas College, Ernakulam, Kerala on 31-10-2012.
53. Dr. Jayasree Thilak, Scientist-C rendered the advisory services to Sr. M. Mary Queen, Research Scholar of Nandanam Arts College and provided her literature for the identification of fishes on 11/1/2013.
54. Dr. Jayasree Thilak, Scientist-C rendered the advisory services to Shanmughapriya, student of Rajalakshmi Engineering College, affiliated to Anna University.
55. Dr. K. Rajmohana, Scientist-C, catered identification and advisory services on 20 genera and 10 species, to a Professor and a student from Annamalai





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- University, Chidambaram with regard to their collection of Platygastriidae from Andamans.
56. Dr. K. Rajmohana, Scientist-C, catered identification services, to a professor, Dept of Zoology, University Of Calicut, for a doctoral work, with regard to some insect specimens that had emerged from plant galls. The samples were identified as an undescribed species of *Insotemma* Forster (Platygastridae: Hymenoptera).
57. Dr. Kailash Chandra, Additional Director and Scientist-‘F’ has attended the evaluation committee meeting to review the progress of the Junior Research Fellows (JRFs) to upgrade their fellowship to Senior Research Fellow at ZSI HQs., Kolkata on 11th July, 2012 and the general meeting of ZSI regarding the discussion on ‘Guidelines for Implementation of Biometric Attendance Monitoring System (BAMS) at Zoological Survey of India in Annandale Hall, ZSI HQs., Kolkata 12th July 2012.
58. Dr. Kailash Chandra, Additional Director and Scientist-F reviewed manuscript entitled ‘Studies on Odonata and Lepidoptera of foothills of Aravalli Range, Rajasthan–Lepidoptera part’ submitted by Dr. Gaurav Sharma for the ZSI publication on 3rd December 2012.
59. Dr. Kailash Chandra, Additional Director and Scientist-‘F’ has reviewed the manuscript entitled on ‘Aves: Kaleshar Wildlife Sanctuary, Haryana’ for the publication in ‘Conservation Area Series of ZSI on 9th July, 2012. He has also reviewed the project proposal entitled ‘Diversity of composition of litter and ground-dwelling Spiders in the Western Ghats of Kerala’ received from SERC, Division, Department of Science and Technology, New Delhi for the consideration of funding and the report was sent on 12th July, 2012.
60. Dr. Kailash Chandra, Additional Director and Scientist-‘F’ has undertaken Ph.D. Viva Voce of Ms. Shazia Quasin, Zoological Survey of India on 9th August, 2012 at Wild Life Institute of India, Dehradun.
61. Dr. Kaushik Deuti, Assistant Zoologist, reviewed 3 research papers and send to Publication Division, ZSI.
62. Dr. Kaushik Deuti, reviewed 2 papers send to him from Publication Division, ZSI, Kolkata and 1 paper send by J. Threatened Taxa, Coimbatore.
63. Dr. L. Bindu, Scientist-C has identified 15 species of freshwater Rhizopods for M.Sc. Students from Kariavattom Campus, Kerala University
64. Dr. M.K. Deb Roy reviewed five research papers pertaining to fauna of Indian Museum Tank.
65. Dr. Muhamed Jafer Palot, A.Z., assisted the Officer-in- Charge for the preparation of the review of the Draft Plan on CITES meeting for updating of animal species in various existing Schedules of the Indian Wildlife (Protection) Act, 1972.





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66. Dr. Muhamed Jafer Palot, A.Z., rendered identification and Advisory services to Mrs. T.R. Ambili, Senior Research Fellow, Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu for studying the *Tor khudree* fish specimens of the Centre.
67. Dr. Muhamed Jafer Palot, A.Z., reviewed a research manuscript on butterflies for Biosystematica journal and comments offered.
68. Dr. Muhamed Jafer Palot, Asstt. Zool., rendered advisory service to Mr. Mathews Plamoottil, Asstt. Professor, Dept. of Zoology, Govt. College, Chavara, Kollam for deposition of type specimens of fishes to the ZSI, WGRC collection.
69. Dr. Muhamed Jafer Palot, Asstt. Zool., rendered identification and advisory service to forest Officials, Thamarasserry Range, Kozhikode for confiscated Indian Bull Frog (*Hoplobatrachus tigerinus*) specimens (16 nos.)
70. Dr. Muhamed Jafer Palot, Asstt. Zool., rendered identification service to M.Sc. Zoology student, S.N.College, Alathur, Palakkad on butterfly collections. 14 specimens were identified into 8 species.
71. Dr. Muhamed Jafer Palot, Asstt. Zool., rendered necessary help to Mr. K.S. Seshadri, Research Associate, ATREE, Bangalore for Amphibain Type specimen study.
72. Dr. Muhamed Jafer Palot, Asstt. Zool., rendered necessary help to Mr. Krishnakumar, K, Programme Officer, CERC, ATREE, Bangalore for Fish Type specimen study.
73. Dr. Muhamed Jafer Palot, Asstt. Zool., reviewed a book entitled Keralathile Kadal Jeevikal (Marine animals of Kerala coast) and offered comments.
74. Dr. Muhamed Jafer Palot, Asstt. Zoologist assisted in reviewing the Annexures of US-FWS proposal for listing Asian Freshwater Turtles and Tortoises in CITES-Appendices and the information on harvest trade, legal status, distribution, biology and conservation of Freshwater Turtles in India.
75. Dr. Muhamed Jafer Palot, Asstt. Zoologist attended the First Class Magistrate Court, Thamarasserry as an expert witness on 24th July 2012 on a case related to the identification of Common Palm Civet and Jungle Cats confiscated from a Pet Shop at Kozhikode in 2006.
76. Dr. Muhamed Jafer Palot, Asstt. Zoologist enrolled Shri. Vivek Philip Cyriac, M. Sc (Wildlife Science) final semester student of KVASU Centre for Wildlife Studies, College of Veterinary and Animal Sciences, Pookode, Wayanad as a research student on his dissertation work on Reptilia.
77. Dr. Muhamed Jafer Palot, Asstt. Zoologist performed as a Judge in connection with the district level Inspire Science Exhibition 2012-13 held at Government U.P. School, Thamarasserry on 06.09.2012 organized by Department of Education, Govt. of





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- Kerala and Department of Science and Technology, New Delhi
78. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered advisory Services to Smt. Ajitha, K.V., Ph.D Research Scholar, Department of Zoology, St. Joseph's College Devagiri, Calicut on her research Project on Ecology and Biology of Egrets.
79. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered advisory services to the B. Ed Natural Science students of CICS College of Teacher Education, Kozhikode, on a project entitled, 'A study of Common Fishes in Kadalundi Community Reserve during monsoon season'.
80. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered identification and advisory services to the Forest Officials of Thamaraserry Forest Range, Kozhikode division on the identification of 45 numbers of Parakeet specimens (Rose-ringed Parakeet, *Psittacula krameri*) confiscated from Kozhikode city.
81. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered identification and advisory service to Ms. Shweta Mukundan, M.Sc. Final Semester, Department of Zoology, St. Joseph's College Devagiri, Calicut on her project entitled, 'A study on the ecology and behaviour of the Black Kite (*Milvus migrans*) in urban environment'.
82. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered Identification and advisory services to Shri. K.P. Rajkumar, M.Sc. final Semester Student, Dept. of Zoology and Wildlife, A.V.C. College, Mayiladumthurai, Tamil Nadu for his M.Sc dissertation work on reptilian fauna of Palakkad district.
83. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered Identification and advisory services to Shri. Sandeep Das, Research Fellow, Wildlife Division, Kerala Forest Research Institute, Peechi, Thrissur on herpeto fauna of southern Western Ghats.
84. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered service to Shri. M. Magesh, Research Scholar, Dept. of Aquatic Biology and Fisheries, University of Kerala, Kariavattom Campus, Thiruvananthapuram in deposition of type specimens of polychaete worms to the Type depository of our Centre.
85. Dr. Muhamed Jafer Palot, Asstt. Zoologist rendered service to Shri. Mathew Plathottahil, Assistant Professor, Dept of Zoology, Government College, Chavara, Kollam district in depositing 6 type specimens of fishes to our type depository.
86. Dr. Muhamed Jafer Palot, Asstt. Zoologist reviewed a research paper entitled "Odonata fauna of Chatri Lake region, Amravati, Maharashtra." for the *International Journal of Biodiversity and Conservation*.
87. Dr. Muhamed Jafer Palot, Asstt. Zoologist, rendered identification and advisory service to Ms. Nafeera N.P, IV Semester M. Sc Student, Post Graduate Department of Zoology, Wildlife Biology





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- Division, Farook, College, Calicut on molluscan specimens (8 species).
88. Dr. Muhamed Jafer Palot, Asstt. Zoologist, reviewed a research paper entitled "Dolphin-assisted cast net fishery in the Ashtamudi Estuary, southwest coast of India" for the *Indian Journal of Fisheries*.
89. Dr. Muhamed. Jafer Palot, AZ rendered advisory service to Mr. Krishna Kumar, RA, ATREE, Bangalore on Holotypes and Paratypes of fishes.
90. Dr. Muhamed. Jafer Palot, A.Z. rendered identification and advisory service to Shri. Vivek Philip Cyriac, M.Sc. Wildlife Science Student, Kerala Veterinary University, Pookode, Wayanad district for a project on Reptilia.
91. Dr. Muhamed. Jafer Palot, A.Z. rendered identification and advisory service to Shri. Rajkumar, K. P, M. Sc. Wildlife Science Student, AVC College, Mayiladumthurai, Tamil Nadu for a project on "Reptilian Fauna of Reserve Forests of Palakkad district"
92. Dr. Muhamed. Jafer Palot, AZ rendered Identification advisory services rendered to forest authorities of Kackavayal Biodiversity Centre, Kozhikode Forest Division on the preparation of Interpretation Centre on Biodiversity of Kozhikode district.
93. Dr. Muhamed. Jafer Palot, AZ, rendered advisory service to Mrs. Ambili, SRF, Bharathiar University, Coimbatore, on the study of *Tor* genus (Pisces) specimens of Western Ghats.
94. Dr. Muhamed. Jafer Palot, AZ, rendered advisory service to Ms. Seena Narayanan, Sr. RA, ATREE, Bangalore, on the study of dung beetles (Coloeoptera).
95. Dr. Muhamed. Jafer Palot, AZ, rendered identification and advisory services to Shri. Rajkumar, K.P. M.Sc.(Wildlife Biology) student, A.V.C. College, Mannampandal, Tamil Nadu on reptilian fauna of Palakkad district.
96. Dr. Muhamed. Jafer Palot, AZ, reviewed a research paper entitled, "Distribution of Mangroves in the Ashtamudi Estuary, Kollam district, Kerala" for the Journal of Aquatic Biology and Fisheries.
97. Dr. Narender Sharma, Scientist-C reviewed research paper entitled, "Orthoptera (Insecta) of Chandigarh and surrounding areas" and sent back to PPO, ZSI, Kolkata.
98. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of Lot No. 42/2012 to Dr. Sumit Homechaudhuri, Professor of Zoology, Department of Zoology, University of Calcutta, 35, Ballygunge Circular Road, Kolkata-700 019, West Bengal.
99. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 45/2012 to Mr. Sankarsan Roy and Amit Kr. Gayen, Bidhannagar Govt. College, Salt Lake, Kolkata-64, West Bengal.





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100. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 47/2012 to Aheli Mazumder, M.Sc. Zoology Student, Presidency University and Sudeshna Biswas, Ballygunge Science College, Kolkata, West Bengal.
101. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 55/2012 to Dr. Susanta Kumar Chakraborty, Professor and Head, Department of Zoology, Vidyasagar University, Midnapore-721 102, West Bengal.
102. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 63/2012 to Prof. P.K. Manna, 297, Bangur Avenue, Block-B, Kolkata-700 055, West Bengal.
103. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 64/2012 to Partha Sarathi Ghosh, 3rd Year B. Sc. Student, Department of Zoology, Sonamukhi College, Sonamukhi, Bankura dist.-722 207, West Bengal.
104. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 66/2012 to Barna Chakraborty, Core Teacher of Zoology, Directorate of Distance Education, Vidyasagar University, Midnapore-721 102, Paschim Midnapore district, West Bengal.
105. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 70/2012 to the Principal, Vivekananda College for Women, Barisha, Kolkata-700 008, West Bengal.
106. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 68/2012 to Dhanalakhi Gogoi, M.Sc. Student, Department of Sericulture, Assam Agricultural University, Jorhat-785 013, Assam.
107. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 74/2012 to Dr. Patralekha Mukhopadhyay, Associate Professor, Victoria College, 78B, A.P.C. Road, Kolkata-700 009, West Bengal.
108. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 2/2013 received from Moumita Choudhuri, Research Scholar, Department of Environmental Studies, Northeastern Hills University, Shillong-22, Meghalaya.
109. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of ZSI Lot No. 9/2013 received from Prof. A.K. Bhatnagar, Environmental Biology Laboratory, Department of Botany, University of Delhi, Delhi-110 007.
110. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of Lot No. 19/2013 received from Dr. Chitta Ranjan Satpathy, Associate Professor, Department of





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- Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur-741 252, Nadia district, West Bengal.
111. Dr. P. Girish Kumar, Zool. Asstt. has provided identification services for identification of Lot No. 21/2013 received from Dr. Kakali Bhadra, Assistant Professor, Department of Zoology, University of Kalyani, West Bengal.
112. Dr. P.M. Sureshan, Scientist-C, identified 15 species under 8 genera; 5 species under 4 genera of Hymenoptera: Pteromalidae identified from collections received from Dr. Girish Kumar, ZSI, Kolkata.
113. Dr. P.M. Sureshan, Scientist-C, identified 51 species under 41 genera received from Dr. Sudhir Singh, Forest Research Institute, Dehra Dun.
114. Dr. P.M. Sureshan, Scientist-C, identified two new species of insect parasitoids of the order Hymenoptera (Family: Stephanidae and Family: Eurytomidae) attacking wood boring beetle *Clytocera chinospila* Gahan (Coleoptera: Cerambycidae) from Chinnar Wild life sanctuary, Kerala described and a manuscript based on the findings prepared.
115. Dr. P.M. Sureshan, Scientist-C reviewed a research manuscript on Hymenoptera for Current science and comments offered.
116. Dr. P.M. Sureshan, Scientist-C reviewed two research manuscripts on Hymenoptera for Threatened Taxa and comments offered.
117. Dr. P.M. Sureshan, Scientist-C reviewed two research manuscripts on Hymenoptera for Records of ZSI and comments offered.
118. Dr. P.M. Sureshan, Scientist-C reviewed two research manuscripts on Hymenoptera reviewed for Records of ZSI and J. Threatened Taxa, Coimbatore and comments offered.
119. Dr. P.M. Sureshan, Scientist-C reviewed two research manuscripts on Hymenoptera for Records of ZSI and J. Threatened Taxa, Coimbatore and comments offered.
120. Dr. P.M. Sureshan, Scientist-C, identified 04 species under 04 genera of Hymenoptera: Pteromalidae for Dr. Sudhir Singh, Forest Research Institute, Dehra Dun
121. Dr. P.M. Sureshan, Scientist-C, identified 04 species under 04 genera of Hymenoptera: Pteromalidae for Dr. Sudhir Singh, Forest Research Institute, Dehra Dun.
122. Dr. P.M. Sureshan, Scientist-C, identified 05 species under 04 genera of Hymenoptera: Pteromalidae for Dr. Sudhir Singh, Forest Research Institute, Dehra Dun.
123. Dr. P.M. Sureshan, Scientist-C, rendered 5 days training to Mr. B. Devarajan, PDBC, Bangalore on Mantids identification from 19th to 23rd November 2012.
124. Dr. P.M. Sureshan, Scientist-C, reviewed one research manuscript on Hymenoptera for the J. Threatened Taxa, and offered comments.





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125. Dr. R. Babu, Scientist-C identified specimens of Odonates received from Dr. Gurinder Kaur Walia, Assistant Professor, Dept. of Zoology and Environ. Science, Punjabi University, Patiala.
126. Dr. R. Babu, Scientist-C, rendered the advisory services to Mr. S.S. Richard, Madras Christian College, Chennai.
127. Dr. R. Venkitesan, Scientist-C identified 32 exs. of Freshwater Molluscs under 2 genera and 4 species for Loyola College, Chennai.
128. Dr. R.C. Panigrahy, P.G. Deptt. of Marine Sciences, Berhampur University and Dr. Ch. Satyanarayana, Scientist, ZSI, FPS Building, Kolkata, Skin specimen of one Sting Ray was identified sent by the Regional Deputy Director, Wild Life Control Bureau (NR), New Delhi, Six species of marine fishes were identified and the identification report sent to the Divisional Forest Officer, Alipore, Kolkata.
129. Dr. Rajesh Kumar from Central Silk Board, Jorhat, Assam and Officer, In Charge, Appu Ghar, New Delhi visited Hymenoptera Section and they were provided advisory services.
130. Dr. S. Sambath attended one legal witness was provided in the court of Judicial Magistrate on 30.11.2012 in response to Judicial summon pertaining to the court case related to Wildlife Protection Act, 1972.
131. Dr. S. Sambath rendered identification and advisory service to Dr. Yashashri A. Gadhikar, Assistant Professor, P.G. Dept. of Zoology, Govt. Vidarbha Institute of Science and Humanities, Amravati – 444 604 Maharashtra for identification of moths (Lepidoptera) and were identified into 28 species of moths belonging to 26 genera under 07 families.
132. Dr. S. Sambath rendered identification and Advisory service to Dr. P.B. Meshram, Scientist-F, Forest Entomology Division, Tropical Forest Research Institute, Jabalpur for identification of 32 specimens of Lepidoptera collected from Pachmarhi Biosphere Reserve and later was identified into 25 species belonging to 12 species of butterflies and 13 species of moths.
133. Dr. S.S. Talmale compiled an identification report for collection received from SFRI, Jabalpur. Identification report of the faunal specimens (20 samples) collected (includes Fishes, mollusca and aquatic Hemiptera) from Sanjay Gandhi Thermal Power Plant, Birshinghpur (Umaria) area w.r.t. the study on “ Environmental Impact Assessment on aquatic life/water supply and water quality of downstream due to reduce flow especially in lean period in Sanjay Gandhi Thermal Power plant, Birshinghpur (Umaria).
134. Dr. S.S. Talmale identified 300 samples of bony parts collected from the pellets of Barn Owl (*Tyto alba*) received from Dr. B. M. Parasharya, Officer-in-Charge, AINP on Agricultural Ornithology, Anand Agricultural University, Anand-388 110.





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135. Dr. S.S. Talmale identified one live owl specimen (*Bubo bubo* (Linnaeus) Eurasian Eagle-Owl) received from Officer-in-Charge, Regional Tiger Strike force, Jabalpur.
136. Dr. S.S. Talmale identified two specimens (wet preserved) of species *Lestes thoracicus* Laidlaw (Odonata : Zygoptera : Lestidae) received on donation to ZSI, CZRC collection depository from Dr. Ashish Tiple, Department of Zoology, Vidyabharti College, Seloo, Wardha, Maharashtra. Material registered in identified register of ZSI, CZRC, Jabalpur.
137. Dr. Sanjeev Kumar, Scientist-C has Conducted practical examination of B. Sc. III (Batch IV) students of Zoology Deptt., Agra College under Dr. Bhimrao Ambedkar University, Agra on 20th April, 2012 at Agra College, Agra as an External Examiner.
138. Dr. Stephen Jackson, Associate Senior Lecturer, University of New South Wales, Sydney, Australia visited Mammals and Osteology Section, interacted with Dr. Gaurav Sharma, Officer-in-Charge of Section and studied reference collection of Flying Squirrel species on 26th and 27th September, 2012.
139. Dr. Tan Koh Siang of Tropical Marine Science Institute, National University of Singapore, Singapore visited Mollusca Section on 21st May to 26th May 2012 and he was provided the information on the group concerned.
140. Emdad Hossain, Associate Professor Pharmacy College, Itura, Chandeshwar, Azamgarh, Uttar Pradesh, India visited the Platyhelminthes Section for Identification of six vials of materials. Materials are under process for identification.
141. Fifty two (52) Graduate Students of Forestry from Kerala Agricultural University, Trissur along with three faculty members : Shri M. Jigeesh, Shri Binu N. Kamalaolbhvan, and Dr. Asha K. Raj visited different Divisions/Sections of the ZSI HQs office on 13th February, 2013 and they were briefed about the activities of the department and were informed about the faunal diversity of India.
142. Fish specimens received for identification from Dr. K.R. Rao, Dept. of Zoology, Walchand College of Arts and Science, Walchand Hirachand Marg, Ashok Chowk Solapur-413 006.
143. Fish specimens received for identification from Mrs. Tejaswini Jagtap, R.R. Junior College, Hadapsar, Pune.
144. Four live specimens of confiscated Water Monitor Lizard *Varanus salvator* (Schedule - 1 under Wildlife Protection Act, 1972) have been identified for Range Officers, Department of Environment and Forests, A and N Administration and reported submitted on request.
145. Four photographs of a bird received from the Mr. Gautam Chakraborty by e-mail were identified as *Nycticorax nycticorax* (Black-crowned Night-Heron) and





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- the identification along with the other characters were sent on 11th May 2012.
146. Four specimens of Rodents were identified as *Bandicota bengalensis* (2 Nos.), *Rattus rattus* (1 No.), *Mus musculus* (1 No.) received from Ajanta Birah, Sr. Scientist, I.C.A.R., Andaman and Nicobar Islands.
147. Guided one student of M.Sc. Biotech Students of Graphic Era University, Dehra Dun on comparative Trichotaxonomy of species of Lagomorpha through SEM.
148. Guided Projects of B.Sc. Biotech Students of Doon Paramedical College. Provided advisory services to two M.Sc. students of Biotech Students of Doon Paramedical College on functioning of SEM.
149. Identification and advisory service was rendered to a Research Scholar of Central Institute of Freshwater Aquaculture, Bhubaneswar.
150. Identification and advisory service was rendered to a Research Scholar of Berhampur University, Ganjam.
151. Identification and Advisory services rendered to Regional Sericulture Research Station, 7th Mile, Reshambari, Kalimpong, West Bengal, Dr. S.K. Srivastava, Prof. and Head Dept. of Entom. Coa, IGKV, Raipur, Mr. Amit Kr. Geyen, Bidhan Nagar College, Saltlake, Kolkata, Mr. M.M. Hasan, Al-Ameen Mission, Partharchapuri, Dist. Birbhum, West Bengal, Dr. S Homechowdhury, Prof. of Zoology, Kolkata University, Ballygang Circular Road, Kolkata- 19, Miss. D. Bhattacharjee, M.S. Sem. (Zool.), 15/12/1/2, Olabibitala, 1st Lane, Howrah, Md. Feroz, Res. Scholar, P.G. Dept. of Zoology, Univ. of Jammu, Jammu, Dr. Patralekha Mukhopadhyaya, Associate Prof. Victoria College, Kolkata, Dr. T. Nandi, Asstt. Prof. in Zoology, Vivekananda College, Kolkata, Miss. Moumita Chowdhury, Res. Scholar, Dept. of Entomology, NEHU, Shillong Dr. Gutam Aditya, Dept. of Zoology, Burdwan University, West Bengal.
152. Identification of about 1000 photographs of insects of Janapav Hills, Indore, received from Shri Pankaj Srivastava, IFS, Chief Conservator of Forests, Asharam Babu Chouraha University Campus, RandE Circle, Indore, Madhya Pradesh and were identified into 72 species which consists of 26 species Lepidoptera, 8 species of Coleoptera, 13 species of Hemiptera, 11 species of Odonata, 13 species of Araneae (spider) and 01 species of Mollusca were identified with help of experts available from this Regional Centre. The Identification report has been sent to the CCF Office, Indore, Madhya Pradesh.
153. Identified 196 species from about 245 lots of 780 specimens available from Departmental survey, week end day visits from different ecological areas.
154. Identified 44 spider specimens of Rani Veerangana Durgawati Wildlife Sanctuary and extended support and guide line to the Arachnid worker of C.Z.R.C., ZSI, and Jabalpur.
155. Identified 570 spider specimens 125 lots of Spiders received from the





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- Researchers, Post Graduate and under graduate students of different collage and Universities, Research organizations and Government Dignitaries like Banaras Hindu University, Indian Institute of Science, Bangalore, Amravati University, Maharashtra, Madurai Kamraj University, Madurai, Burdwan University, Burdwan, W.B., Vidyasagar University, Midnapur, W.B., B.K.C. College, Kolkata, and Narendrapur Ramakrishna Mission were identified.
156. Identified 58 spider Fauna of Singhori Wildlife and extended support and guide line to the Arachnid worker of C.Z.R.C., ZSI, and Jabalpur.
157. Images of four species of Holothurians were provided to the guidebook on commercial sea cucumber of the world being prepared by Food and Agricultural Organization (FAO) on request.
158. Information on the mammalian fauna of Garo Hills based on the collections at NERC/ZSI, Shillong was provided to Dr. Rishi Kumar during April, 2012 received from Wildlife Trust of India, Tura, Meghalaya.
159. K.G.Emiliyamma, Scientist-C identified 13 images of Odonata belonging to 9 species under 9 genera for Ms. Karthika, M.Phil student, Bharathidasan University, Tamil Nadu for her project work.
160. K.G.Emiliyamma, Scientist-C identified 6 species of Odonata belonging to 5 genera for Mr. Adarsh C.K., M.Sc, Forestry College, Kerala Agricultural University, Thrissur, Kerala for his project work.
161. K.G.Emiliyamma, Scientist-C identified 8 species of Odonata belonging to 6 genera for Ms. Karthika, M.Phil student, Bharathidasan University, Tamil Nadu for her project work.
162. K.G.Emiliyamma, Scientist-C, identified 174exs.of Odonata belonging to 20 species under 15 genera received from SRC/ZSI, Chennai, report and material has been sent back. Based on this a paper on 'Odonata of southern Eastern Ghats' was prepared and submitted for publication.
163. K.G. Emiliyamma, Scientist-C, identified 35exs. of Chalcididae (Hymenoptera) belonging 18 species under 7 genera from various localities of southern Western Ghats.
164. K.G.Emiliyamma, Scientist-C, identified 55exs. of Odonata belonging to 25 species under 23 genera from various localities of southern Western Ghats. All specimens were registered and added to the National zoological collections of the Centre.
165. K.G.Emiliyamma, Scientist-C, identified 8 species of Odonata and provided all literatures pertaining to Odonata taxonomy of Kerala to Mr. Aneesh, K.S., Teaching Assistant, Department of Forest Management and Utilization, College of Forestry, Vellanikkara, Thrissur for his project work on the diversity of odonates in KAU campus and adjoining areas.
166. Miss Swagata Mondal of Zoology Department, Calcutta University visited the Nematelminthes Section for identification.





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167. Mr. B. K. Baliar Singh of Central Institute of Freshwater Aquaculture (Indian Council of Agricultural Research), Bhubaneswar visited Fish Division between 21st and 28th August, 2012 for the identification Fishes.
168. Mr. Devendra Sharma, New Delhi and Mrs. Seena Narayanan K., Research Scholar, ATREE, Bangalore visited Coleoptera Section.
169. Mr. Dipanjan Roy, JRF from MARC, Digha visited the Fish Division for identification of his collections during 22-24th January, 2013.
170. Mr. K.K. Bineesh and Rahul G. Kumar, Research Fellow of NBFGR, Kochi Unit, Kerala visited from 15th to 21st January to study 29 type and 4 non-type specimens in the Fish Division.
171. Mr. Sachin Ram Singh Patil identified 12 examples of Mollusca provided by State Forest Research Institute's Letter No. 3166 dated 3.8.2012, as *Lamellidens corrianus* (Lea, 1834).
172. Mr. Sachin Ram Singh Patil sent an identification report of Land Mollusca 06 specimens is sent to Mr. Prakash T. Wankhedkar, Research Student, Department of Zoology, Pratap College, Amalner-425 401, Dist. Jalgaon, Maharashtra.
173. Mr. Sandeep Khuswaha, Zoological Assistant, CZRC, Janbalpur visited Hemiptera Section with the backlog collection of about 250 Hemipteran specimens between 19th to 26th April, 2012 to get the specimens identified.
174. Mr. Sandeep Kushwaha, identified following two species with reference to State Forest Research Institute's Letter No. 3166 dated 3.8.2012.
175. Ms Nishima Dahal, JRF, National Centre for Biological Sciences, TIFR, Bangalore visited ZSI HQs office on 4th February, 2013 to study the mammalian fauna present in National Zoological Collection.
176. Necessary help and advice was extended to Mr. S.K. Sajan from Kandhamal district, Odisha for a photograph of woodpecker species and to Mr. Rony for a photo and a video of a Sunbird species on 14th and 22nd August 2012 respectively.
177. On behalf of Director, Zoological Survey of India, Shri S.S. Mishra, Scientist-B and Officer-in-charge of Marine Fish Section attended the meeting of the Similipal Biosphere Reserve Management Council (SBRMC) on 31-07-2012 at Odisha Secretariat, Bhubaneswar.
178. On behalf of Director, Zoological Survey of India, Shri S.S. Mishra, Scientist-B and Officer-in-charge of Marine Fish Section attended the meeting of the Similipal Biosphere Reserve Management Council (SBRMC) on 31-07-2012 at Odisha Secretariat, Bhubaneswar.
179. One live specimen of confiscated Water Monitor Lizard *Varanus salvator* (Schedule - 1 under Wildlife Protection Act, 1972) has been identified for Crime Branch Police, Port Blair
180. One sample of gallmidge (Diptera: Cecidomyiidae) causing leaf galls on *Calicopteris floribunda* (Roxb.) Lamk.





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- (Family: Combretaceae) received for identification from Prof. Dr. T.C. Narendran, Calicut. Identification as follows: One male and female of sp.
181. One Scientist of the Centre reviewed and offered comments on 2 papers for the J. Threatened Taxa.
182. One species of ascidian for National Institute of Ocean Technology, Port Blair has been identified on request and report submitted.
183. Photographs received for identification by e-mail from Dy. Director, Regional Forensic Science Laboratory, Shivaji Nagar, Pune. Identification as follows: *Funambulus pennantii* (five-striped palm squirrel).
184. Prof. A.K. Bhatnagar, Environmental Biology Laboratory, Department of Botany, University of Delhi, Delhi-110 007, 4 Vials received from Dr. K.P. Jayanth, Vice President, Pest Control (India) Pvt. Ltd., Bio-Control Research Lab., Bangalore, Karnataka and identified under two species, namely, *Odontotermes obesus* (Rambur) and *Odontotermes horni* (Wasmann)
185. Provided advisory services in identification of insect Nematodes to SRF, from TFRI-Jabalpur from 21-25th June'12.
186. Provided advisory services in making permanent slides of nematode of fishes to JRF from Dept of Life Sciences, Rohilkhand University from 18-19th June'12.
187. Provided advisory services to Dr. Andrey A. Lisovsky, Curator of Lagomorph and Osteological collection Zoological Museum of Moscow State University, Russia and Ms. Nishma Dahal, JRF, National Centre for Biological Sciences, Tata Institute of Fundamental Research, Bangalore to help him in identification and information on Pika and Hispid hare specimens.
188. Provided advisory services to The Divisional Forest Officer, Jalpaiguri Division, Jalpaiguri to bring the large piece of Elephant tusk for the purpose of scientific examination.
189. Provided identification services on "Taxonomic identification of Flying Squirrel" to Dr. Stephen Jackson, Associate Senior Lecturer, University of New South Wales, Sydney, Australia during his visit to Mammals and Osteology Section on 26th and 27th Sept., 2012 at ZSI (HQs.), Kolkata.
190. Provided identification services to Dr. Ajanta Birah, Sr. Scientist, ICAR, Andaman and Nicobar Islands for identification of four specimens of Rodents, which were identified as *Bandicota bengalensis* (2 nos.), *Rattus rattus* (1 no.), *Mus musculus* (1 no.).
191. Quarries raised by Dr. A. Husain (Ex. Joint Director, ZSI, Dehradun) were attempted pertaining to the identification of birds' photograph received by him from Goa.
192. Rameshori Yumnam and B.D. S. Anal Research Scholars of Department of Life Sciences of Manipur University visited Freshwater Fish Section for examining 20





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- types and non-type specimens during 3rd to 7th January, 2013.
193. Received some hair samples of the genus *Petaurista* from Dr. A. Choudhury, Dy. Commissioner of District Magistrate, Lakhimpur, Assam for confirmation of the identity of the hair samples. It is under process of Tricho-taxonomy.
194. Rendered identification services on the identity of 26 species of fish specimens deposited on 1st Nov., 2012 received from St. Peter's College, Shillong.
195. Rendered identification services to Dr. R.N. Bhuyan on the identity of one reptile and one Centipede specimen deposited on 15th May, 2012. Also rendered identification services on the identity of one fish specimens deposited on 13th Feb., 2013 received from St. Anthony's College, Shillong.
196. Rendered identification services to Mr. Ananda Ram Boro, research scholars on 22nd Dec., 2012 on the identity of five species of bats specimens received from Zoology Department, Gauhati University, Assam.
197. Rendered identification services to Mr. G.G. Syngai, Assistant Professor, department of Biochemistry on the identity of one species of fish deposited on 6th March, 2013 received from Lady Keane College, Shillong.
198. Rendered identification services to Prof. Dr. J. Rout, on the identity of 40 species of fishes specimens deposited on 19th Oct., 2012 received from Department of Ecology and Environmental Science, Assam University, Silchar, Assam.
199. Rendered Laboratory facilities to Dr. Abhijit Das from 9th – 13th July, 2012 to study the Herpetofaunal collections of the Centre received from Aaranyak, a society for Biodiversity Conservation, Guwahati, Assam.
200. Rendered Laboratory facilities to Mr. Dipankar Dutta, research scholar from 20th – 21st Dec., 2012 to study the amphibian general collections of the Centre received from Department of Zoology, Arya Vidyapeeth College, Guwahati, Assam.
201. Seized gastropod samples have been identified for Central Crime Station, Police Department, Port Blair on request.
202. Seven species of sponges have been identified for National Institute of Ocean Technology, Port Blair on request.
203. Shri Ramesh Kumar and Ms. Neeta Kumari research scholar of Ranchi University visited Coleoptera Section and studied the group concerned. Mis Swagata Mondal of Zoology Department, Calcutta University visited the Nematelminthes Section for the identification of some Nematodes.
204. Shri S.S. Mishra, Scientist-B imparted field training to the trainees at the state Govt. Officers 'Integrated coastal zone Management Training Programme' held at MARC, ZSI, Digha on 15th and 16th Dec., 2012.
205. Shri. D. Prabakar, Assistant Zoologist, identified 10 specimens of grasshoppers





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- received from Research scholar, Chennai based college.
206. Shri. Kondala Rao, Dy. Conservator of Forests along with his team 39 trainees of Forest Range Officers from Andhra Pradesh Forest Academy, Hyderabad visited different Divisions/ Sections of ZSI Headquarters on 31st January, 2013.
207. Smt. Mithila Das, Lecturer in Zoology, S.N. College, Rajkanika, Kendrapara dist., Odisha visited on 23-07-2012 and the report has been sent; Dr. S.S. Jadhav, Zoological Assistant, Western Regional Center, Z.S.I., Pune visited during 09th to 13th July 2012 and Shri J.A. Johnson, Scientist, Wildlife Institute of India, Dehradun visited on 27-07-2012 visited Fish Division.
208. Students from Sikkim University visited to study the cat fishes collection for research purpose. Collection shown and Guided for identification.
209. Survey of birds and butterflies along the 'Mangrove Walk' area in Yerata Mangrove has been conducted as requested by the Divisional Forest Officer, Middle Andaman.
210. Taxonomic characters analysis of corals under the family Poritidae was made with a visiting fellow of Annamalai University.
211. The confiscated/sized body parts of protected animals such as 2 elephant tusks for Central Crime Station, Port Blair; 2 elephant tusks, 1 sawfish rostrum and 4 molluscan shells for Range Officer, Port Blair; 11 species of corals for Ranger Officer, Great Nicobar Island were identified and reports submitted to the officials concerned.
212. Three Research scholars of Assam University, Deptt. of Ecology and Environmental Science, Silchar, Assam visited Apterygota Section.
213. Three species of seized live snakes were identified for Department of Environment and Forests, Andaman and Nicobar Administration on request.
214. Twenty one specimens of Hymenoptera received for identification from Mr. Hemant Dhamke, Dept. of Zoology, D.Y. Patil College, Pimpri, Pune.
215. Twenty-eight examples of gobioid fishes have been identified under 7 species and 7 genera in 3 subfamilies. The report has been sent to Mrs. Mithila Das, Lecturer in Zoology, S.N. College, Rajkanika, Odisha.
216. Two fish specimens and 15 fish photographs received for identification from Dr. R.K. Kasar, Department of Zoology, New Arts, Commerce and Science College, Shevgaon, Dist.-Ahmednagar.
217. Two molluscan specimens received for identification from Prof. (Mrs.) S.S. Patil, 59 Vasant vihar, Shree Shivaji Housing Society, Senapati Bapat Road, Pune.
218. Two samples of Antler have been identified for Divisional Forest Officer, North Andaman Division on request.





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CONFERENCE/SYMPOSIUM/SEMINAR/TRAINING COURSES ATTENDED BY THE ZSI SCIENTISTS

1. A committee constituted by the Officer-in-Charge reviewed the progress of two JRF's for their up gradation to S.R.F on 10.07.2012 and evaluation report sent to HQ.
2. A one day "Capacity Building Workshop for Frontline Staff of Wildlife Enforcement Departments (Coast Guard, Custom and Central Excise, WB Forest Department, Intelligence Bureau, CID and Revenue Intelligence) on "Protected Mollusca of India" organized by Mollusca Section in collaboration with the Training and Extension Division of Zoological Survey of India, Kolkata on 18th May, 2012 in which participants from various enforcement departments were given hands on training on various aspects of protected mollusca of India. On this occasion, a poster of Protected Mollusca prepared by Dr. Basudev Tripathi, Scientist-C and Officer in Charge on Mollusca Section and was released by Director, ZSI.
3. As constituted by Administrative Ministry, Taskforce Committee for National Coral Reef Research Institute (NCRI) visited the Centre and assessed the research activities on 4th September 2012. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge presented 'Activities and achievements of NCRI' before the committee.
4. Attended audit inspection of CZRC, ZSI, Jabalpur for period of April, 2008-March, 2013 carried out by Principal Director of Audit, Scientific Departments, New Delhi, w.e.f. 09.04.2013 to 26.04.2013.
5. Attended the inaugural function of the '24th National Congress on Parasitology' on 27.04.2013 at Regional Medical Research Centre for Tribal, Jabalpur organized by the Indian Society for Parasitology and Regional Medical Research Centre for Tribal, Jabalpur (M.P.).
6. C. Radhakrishnan, Scientist-F and Officer-in-Charge visited ZSI, Kolkata, from 23rd to 27th October 2012 and attended the Project Monitoring Committee Meeting with the Addl. Secretary and Jt. Secretary from the Administrative Ministry, as a member of the Committee, on 25th.
7. Chitra J, Assistant Zoologist, participated in National Conference on Challenges in Biodiversity Conservation and Resource Management held on 26-27 February, 2013, at Department of Zoology, University of Kalyani and presented a paper entitled "A preliminary account on Free living Protozoa and other microinvertebrates of fresh water bodies from Tarakeswar, West Bengal" in poster presentation and attended the training/workshops for Young Scientists.
8. Devanshu Gupta and Kailash Chandra, 2012. "Scarab beetle (Coleoptera:





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- Scarabaeidae) diversity in Achanakmar-Amarkantak Biosphere Reserve, Chhattisgarh (India)". Abstract published in "*Biodiversity-Asia-2012*", The 2nd Asian Regional Conference of Society for Conservation Biology. : 122.
9. Dr A.N. Rizvi, Scientist-C, evaluated M.Phil Thesis in Biotechnology on Molecular Characterization of soil nematodes from School of Biosciences and Biotechnology, BGSB, University, Jand K and sent the report to the Controller of Examination.
 10. Dr A.N. Rizvi, Scientist-C delivered Invited lecture on "The role of Nematodes in Ecosystems" in the workshop on "Awareness and Capacity Building on Soil testing and Management" organized by Society of Pollution and Environmental Conservation Scientists (SPECS), Dehradun and sponsored by NCSTC, DST, New Delhi and UCOST from 15th- 17th March'2013 at BFIT, Dehradun.
 11. Dr. Gopal Sharma, Scientist-C and Officer in charge attended a seminar on 'Ethics in animal experience, statutory and technical requirements' organized by life sciences intelligentsia foundation (LIFO), centre for the purpose of control and supervision of experiments on animals welfare and member secretary, Min. of Evnv.and forests held at hotel Chanakya, Patna on 11th May, 2012.
 12. Dr. Gopal Sharma, Scientist-C and Officer in charge attended a workshop on "Excreta Matters: Patna's water and sewage problems on 25th May, 2012 at seminar hall, Shatabdi Bhawan, A.N. College, Boring road, Patna organized by Centre for Science and Environment, 41 Tughlakabad Institutional Area, New Delhi.
 13. Dr. Gopal Sharma, Scientist-C and Officer in charge attended world biodiversity day 2012, organized by department of forest Govt. of Bihar in Patna Museum on 2nd May, 2012.
 14. Dr. Gopal Sharma, Scientist-C attended Narakash Meeting on 28th Dec.2012
 15. Dr. Kailash Chandra, Scientist- F and Additional Director, attended the 23rd meeting of 'West Bengal Biodiversity Board' meeting held at Paribesh Bhawan, Salt lake, sector-III, Kolkata on 8th November 2012.
 16. Dr. R. Bano, Scientist-'C' attended the training on Molecular techniques for extraction and analysis of DNA of insects at Indian Agricultural Research Institute, Pusa Campus, New Delhi from 7th to 12th May, 2012.
 17. Dr. Rajkumar Rajan attended the CITES meeting and workshop for the revision of Wildlife Protection Act (1972) held at ZSI, Kolkata, from 21-22 November 2012.
 18. Dr. S.S.Jadhav, Sr. Zool.Asstt., conducted tour to study some Type Specimens and comparative fish material at SRC, Chennai and collected fish samples from Nilgiri Hills from 22nd September to 1st October, 2012.





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19. Dr Shantabala Gurumayum, Scientist-C attended a training on GIS in Faunal Studies, Data basing and Digitization of Faunal Collections at zoological survey of India, Prani Vigyan Bhawan, Kolkata, organized by Training and Extension Division, ZSI, Kolkata from 21-22 January, 2013.
20. Dr Swetapadma Dash, Scientist-C of the Centre attended a Workshop on molecular Phylogenetics organized by BIF, Department of Biotechnology, Mizoram University, Aizwal sponsored by DBT, Ministry of Science and Technology from 26th to 28th November, 2012 at Mizoram.
21. Dr. V.M. Sathis Kumar, Sr. Zoological Assistant, delivered an invited lecture on “Cybertaxonomy and biodiversity documentation in India with special emphasis to DNA Barcoding and Molecular markers” in the National Level Training Cum Workshop on DNA Barcoding of Fish and Marine Life – Molecular Analysis and Bioinformatics Approaches, FISHCODE-2012, Dept. of Marine Science, Bharathidasan University, Tiruchirappalli – 620 024, Tamil Nadu on 13th Sept 2012. Dr V. M. Sathish Kumar also delivered an invited lecture on “*Cyber Taxonomy and Biodiversity documentation in India with special emphasis to faunal diversity and DNA Barcoding*” under the auspices of the Zoology Association, Department of Advanced Zoology and Biotechnology, Guru Nanak College, Velachery, Chennai on 06.03.2013.
22. Dr. A.P. Singh, Member Secretary and Mr. B. N. Srivastava, Chairman Gujarat Biodiversity Board, Gandhinagar visited DRC, ZSI, Jodhpur on 8th May, 2012 and had a discussion with Dr. Padma Bohra, Scientist-D and O/C, Dr. Sanjeev Kumar, Dr. H.S. Banyal, Scientist-C on Rare and endangered animal species, Red listed species and endemic species to Gujarat.
23. Dr. A. Gokul, Asst. Zoologist and Shri S. Mitra, Zool. Asst. participated in 100th Indian Science Congress held at Kolkata from 3rd -7th January, 2013.
24. Dr. A.N. Rizvi, Scientist-C attended and delivered Invited lecture on Soil Nematode Fauna: Useful Tool for the Biological Monitoring of Soil nematodes and the Effects of Climatic Changes in the International Conference on recent trends in Climate Change researches vis-à-vis Biodiversity, held at Rohilkhand University, Bareilly (U.P.) from 3rd -4th Dec’12.
25. Dr. A.N. Rizvi, Scientist-C conducted viva-voice of M.Phil student of Department of Biotechnology and Bioresources, BGSB University, Rajauri (JandK) on “Molecular Characterization of some nematodes of subfamily Mesorhabditinae using RAPD marker” on 9th November, 2012.
26. Dr. A.N. Rizvi, Scientist-C delivered invited lecture on “Molecular Taxonomy and DNA Bar-coding” to B.Sc. 1st year (Biotechnology) and M.Sc. I Sem. (Zoology) students on of Dolphin (PG)





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- Institute of Biomedical and Natural Sciences, Mandu wala, Dehradun on 20.10.12.
27. Dr. A.N. Rizvi, Scientist-C, was awarded the Honorary Fellowship of the Indian Academy of Environmental Sciences, Haridwar, i.e. FIAES, in recognition of valuable contributions to The discipline of Zoology in general and Parasitology in particular, during the International Conference on Recent trends in Climate Change researches vis- à-vis Biodiversity, held at Rohilkhand University, Bareilly (U.P.) from 3rd-4th Dec'12.
 28. Dr. Animesh Bal, Additional Director and Scientist-F, attended the Inauguration Programme of IInd ICZM Training for State Govt. Officials at MARC, Digha which was inaugurated by Dr. Nandita Chatterjee, Addl. Secretary, Ministry of Environment and Forests (MoEF) on 11th December, 2012 also given a deliberation on the introduction of the ICZM Training, on 17th December, 2012 attended valedictory programme and delivered the Report of the Training.
 29. Dr. Animesh Bal, Scientist- F and Additional Director, attended an Official meeting on 18th October, 2012 at MARC, Digha with Ms. Moushumi Chatterjee, Consultant World Bank for the re-revised Proposal regarding the renovation of Marine Aquarium under the ICZN Project, funded by the World Bank.
 30. Dr. Animesh Bal, Scientist- F and Additional Director, attended the Review Meeting ICZM Project of MARC, ZSI, Digha which was held on 3rd October, 2012 at HOTEL SONNET, Salt Lake, under the Chairmanship of Shri Vevek Wadkar, Director, NPMU, MoEF, New Delhi. Shri Tapan Pal, Team Leader, World Bank and Shri Arijit Banerjee, Director, SPMU were also present in the Review Committee. Dr. Somnath Bhattacharyya, Additional Director, IESWM, acted as Co-ordinator in the said meeting.
 31. Dr. Archana Bahuguna attended training course from 20th to 22nd June on Gene sequencer instrument organised by Applied Bio systems (LABINDIA) Gurgaon.
 32. Dr. Archana Bahuguna, Scientist-C attended Second Indian Biodiversity Congress (9th - 11th , Dec. 2012 at Indian Institute of Science , TATA auditorium, Bangalore and Presented paper on '*Identification of some small mammals through hair-A tool for conservation of the species*'.
 33. Dr. Archana Bahuguna, Scientist-C given presentation at Gurukul Kangri University as invitee lecture on Trichotaxonomy and Molecular Biology as techniques for wildlife forensic Ecology for National Workshop on Taxonomic keys and identification tools of different groups of flora and fauna. organized for research scholars by GKU, Department of Zoology and Environment Sciences. Haridwar. Sponsored by UCOST.
 34. Dr. Basudev Tripathy, Scientist-C attended Consultation cum stakeholders workshop for identification of research





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- gaps in coastal and marine biodiversity conservation in the Godavari estuarine ecosystem (EGREE) organized by Wildlife Institute of India, Dehradun in collaboration with Andhra Pradesh Forest Department and UNDP, held at Kakinada on 8th May 2012. He has delivered a lecture of Protected Mollusca during the “Capacity Building for Frontline Staff of Wildlife Enforcement Departments (Coast Guard, Custom and Central Excise, WB Forest Department, Intelligence Bureau, CID and Revenue Intelligence) on Protected Mollusca of India” organized by Mollusca Section in collaboration with the Training and Extension Division of Zoological Survey of India, Kolkata on 18th May 2012 at Headquarters.
35. Dr. Basudev Tripathy, Scientist-C, participated and delivered lecture in the 2nd ICZM Training for State Government Officers of W.B. organized by ZSI, MARC, Digha from 11th to 17th December, 2012.
 36. Dr. Bikramjit Sinha attended the two-day training on GIS in faunal studies, data basing and digitization of faunal collections organized by the training and extension division of ZSI during 21-22 January, 2013.
 37. Dr. Bikramjit Sinha participated in the PAC East Zone meeting at ZSI, Kolkata held during 14-15 February, 2013.
 38. Dr. Bikramjit Sinha was invited and participated as a resource person in the state level consultative workshop to finalize the draft guidelines on Promotion and management of community conserved areas in Arunachal Pradesh organized by G. B. Pant Institute of Himalayan Environment and Development, North East Unit, Itanagar on 8th March, 2013 at Hotel Donyipolo Ashok, Itanagar.
 39. Dr. C. Raghuanthan, Scientist-D and Officer-in-Charge attended the ‘International Workshop for Sharks and Manta Rays at CITES’ held at Colombo, Sri Lanka during 22nd and 23rd January, 2013
 40. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge attended the review meeting at PCCF Office, Department of Environment and Forests, Port Blair in which Dr. C. Sivaperuman, Scientist-C made a presentation on ‘Techniques of Crocodile Census’; served as a member in Inter-Media Publicity Co-ordination Committee meeting organized by Doordharsan Kendra held at ZSI, Port Blair on 27th July, 2012.
 41. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge attended consultation meeting to conduct studies on Fish Aggregating Devices conducted at NIOT, Port Blair on 7th September, 2012; served as a Ph.D. doctoral committee member at Department of Marine Biology and Coastal Studies, Pondicherry University on 24th September 2012; attended Fisheries Interface meeting held at Central Agricultural Research Institute, Port Blair on 26th September 2012; and served as a member for Inter-Media





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- Publicity Co-ordination Committee meeting organized by Doordharsan Kendra held at Police Headquarters, Port Blair on 28th September, 2012.
42. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge attended Programme Advisory Committee meeting at ZSI/SRC, Chennai on 29th January, 2013.
43. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge attended the 58th Wildlife Week meeting on 3rd and 8th October 2012 organized by Department of Environment and Forests, A and N Administration; attended the 3rd Indian Landslide Congress on 4th October 2012.
44. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge convened a Stakeholder meeting for the 'Filming of Island Ecosystem' at ZSI, Port Blair on 20th July, 2012.
45. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge made a presentation on revised management plan for Lohabarrack Crocodile Sanctuary to the Officers of Department of Environment and Forests, A and N Administration on 13th July, 2012.
46. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge participated in the National Seminar on 'Innovative technologies for conservation and sustainable utilization of island biodiversity' held at CARI from 20th to 22nd December, 2012.
47. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as a Member in State Level Steering Committee for Great Nicobar Biosphere Reserve at Secretariat, Port Blair chaired by Chief Secretary, A and N Administration on 18th June 2012
48. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as a member for Inter-Media Publicity Co-ordination Committee meeting organized by Doordharsan Kendra held at ZSI, Port Blair on 17th August 2012; Ph.D. doctoral committee meeting held at Pondicherry University on 18th August 2012; interview for admission of Ph.D. students at ZSI on 31st August 2012
49. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as a resource person and delivered a lecture on 'Coast and its Importance' during 13th December 2012 at Integrated Coastal Zone Management Workshop held MARC/ZSI, Digha;
50. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as a selection committee member for the selection of Project Fellows and assessment of SRFs in Department of Ocean Studies, and Department of Disaster Management in Pondicherry University during 19th and 20th December 2012
51. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as Member in 'Interface Meeting on Island Livestock Development' and made a presentation on Role ZSI on Faunal Diversity Research in A and N Islands at CARI-ICAR, Port Blair on 12th June, 2012.





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52. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge served as Member in Inter-Media Publicity Co-ordination Committee meeting organized by Doordharsan Kendra, Port Blair on 29th June 2012. Dr. C. Raghunathan, Scientist-C and officer-in-Charge served as a doctoral committee member for the Ph.D. research scholars of Marine Biology at Pondicherry University on 4th July, 2012.
53. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge evaluated Ph.D. thesis of Marine Biology and Oceanography for Annamalai University; evaluated the project annual report on Polychaete diversity of Great Nicobar Island received from the administrative Ministry; attended the meeting of Andaman Scientific Forum at ICMR, Port Blair on 16th November 2012; attended the 'CITES meeting and Workshop for the revision of Wildlife (Protection) Act, 1972' held at ZSI headquarters, Kolkata from 20th to 21st November, 2012.
54. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge made a presentation on 'Activities and achievements of ZSI, Port Blair' to the Joint Secretary to Government of India, Ministry of Environment and Forests, Mr. B.M.S. Rathore, IFS, during his visit to the Centre on 14th January, 2013.
55. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge participated in the SAARC Coastal Zone Management Workshop on 'Capacity building for Coral Reef Monitoring' held at Hikkaduwa, Sri Lanka from 21st to 24th June 2012.
56. Dr. C. Raghunathan, Scientist-D and Officer-in-Charge, made a presentation upon the proposal for the establishment of ENVIS Centre at ZSI, Port Blair in ENVIS meeting held at MoEF on 4th December, 2012 chaired by Additional Secretary
57. Dr. C. Sivaperuman attended general body meeting of Andaman Science Association at Central Agricultural Research Institute (CARI) on 15th December, 2012.
58. Dr. C. Sivaperuman attended the Programme Advisory Committee meeting of ZSI held at ZSI/SRC, Chennai on 29th January 2013.
59. Dr. C. Sivaperuman participated and presented a paper in the International Conference on Insect Science-2013 held at Bangalore from 14th to 17th February, 2013.
60. Dr. C. Sivaperuman Scientist-C attended the national conference on 'Conservation and Management of Wetland Ecosystem' held at M.G. University during 6th to 8th November 2012 and the meeting of Andaman Scientific Forum held at ICMR, Port Blair on 16th November, 2012.
61. Dr. C. Sivaperuman, Scientist-C attended 3rd Indian Landslide Congress on Natural Hazards and Coastal Environment: A roadmap to Andaman and Nicobar Islands held at Port Blair on 4th October, 2012.





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62. Dr. C. Sivaperuman, Scientist-C attended the training programme on 'Primer on Administration and Management for Scientists and Technologists' at Lal Bahadur Shastri National Academy of Administration, Mussoori during 3rd to 7th December 2012
63. Dr. C. Sivaperuman, Scientist-C attended the Workshop on Biomedical Waste Management at Directorate of Health Services, A and N Administration during 5th to 6th January 2013
64. Dr. C. Sivaperuman, Scientist-C, reviewed two manuscripts for the journals, *Transnational Journal of Agriculture and Soil Sciences* and *International Research Journal of Agricultural Science and Soil Science*; served as a member in interview committee for ICMR on 30th – 31st July and 1st August 2012; member in Ph.D. doctoral committee meeting at Pondicherry University on 18th August 2012; delivered a lecture on 'Wildlife Census Techniques' at Forest Training School, Wimberligunj on 27th August 2012.
65. Dr. C. Venkatraman and Dr Rajkumar Rajan attended and exhibited two posters: one on the "Corals: New to Indian waters" and another on the "Sea grass ecosystems of India" during the side event on "Lagoons, Lives and Livelihoods: bridging people and environment through science-policy" jointly organised by National Centre for Sustainable Coastal Management, Society of Integrated Coastal Management and MoEF during CBD COP11 meeting at Hyderabad.
66. Dr. C. Venkatraman attended "National seminar on "Endangered species and conservation measures" organized by Meenakshi College, Chennai
67. Dr. C. Venkatraman attended National seminar on the "Biodiversity and Bioresources: A fragile balance" organized by St. Xavier college, Palayamkottai, Thirunelveli.
68. Dr. D.V. Rao, Scientist-C and Officer-in-Charge attended the Andhra Pradesh State Biodiversity Board expert committee meeting held on 28.02.2013 in the conference hall of Office of Addl. PCCF, Aranya Bhavan, Hyderabad.
69. Dr. D.V. Rao, Scientist-C and Officer-in-Charge delivered an invited talk on "Role of ZSI in Conserving faunal resources in the Country" in the IFS officer's workshop held on 12.02.2013 conducted by A.P. Forest Academy, Hyderabad.
70. Dr. D.V. Rao, Scientist-C and Officer-in-Charge participated in training programme on 'Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies' at Indian Forest Research Institute, Dehradun during 17-21st December, 2012.
71. Dr. D.V. Rao, Dr. Prasanna Yennawar and Dr. Deepa Jaiswal attended International Conference on Natural History of Indian Biodiversity from 4-5th October, 2012 at Salarjung Museum, Hyderabad and other side events of COP-11.





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72. Dr. D.V. Rao, Dr. Prasanna Yennawar and Dr. Deepa Jaiswal of the Centre attended (COP11) Conference of Parties on Biological Diversity, Eleventh meeting from 1st -19th October, 2012 at Hyderabad International Convention Centre, Hyderabad.
73. Dr. Deepa Jaiswal, Scientist-C underwent training in Genetic analyser ABI 3730 sponsored by Invetrogen services and Labindia, Gurgaon for three days from 20th to 22nd June, 2012.
74. Dr. G. Maheswaran attended a workshop on Homestay operation guidelines for Arunachal Pradesh Under GoI-UNDP CCF II project organized by the G B Pant Institute of Himalayan Environment and Development, North East Unit on 3rd May, 2012.
75. Dr. G. Maheswaran attended a workshop on Strengthening Wildlife law enforcement and conservation in Arunachal Pradesh on 1st May, 2012. The workshop was jointly organized by the State Forest Department and WWF-India (Assam Unit).
76. Dr. G.P. Mandal, Scientist-C and Dr. Girish Kumar, P., Zoological Assistant, attended Training on Operation of Scanning Electron Microscope between 30th July to 3rd August, 2012 at Carl Zeiss NTS Ltd., Cambridge, U.K.
77. Dr. Gaurav Sharma, Scientist-C and O/C, Hindi Section under the Chairmanship of Dr. K. Venkataraman, Director, ZSI has coordinated Hindi Quarterly and Annual Meeting on 28th March, 2013.
78. Dr. Gaurav Sharma, Scientist-C delivered Extension Lecture on topic entitled "*Faunal diversity and conservation of habitats in India*" to M.Sc. Zoology students of Lachoo Memorial College of Science and Technology, Jodhpur on 19 February, 2013.
79. Dr. Gaurav Sharma, Scientist-C has attended "5th meeting of CITES cell" at MoEF, New Delhi on 23rd January, 2013.
80. Dr. Gaurav Sharma, Scientist-C has attended meeting with Prof. S. B. Roy, Chairman, Indian Institute of Bio-Social Research and Development (IBRAD), Kolkata, NMDC and Karnataka Forest Department Officers at NMDC Donimalai, District Bellary, Karnataka on 23 March, 2013.
81. Dr. Gaurav Sharma, Scientist-C has delivered lecture on "*Mammals in the IUCN Red list of Threatened species/ Schedules of Indian Wildlife (Protection) Act, 1972*" in the "*Training Programme on Collection, Maintenance and Identification of Zoological Specimens with Special Reference to the Scheduled Mammals*" to the trainees from the Forest department, Wildlife Crime Control Bureau and ZSI on 6th March, 2013.
82. Dr. Gaurav Sharma, Scientist-C has participated in "Akhil Bhartya Rajbhasha Sangoshti-Sansadiyae Rajbhasha Samiti Nirikshan Prashanavali" Training Programme at Hotel Samudra, Kovalam, Kerala organized by "Centre for Training and Development" Bangalore on 21st and 22nd August, 2012.





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83. Dr. Gaurav Sharma, Scientist-C has participated in the “4th Meeting of CITES Cell” held at MoEF, New Delhi on 17th September, 2012.
84. Dr. Gaurav Sharma, Scientist-C, Sri S.S. Mishra, Scientist ‘B’ and Dr. Girish Kumar, P., Zoological Assistant visited Kirandul and Bacheli Iron Ore Mine area in Dantewada District of Chhattishgarh as member of EIA Survey team of Zoological Survey of India, Kolkata from 7th to 16th January, 2013.
85. Dr. Gopal Sharma Scientist-C participated in the Dolphin rescue and release operation in River Donk at Kishanganj in Bihar. Two female dolphins were translocated from the River Donk to River Mahananda in his leadership.
86. Dr. Gopal Sharma, Scientist-C and Dr Navneet Singh, Scientist-C attended Dolphin Day organized by the department of Forests, Govt. of Bihar on 5th Oct. 2012. Dr Sharma presented a paper on Dolphin Conservation activities at National level in India.
87. Dr. Gopal Sharma, Scientist-C attended a meeting with the Additional Principal Conservator of Forests, Govt. of Bihar on 5th Sept 2012 for organizing ‘Dolphin day’ on 5th October 2012.
88. Dr. Gopal Sharma, Scientist-C delivered a lecture on Biodiversity of Eastern India at the Indian Council of Agricultural Research, Eastern Zone, Patna on 25th Sept 2012 during Hindi Pakhwara, 2012.
89. Dr. Gopal Sharma, Scientist-C delivered a lecture on Ensuring Survival of Gangetic dolphin on 19th Jan. 2013 at Chhapra in the INSPIRE Programme organized by Jagdam College Chhapra, sponsored by DST, New Delhi.
90. Dr. Gopal Sharma, Scientist-C participated as a panelist for discussion on “Dimensions of changing river patterns and its effect on living resources” and delivered a lecture on ensuring survival of Gangetic Dolphin, our National aquatic animal in its natural habitat, on 8th October 2012 at Middleton Chambers, 10, Middleton Street, Kolkata. The program was organized by WWF-India, Kolkata.
91. Dr. Gopal Sharma, Scientist-C participated in a bird watching programme on Big Bird Day on 24.2.2013 with the IBCN members in and around Patna wetland and some part of the River Ganga near Patna.
92. Dr. Gopal Sharma, Scientist-C was invited to judge the selected students from the different schools of Bihar for attending Cop-11 at Hyderabad.
93. Dr. Gopal Sharma, Scientist-C, participated in a consultation and capacity building workshop on Conservation and Sustainable management of Wetlands of Bihar, organized by the Dept. of Environment and Forests, Govt. of Bihar and Wetland International-South Asia, New Delhi at Indian Council of Agricultural Research, Patna on February 23, 2013.





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94. Dr. Gopinathan Maheswaran, Scientist-C and Officer-in-Charge of Bird Section has attended an Ecosystem Committee Meeting to scrutinize project proposals received for funding from Ministry of Environment and Forests (MoEF) on 14th and 15th March, 2013 at MoEF, New Delhi.
95. Dr. Gopinathan Maheswaran, Scientist-C, attended the meeting of Sunderban Tiger Conservation Foundation Trust (STCFT) regarding budget estimate for the financial year 2012-13 to be held on 11th October, 2012 at the conference hall 6th floor of Aranya Bhavan, Salt lake city, Kolkata-700098.
96. Dr. Gopinathan Maheswaran, Scientist-C, O/C Bird Section, has delivered a lecture on Scheduled Mammals on 06th of March 2013 during training programme on Collection, Maintenance and Identification of Zoological specimens with special reference to the scheduled mammals held at HQ office, Kolkata.
97. Dr. H. S. Banyal, Scientist-C has attended and presented research paper entitled "Fish diversity of Rana Pratap Sagar Reservoir – A wetland on Chambal River, Rajasthan". *In the National Seminar on Status of Environment and Biodiversity Rio +20 and role of space technology* held at deptt. of Zoology and Environmental Science, Gurukul Kangri University, Haridwar from 2-3 November, 2012.
98. Dr. H. S. Banyal, Scientist-C has attended *the National Seminar on Status of Environment and Biodiversity Rio +20 and role of space technology* held at deptt. of Zoology and Environmental Science, Gurukul Kangri University, Haridwar from 2- 3 November, 2012 .
99. Dr. H. S. Banyal, Scientist-C has delivered a lecture on the Fauna of Rajasthan and its conservation on 22 November, 2012 in "Bharat Nirman Jan Suchana Abhiyan" at Borunda in Rajasthan.
100. Dr. H.S. Banyal, Scientist-C has attended lectures on Laboratory Accreditation held at Desert Medicine Research Centre, Jodhpur on 5-2-2013.
101. Dr. H.S. Banyal, Scientist-C has attended Nagar Rajbhasha Karyanvyan Smiti Meeting held on 22.06.2012 at DRM office, Jodhpur.
102. Dr. K.A. Subramanian Scientist-C represented Long Term Ecological Monitoring Observatories meeting organized by MoEF, New Delhi and Centre for Ecological Sciences, I.I.Sc., Bangalore on 28th and 29th May, 2012. He has reviewed one manuscript for J. Threatened Taxa,
103. Dr. K.A. Subramanian, Dr. Gaurav Sharma and Dr. Basudev Tripathy conducted faunal studies for biodiversity management in iron ore mining sites of NMDC, Dhonimalai and Kumaraswamy, Bellary.
104. Dr. K.A. Subramanian, Scientist-C delivered lecture in the 2nd Asia Regional Conference of the Society for Conservation Biology: Geographic Distribution of dragonflies and





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- damselflies of the (Insecta: Odonata) of the Western Ghats and conservation priorities; Training on animal taxonomy to post graduate students. Southern Regional Centre, Chennai. May, 2012 and Training of GIS and Databasing for faunal diversity studies. ZSI, Kolkata. January, 2012.
105. Dr. K.A. Subramanian, Scientist-C, delivered a lecture on the “Natural History of Odonata” to post graduate students in a Taxonomy Orientation Workshop “Internship Training Programme for the Post Graduate Students” from 11th to 15th June, 2012 organized by Southern Regional Centre and Marine Biology Regional Centre, ZSI, Chennai. Under his supervision three students from West Bengal State University completed and submitted their M.Sc. thesis work entitled “Morphometric Distribution of Bulbuls (Pycnonotidae) from Indian Subcontinent”, “Morphometric Distribution of Garrulax (Timaliidae) from Indian Subcontinent” and “Geographical Distribution of Garrulax (Timalidae) of Indian Subcontinent”.
106. Dr. K.A. Subramanian, Scientist-C, participated and presented a paper on “Diversity and Distribution of Odonata of the Western Ghats” at Society for Conservation Biology-Asia Conference at IISc, Bangalore between 7th and 10th, August 2012. He has identified 102 samples of Odonata larvae received from Dr. Biju Kumar, Dept of Zoology, Kerala University, Trivandrum.
107. Dr. K.A. Subramanian, Scientist-C, represented Zoological Survey of India in “Consultation Meeting on National Biodiversity Targets” organized by National Biodiversity Authority at New Delhi.
108. Dr. K. Ilango, Scientist-D and Officer-in-Charge was invited by the Defense Research Laboratory (Defense Research Development Organization, Govt. of India), Tezpur (Assam) to discuss and deliver the guest lectures on (i) Vector and Vector Borne Diseases of North East India; (ii) the History of Leishmaniasis in North East India from 28.08.2012 to 31.08.2012.
109. Dr. K. Rajmohana, Scientist-C, extended a 3 day training on the systematic of Platygasteridae (Platygastroidea: Hymenoptera), was extended on request, to a Professor and a student from Faculty of Agriculture, Annamalai University, Tamilnadu.
110. Dr. K. Venkataraman, attended Executive Body Meeting of Zoological Society, Kolkata on 10th April, 2012, where Director, ZSI was presided over the meeting and several matters were discussed. He has attended a Workshop on “Coastal and Marine Biodiversity: Gaps, Challenges and opportunities” held at Gandhinagar, Gujarat on 12th and 13th April, 2012.
111. Dr. K. Venkataraman, attended Seminar at Science City Auditorium, Kolkata organized by Central Institute of Fisheries Education held on 23rd April, 2012 as a guest speaker.





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112. Dr. K. Venkataraman, attended Seminar of Zoological Society, Kokata on 21st April, 2012 and throw light on “Emerging Trends in Ecological Analysis”. He has attended meeting of Indian Museum for run-up Bi-Centenary (2014) celebration. Governor of West Bengal was presided over the function. DZSI, DBSI, DGSI, DASI were attended the meeting on 23rd April, 2012.
113. Dr. K. Venkataraman, Director attended “Internship Training Programme” on Animal Taxonomy for the Post Graduate Students from 11th to 15th June, 2012 organized by Southern Regional Centre and Marine Biology Regional Centre, ZSI, Chennai.
114. Dr. K. Venkataraman, Director attended “Training Programme on Coastal Zone Management” at MARC, Digha held between 11th and 17th December, 2012 as a Chairman.
115. Dr. K. Venkataraman, Director attended Biodiversity Board meeting at Pribesh Bhawan on 8th January, 2013.
116. Dr. K. Venkataraman, Director attended Convention on International Trade in Endangered Species (CITES) meeting at Ministry of Environment and Forests (MoEF), New Delhi on 18-19th June, 2012.
117. Dr. K. Venkataraman, Director attended Departmental Screening meeting for consideration of grant of Assured Career Progression to eligible Scientist – ‘B’ and ‘C’ of ZSI at Ministry of Environment and Forests (MoEF), New Delhi on 24th January, 2013.
118. Dr. K. Venkataraman, Director attended Expenditure Financial Committee (EFC) meeting at Ministry of Environment and Forests (MoEF), New Delhi on 29th November, 2012.
119. Dr. K. Venkataraman, Director attended meeting regarding Brainstorm on the issues related to National Taxonomy Congress held on 4th February, 2013 at Ministry of Environment and Forests (MoEF), New Delhi.
120. Dr. K. Venkataraman, Director attended meeting regarding Brainstorm on the issues related to National Taxonomy Congress held on 4th February, 2013 at Ministry of Environment and Forests (MoEF), New Delhi.
121. Dr. K. Venkataraman, Director attended meeting at Gulf of Kachchh Marine National Park, Jamnagar, Gujarat between 30th June and 4th July, 2012.
122. Dr. K. Venkataraman, Director attended meeting at MoEF, New Delhi on 30th May, 2012 in connection with the administrative issues.
123. Dr. K. Venkataraman, Director attended meeting at Paribeshbhavan, Salt Lake City in connection with the discussion of World Bank Project for Digha on 27th November, 2012
124. Dr. K. Venkataraman, Director attended meeting of Departmental Flexible Complementary Scheme at Board Room of Indian Forestry Research Institute,





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- Dehra Dun and visited N.R.C., Dehra Dun on 8th and 9th June, 2012.
125. Dr. K. Venkataraman, Director attended Meeting of National Biodiversity authority (NBA), Chennai on 25th and 26th February, 2013.
126. Dr. K. Venkataraman, Director attended Meeting of National Biodiversity authority (NBA), Chennai on 25th and 26th February, 2013.
127. Dr. K. Venkataraman, Director attended meeting on 10th December, 2012 at Zoological Society, Kolkata in connection with F.Z.S. Awardees for the year 2011-2012.
128. Dr. K. Venkataraman, Director attended meeting on 20th November, 2012 at Ministry of Environment and Forests (MoEF), New Delhi
129. Dr. K. Venkataraman, Director attended meeting on 26th December, 2012 at Ministry of Environment and Forests (MoEF), New Delhi.
130. Dr. K. Venkataraman, Director attended meeting to discuss the Agenda of CoP-11 for the preparation of brief for the Indian delegates on 27th August, 2012 at Casuarin Hall, Indian Habitat Centre, Ministry of Environment and Forests (MoEF), New Delhi.
131. Dr. K. Venkataraman, Director attended official meeting at Chennai and New Delhi in order to attend DPC meeting at UPSC, New Delhi from 26th to 31st January, 2013.
132. Dr. K. Venkataraman, Director attended Phase-II, Interview and Selection of Scientific Staffs for Scientist-C and Scientist-D of NCSCM on 28th February and 1st March, 2013 at Ministry of Environment and Forests (MoEF), New Delhi.
133. Dr. K. Venkataraman, Director attended Phase -II, Interview and Selection of Scientific Staffs for Scientist "C" and "D" of NCSCM on 28th February and 1st March, 2013 at Ministry of Environment and Forests (MoEF), New Delhi.
134. Dr. K. Venkataraman, Director attended Programme Advisory Committee (PAC) meeting at HAZRC, ZSI, Solan and National Centre for Sustainable Coastal Management : Interview and Selection of Scientific Staffs at Anna University Campus, Chennai from 6th to 13th February, 2013.
135. Dr. K. Venkataraman, Director attended Programme Advisory Committee (PAC) meeting at HAZRC, ZSI, Solan and National Centre for Sustainable Coastal Management : Interview and Selection of Scientific Staffs at Anna University Campus, Chennai from 6th to 13th February, 2013.
136. Dr. K. Venkataraman, Director attended RCM (Regional Council Meeting) of MARC, Digha on 18th December, 2012.
137. Dr. K. Venkataraman, Director attended review meeting of activities of S.R.C. and M.B.R.C., Chennai on 2nd August, 2012 along with Dr. Nandita Chatterjee,





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- Additional Secretary, Ministry of Environment and Forests (MoEF), New Delhi. He has given a Welcome address in the above said meeting.
138. Dr. K. Venkataraman, Director attended review meeting to discuss Programme and key issues of ZSI at Ministry of Environment and Forests (MoEF), New Delhi on 26th June, 2012.
139. Dr. K. Venkataraman, Director attended urgent official meetings at MBRC, SRC, Chennai and also at Bangalore from 11th to 21st January, 2013.
140. Dr. K. Venkataraman, Director attended World Environment Day celebration at Van Vigyan Bhavan Bhawan, New Delhi on 4-5th June, 2012 where Hon'ble Environment Minister, Hon'ble Railway Minister and distinguish Scientists were present in the function.
141. Dr. K. Venkataraman, Director attended XXIXth Meeting of the Training, Research and Academic Council (TRAC) of WII of Dehra Dun on 14th February, 2013.
142. Dr. K. Venkataraman, Director attended XXIXth Meeting of the Training, Research and Academic Council (TRAC) of WII of Dehra Dun on 14th February, 2013.
143. Dr. K. Venkataraman, Director has attended 6th meeting of National Board for Wildlife, New Delhi was held on 5th and 6th September, 2012, Honorable Prime Minister was attended that meeting.
144. Dr. K. Venkataraman, Director has attended 70th CSIR Foundation Day Celebration on 25th September as a Chief Guest at Bhavnagar, Gujarat.
145. Dr. K. Venkataraman, Director has attended Annual Meeting of Wildlife Institute of India, Dehra Dun on 17-18th September, 2012.
146. Dr. K. Venkataraman, Director has attended Brainstorming session on DNA Barcoding on 27th October, 2012 at Central Institute of Fisheries Education (C.I.F.E.), Mumbai and delivered a special talk on "Importance of Taxonomy, Biodiversity, DNA Barcoding and Networking"
147. Dr. K. Venkataraman, Director has attended Programme Advisory Committee meeting held on 25th October, 2012 at Headquarters. Dr. Nandita Chatterjee, I.A.S., Additional Secretary, MoEF, Govt. of India, New Delhi, Shri B.M.S., Rathore, Joint Secretary, MoEF, New Delhi, Dr. Sinha from Wildlife Institute of India, Dehra Dun and DZSI were presided over that discussion.
148. Dr. K. Venkataraman, Director has attended Symposium on 13th and 14th September, 2012 at Annamalai University, Tamil Nadu.
149. Dr. K. Venkataraman, Director has attended urgent meeting on 21st September, 2012 at MoEF in connection with CoP-11 Conference to be held at Hyderabad.
150. Dr. K. Venkataraman, Director has attended XI Conference of Parties (CoP-11) the Convention on Biological





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- Diversity (CBD), an Interministerial-cum-expert meeting between 1st and 19th October, 2012 at Hyderabad. On this occasion Book/ Boxers/ Posters were released by Smt. Jayanthi Natarajan, Hon'ble Minister of State for Ministry of Environment and Forests (MoEF).
151. Dr. K. Venkataraman, Director inaugurated Clima Adapt Programme and National Consultant on Coastal and Marine Biodiversity Conservation in India on 16th-17th August, 2012, delivered a talk on "Gaps in Conservation of Marine and Coastal biodiversity, organized by M. S. Swaminathan Research Foundation (MSSRF) in collaboration with the United Nations Development Programme (UNDP).
152. Dr. K. Venkataraman, Director undertaken Official visit to SRC and MBRC, Chennai and attended meeting on "International Day for Biological Diversity" at N.B.A., Chennai on 21st and 22nd May, 2012 and also to MARC, Digha regarding renovation of office museum building and interior decoration of aquarium on 24th May, 2012.
153. Dr. K. Venkataraman, Director visited GPRC, ZSI, Patna on 24-25th November, 2012 for the inspection of New Office Building.
154. Dr. K. Venkataraman, Director, attended RAMC meeting on 9th November, 2012 at Centre for Ecological Sciences, Bangalore
155. Dr. K. Venkataraman, Director, in connection with holding discussion on CoP-11 with Chairman, NBA and S.R.C. and M.B.R.C., ZSI, Chennai visited Chennai on 5th and 6th April, 2012. He has attended 1st Consultation meeting to discuss the targets of National Biodiversity Authority (NBA) held at New Delhi (ICAR Conference hall) on 9th April, 2012.
156. Dr. K. Venkataraman, was presided over on the occasion of 121ST Birth Anniversary of Baba Saheb Dr. B.R. Ambedkar celebration, organized by Akhil Bharat Anusuchit Jati Parishad, ZSI, Kolkata on 20th April, 2012 at ZSI Headquarters, where Chief Guest, Prof. Debi Chatterjee, J.U. (International Relations), Kolkata and Special Guest Dr. S. K. Naskar, former Deputy Director, National Commission for Scheduled Tribes and Castes, Kolkatta were graced the occasion.
157. Dr. K.A. Subramanian, Scientist-C, reviewed one project proposal for DST and identified Odonates received for Ranchi University, Ranchi and Garware College Pune.
158. Dr. K.C. Gopi attended the training programme on "Science and Technology for Rural Societies" from 20th to 31st August, 2012 at Mussoorie which was organized by CDM, NIAR, LBS National Academy of Administration, Mussoorie, sponsored by Department of Science and Technology (DST), New Delhi.
159. Dr. K.C. Gopi, Scientist-E and Head of Fish Division and Shri S.S. Mishra, Scientist-B of Marine Fish Section along





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- with Director, Zoological Survey of India attended the Regional Workshop on “Expert Consultation on Academic Partnership for Excellence and Networks in Fisheries Education and Research” organized by Central Institute of Fisheries Education, Kolkata Centre at Science City, Kolkata.
160. Dr. K.C. Gopi, Scientist-E, attended the ICAR funded short term course on “World Trade Agreement and Indian Fisheries Paradigms - A Policy Outlook” organized by the CMFRI, Kochi during 17- 26 September, 2012.
161. Dr. K. Ilango, Scientist-D and O/C delivered invited talk on the “Role of ZSI and Faunal diversity documentation in India” organized by the Indian Science Congress Association, Chennai Chapter on 17th and 18th Dec 2012.
162. Dr. K. Rajmohana, Scientist-C and Md. Jafer Palot, AZ, attended National Seminar on Western Ghats-Biogeography, Biodiversity and Conservation, on 15th February, 2013, at Manjeri NSS College, Malappuram and delivered invited lectures.
163. Dr. K. Rajmohana, Scientist-C, delivered a lecture on ‘Role of ZSI in conserving the faunal diversity of the country’, to the students of M.S. Swaminathan Research Foundation, Wyanad on 10/5/2012
164. Dr. K. Rajmohana, Scientist-C attended as an Invited participant at joint Indo-US workshop on Biodiversity Informatics, January 19-20, at ATREE, Bangalore.
165. Dr. K. Rajmohana, Scientist-C delivered a lecture and organized an interactive section on ‘Zoological Survey of India and Taxonomic studies’, on 27th February, 2013, to a group of graduate students of Govt. Arts and Science College, Calicut selected under ‘Walk with a Scholar’ Programme, 2013.
166. Dr. K. Rajmohana, Scientist-C delivered a lecture on request to B.Sc. Students, Providence Women’s College, Calicut regarding General Insect Diversity on 1st Feb, 2013.
167. Dr. K. Rajmohana, Scientist-C delivered an invited lecture on “Little things that run the world: A tribute”, on 11th March, 2013 at Academic Staff College, University of Calicut, for the Orientation programme for College teachers, sponsored by UGC.
168. Dr. K. Rajmohana, Scientist-C delivered an invited lecture on Invertebrate Diversity of Western Ghats at the National Seminar on Western Ghats - Biogeography, Biodiversity and Conservation, on 15th Feb 2013, at Manjeri NSS College, Malappuram.
169. Dr. K. Rajmohana, Scientist-C Served as an External Expert for M.Sc. Entomology Semester Examination, at Dept. of Zoology, University of Calicut on 23/8/2012.
170. Dr. K. Rajmohana, Scientist-C, attended the “*Scoping workshop on Canopy Research*”, the Preconference workshop of “Biodiversity Asia 2012’ an international seminar/workshop organized by Society





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- of Conservation Biology, Asia Conference at Atree, Bangalore
171. Dr. Kailash Chandra, Additional Director and Scientist-F, attended the Chhattisgarh State Wildlife Advisory Board meeting on 29th May, 2012 at Raipur, which was chaired by the Hon'ble Chief Minister of state and he has also undertaken general Faunistic survey of Korba district under the 'Chhattisgarh CAMPA' project between 31st May and 6th June, 2012.
172. Dr. L. Kosygin Sing, Scientist-C accompanied a team of Scientists of Z.S.I. for E.I.A. study of the Iron ore mining area at Donamalai, Bellary district, Karnataka from 21st to 25th March 2013.
173. Dr. M. K. Dev Roy, Scientist - 'B' attended in-house seminar on Life and Livelihood of the inhabitants of Sundarbans organized by SEBA and Lokmata Rani Rasmoni Mission (LRRM) at Joynagar on 24. 02. 2013.
174. Dr. Md. Jafer Palot, AZ attended two days Workshop on 'Recent Trends in Biodiversity Documentation' at the Department of Zoology, Government College Kodancherry, Kozhikode on 12th February 2013 and presented an invited lecture.
175. Dr. Md. Jafer Palot, AZ, delivered a talk on 'Mangrove Biodiversity of Kerala' at the Department of Zoology, Zamorin's Guruvayurappan College, Kozhikode on 2.02.2013 in connection with the celebration of World Wetlands Day.
176. Dr. Md. Jafer Palot, AZ, delivered a talk on "Biodiversity assessment and conservation protocols" on 8th February 2013 at the Department of Botany, University of Calicut as part of National Environmental Awareness Campaign of Ministry of Environment of Forests.
177. Dr. Md. Jafer Palot, AZ, delivered a talk on "Wonderful world of Butterflies at the 'Agri-Food- Flower Festival - 2013' organized by University of Calicut at University Campus on 11th February 2013.
178. Dr. Md. Jafer Palot, AZ, delivered an invited lecture on 'Invertebrate diversity in the Western Ghats' at the Workshop on 'Recent Trends in Biodiversity Documentation' at the Department of Zoology, Government College Kodancherry, Kozhikode on 12th February 2013.
179. Dr. Md. Jafer Palot, AZ, delivered an invited lecture on 'Vertebrate Faunal diversity of Western Ghats' at the National Seminar on Western Ghats - Biogeography, Biodiversity and Conservation, on 15th Feb 2013, at Manjeri NSS College, Malappuram.
180. Dr. Muhamed Jafer Palot, AZ, attended a Seminar on the Conservation of Sacred Groves on 31.01.2013 organized by Kozhikode Paristhithi Samrakashana Samithi at Police Club Hall, Kozhikode and delivered a talk on " Faunal diversity of Sacred Groves of Kerala"





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181. Dr. Muhamed Jafer Palot, A.Z, attended National Seminar on Biodiversity Conservation: Prospects and Challenges organized by Research Department of Zoology, Government College, Kasaragod on 12th December 2012 sponsored by Kerala State Council for Science Technology and Education (KSCTE) and Directorate of Collegiate Education, Kerala.
182. Dr. Muhamed Jafer Palot, A.Z, delivered a talk on 'Butterfly Migration in Kerala' at the Butterfly survey camp at Aralam WLS on 12.01.2013 organized by Kerala Forests and Wildlife Department and Malabar Natural History Society, Kozhikode.
183. Dr. Muhamed Jafer Palot, A.Z, delivered a talk on 'Herpetofauna diversity of Western Ghats' to the 13th Refresher Course in Life Sciences on 18.12.2012 at UC- Academic Staff College, University of Calicut.
184. Dr. Muhamed Jafer Palot, A.Z, delivered a talk on 'Herpetofaunal diversity of Kerala' at the National Seminar on Biodiversity Conservation: Prospects and Challenges organized by Research Department of Zoology, Government College, Kasaragod on 12th December 2012 sponsored by Kerala State Council for Science Technology and Education (KSCTE) and Directorate of Collegiate Education, Kerala.
185. Dr. Muhamed Jafer Palot, A.Z, delivered a talk on "Biodiversity of Kerala' to the students of a special project- 'Promotion of excellence among gifted students of the Kozhikode district' organized by District Education Department at our Centre on 24.12.2012.
186. Dr. Muhamed Jafer Palot, A.Z, delivered a talk on "Faunal diversity of Sacred Groves of Kerala" at the Seminar on the Conservation of Sacred Groves on 31.01.2013 organized by Kozhikode Paristhithi Samrakashana Samithi at Police Club Hall, Kozhikode.
187. Dr. Muhamed Jafer Palot, A.Z, participated in a two day Workshop on 'Biodiversity Conservation and Solution for Environmental Pollutions' organized by Department of Molecular Biology, Kannur University, Nileswarm Campus, Kasaragod district on 03.11.2012 and presented a talk on "Mangrove Biodiversity of Kerala and its conservation".
188. Dr. Muhamed Jafer Palot, A.Z, participated in the one day work shop on the 'Declaration of ecosensitive zone for the Aralam WLS' at Valayamchal, Aralam WLS on 17th January 2013 organized by Kerala Forests and Wildlife Department.
189. Dr. Muhamed Jafer Palot, Asstt. Zoologist attended a State Level Seminar on Mangrove Conservation at Papinisseri Aaron U.P. School, Kannur on 25th August 2012 organized by State Environment and Development Committee, Kerala Sasthrya Sahithya Parishath, Thirvananthapurram and presented a paper on "Mangrove faunal diversity of Kerala".





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190. Dr. Muhamed Jafer Palot, Asstt. Zoologist delivered a talk on “Amazing world of butterflies” to the students of *Scientia*, science club of Regional Science Centre and Planetarium during their visit to our Centre on 31st August 2012.
191. Dr. Muhamed Jafer Palot, Asstt. Zoologist delivered a talk on “Biodiversity of Western Ghats” to the students of Govt. U.P. School, Quilandy at our Centre on 20th July 2012.
192. Dr. Muhamed Jafer Palot, Asstt. Zoologist delivered a talk on “Mangrove Biodiversity of Kerala” at the Management Training Workshop for the Forest Range Officers of Northern Kerala at the Institute of Management in Government (IMG), Kozhikode on 27th July 2012 organized by Kerala Forest and Wildlife Department.
193. Dr. Muhamed Jafer Palot, Asstt. Zoologist delivered a talk on “Mangrove Faunal diversity of Kerala” at the State Level Seminar on Mangrove Conservation at Papinisseri Aaron U.P. School, Kannur on 25th August 2012 organized by State Environment and Development Committee, Kerala Sasthrya Sahithya Parishath, Thirvananthapuram.
194. Dr. Muhamed Jafer Palot, Asstt. Zoologist, delivered a talk on “Herpetofauna of Kerala” at state level residential vacation training programme for school children at Community Agrobiodiversity Centre, M.S. Swaminathan Research Foundation, Wyanad on 10/5/2012
195. Dr. Muhamed Jafer Palot, AZ Attended a one day workshop on the preparation of management Plan for Kottiyur WLS on 8th March 2013 organized by Periyar Tiger Conservation Foundation at Kottiyur WLS.
196. Dr. Muhamed Jafer Palot, AZ Participated in a one day Workshop on ‘Ecorestoration of Degraded laterite Landscapes: Current Status and Future Scenario’ at SEEK, Edat, Payyanur on 25th March 2013 organized by Kerala Forest Research Institute, Thrissur and lead a session on ‘Faunal studies- habitat use and interactions’
197. Dr. Muhamed Jafer Palot, AZ, delivered a talk on ‘Shorebirds of Kerala’ at the one day Workshop on “Wetlands and Waterfowls’ at the auditorium of ZSI on 7th March 2013.
198. Dr. Muhamed Jafer Palot, AZ, delivered a talk on “Marine coastal biodiversity of Kerala” at the one day Workshop on Marine Turtle Conservation at Koottayi kadappuram, Malappuram district organized by Kerala Forests and Wildlife Department and Kerala Sasthrya Sahithya Parishath.
199. Dr. P.C. Tak, Scientist-D attended the XXIXth meeting of the Training, Research and Academic Council (TRAC) at WII on 14th February 2013 as assigned by the DZSI/O/C.
200. Dr. P.M. Sureshan, Scientist-C and Officer-in-Charge attended the PAC meeting for south zone at ZSI, SRS, Chennai and presented the station’s work progress on assigned research programmes





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- and new research programmes on 29 Jan.2012.
201. Dr. P.M. Sureshan, Scientist-C and Officer-in-Charge attended the Republic day ceremony functions at ZSI, Headquarters, Kolkata and received the high performance award for the year 2012 from DZSI, Kolkata on 26 th Jan. 2012.
202. Dr. P.M. Sureshan, Scientist-C and Officer-in-Charge, attended the meeting of State Board for Wild life Kerala, at Secretariat, Trivandrum on 03.01.2013.
203. Dr. P.M. Sureshan, Scientist-C attended National seminar on Biodiversity conservation: Prospects and challenges organized by Research Dept. of Zoology, Govt. College, Kasaragod, Kerala on 11 and 12 Dec.2012 and delivered invited talk on *Indian biodiversity status, threats and conservation* on 12.12.2012.
204. Dr. P.M. Sureshan, Scientist-C delivered an invited talk on *Indian biodiversity status, threats and conservation* on 12.12.2012, at National seminar on Biodiversity conservation: Prospects and challenges organized by Research Dept. of Zoology, Govt. College, Kasaragod, Kerala on 11th and 12th December, 2012.
205. Dr. P.M. Sureshan, Scientist-C and Dr. K. Rajmohana, Scientist-C attended the conference of Research guides under the University of Calicut organized by the Directorate of Research, University of Calicut on 26.09.2012.
206. Dr. P.M. Sureshan, Scientist-C delivered a lecture on “Importance of wetlands” during the work shop on ‘Wetlands and waterfowls’ organized in the centre on 07.03.2013.
207. Dr. P.M. Sureshan, Scientist-C, attended the 2nd meeting of “Animal ethics committee” of Malabar Institute of Medical sciences (MIMS), Calicut as member nominee.
208. Dr. P.M. Sureshan, Scientist-C, delivered a lecture on the topic “Environmental issues in India “to the students of Chinmaya mission High school Calicut on 19.09.12.
209. Dr. P.M. Sureshan, Scientist-C, extended 5 days training on the systematic of Mantodea (Insecta) was extended on request, to Mr. B. Devarajan, PDBC, Bangalore, from 19-23rd November 2012.
210. Dr. Padma Bohra Scientist-D and Dr. Sanjeev Kumar, Scientist-C has attended and presented Report in the Inspection meeting of the Third Sub-Committee of the Committee of Parliament on Official Language of the Desert Regional Centre, Zoological Survey of India held at Hotel Vivanta Taj Hari, Jodhpur on 16th October, 2012.
211. Dr. Padma Bohra, Scientist-D has attended and presented progress of Ongoing and status of Completed Research Programmes. Proposals for New Programmes were also presented and discussed in the Programme Advisory Committee (PAC) Meeting (North Zone) held at HARC, Solan on 7.2.2013.
212. Dr. Padma Bohra, Scientist-D has attended Jodhpur Conclave under the





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- theme: Collaborative Research in Public Health – A Holistic Approach on 2nd December, 2012 at DMRC, Jodhpur. Besides, attended Nagar Rajbhasha Karyavayan Samiti meeting at DRM Office Jodhpur on 26.12.2012.
213. Dr. Padma Bohra, Scientist-D, Dr. Sanjeev Kumar, Dr. H.S. Banyal, Scientist-C have attended a discussion meeting on 22th August, 2012 with Dr. S. S. Choudhary, IFS, Chairman, Rajasthan Biodiversity Board, Jaipur and discussed the issues of faunal diversity information pertaining to Rajasthan. The Chairman, Rajasthan Biodiversity Board, Jaipur was apprised of the scientific work done by the centre and were also given information on various publications published by ZSI on Fauna of Rajasthan and Gujarat.
214. Dr. Padma Bohra, Scientist-D, Dr. Sanjeev Kumar and Dr. H.S. Banyal, Scientist-C have attended and presented paper (poster) in the Symposium on “Managing stress in Dry lands under Climate Change Scenario” (MSDC-2012) organized by AZRAI from December 1-2, 2012 held at CAZRI, Jodhpur.
215. Dr. Padma Bohra, Scientist-D, Dr. Sanjeev Kumar and Dr. H. S. Banyal, Scientist-C have attended National Conference on “Conservation of Desert Biodiversity” on March 6th, 2013 in the Deptt. of Zoology, J.N.V. University, Jodhpur. Dr. Padma Bohra, acted as Co-Chairman in Scientific Session I .
216. Dr. Padma Bohra, Scientist-D, Dr. Sanjeev Kumar and Dr. H.S. Banyal, Scientist-C have attended Official Language Seminar on New Dimensions of Defence Development from 14-15 March, 2013 at Defence Laboratory (DRDO), Jodhpur.
217. Dr. Prasanna Yennawar, Scientist-C delivered lecture as a resource person on ‘Coastal Zone Management in India’ in 2nd Training Program on Integrated Coastal Zone Management sponsored by World Bank at Marine Aquarium and Regional Centre, Digha on 13th December, 2012.
218. Dr. Prasanna Yennawar, Scientist-C participated in Training on GIS in Faunal Studies, Data basing and Digitization of faunal collections held at Zoological Survey of India, Kolkata during 21-22 January, 2013.
219. Dr. Prasanna Yennawar, Scientist-C, Dr. Deepa Jaiswal, Scientist-C, Dr. S.V.A. Chandrasekhar, Scientist ‘B’ and Shri. Anand Kumar, Sr. Zool. Asst. attended PAC meeting for south zone held at Southern Regional Centre, Chennai on 29th January, 2013.
220. Dr. Prasanna Yennawar, Scientist-C delivered lecture on ‘Collection, Preservation and Identification of Various Faunal Groups’ in Interactive meeting organized by Institute of Forest Biodiversity on 18th March, 2013.
221. Dr. R. Aengals, Scientist-C, as a resource person delivered an invited lecture to the Government School students on “Reptiles in Wetlands” at Environmental Education Programme, Adayar Poonga, Chennai on 16th July, 2012.





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222. Dr. R. Babu, Scientist-C, as a resource person delivered an invited lecture to the Government School students on “Invertebrates in Wetland Ecosystem” at Environmental Education Programme, Adayar Poonga, Chennai on 16th July, 2012.
223. Dr. R. Babu, Scientist-C, attended the Training Course on “GIS and Database usage for the faunal studies” held at ZSI Headquarters, Kolkata from 21st to 22nd January, 2013.
224. Dr. R. Bano, Scientist-C attended Brain Storming Session on DNA Barcoding for Biodiversity Management at CIFE, Versova, Mumbai on 27th October, 2012.
225. Dr. R. Bano, Scientist-C attended training on ABI Prism® 3730 Genetic Analyzer DNA Sequencer: Basic Instrument Training Course at Invitrogen Bioservices Pvt. Ltd. Udyog Vihar, Gurgaon, Delhi NCR from 20th – 22nd June, 2012.
226. Dr. R. Bano, Scientist-C. Attended PAC (North) committee meeting on 7th February 2013 and presented a new programme on Molecular taxonomy of endemic freshwater fishes of Western Ghats under the Annual Programme of Research work 2013-14 at HARC, ZSI, Solan.
227. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge attended 6th State Wildlife Board Meeting at Mantralaya, Mumbai on 7th June, 2012.
228. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge attended PAC (North) committee meeting on 7th February 2013 and presented the progress of Research Programmes of the Centre at HARC, ZSI, Solan.
229. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge attended Selection Committee Meeting as Vice-Chancellor’s Nominee at Department of Zoology, University of Pune on 16th March 2013.
230. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge delivered an invited lecture “Grassland Ecosystem and Insect Communities” at Nannaj Wildlife Sanctuary, Dist. Solapur on 11.12.2012. He also gave presentation during the Third Party Evaluation of Zoological Survey of India on 13.12.2012 at WRC, Pune.
231. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge delivered an invited lecture as Mentor “Zoological Survey of India and Indian Zoology” on 14.12.2012 at New Arts, Science and Commerce College, Parner, Dist. Ahmednagar.
232. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge delivered an invited lecture on “Birds and Insect Relationship” for the participants of 9th Basic course in Ornithology conducted by ELA Foundation on 16th December, 2012 at WRC, Pune.
233. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge delivered an invited lecture on Taxonomy/Systematics and Indian Bird Diversity” for the participants of 9th Basic course in Ornithology conducted by ELA





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- foundation on 17th December, 2012 at Garware College, Pune.
234. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge, Dr. S. S. Jadhav, Sr. Zool. Assistant and Dr. S. K. Pati Zool. Assistant attended 1st Stakeholders Workshop of Maharashtra State Biodiversity Board at Bharathi Vidyapeeth, Pune on 9th June, 2012.
235. Dr. R. M. Sharma, Scientist-D and Officer-in-Charge. Attended a meeting as member convened by the Vice-Chancellor, Shivaji University, Kolhapur on 22nd February 2013. He also delivered an invited lecture "Outline of Entomology" for Insearch Outdoors, Pune (an NGO) on 24th February 2013 at Aksharnandan School, Pune.
236. Dr. R.M. Sharma, Scientist-'D' and O/C approached the Office of Governor, Maharashtra for seeking a date for release of State Fauna Volumes at the hands of His Excellency.
237. Dr. R.M. Sharma, Scientist-'D' and O/C attended 7th State Wildlife Board Meeting on 24th January 2013 at Council Hall, Pune.
238. Dr. R.M. Sharma, Scientist-'D' and O/C attended a meeting as Vice-Chancellor's nominee and external subject expert to select Research Fellows for a project on Western Ghats on 7th November 2012 at Botany Department, University of Pune.
239. Dr. R.M. Sharma, Scientist-'D' and O/C attended a meeting convened by the PCCF (Maharashtra) at Nagpur on 18th October, 2012 and gave presentation for seeking extension for permission to conduct the faunistic surveys in Phansad Wildlife Sanctuary, Raigad for third year (2012-2013).
240. Dr. R.M. Sharma, Scientist-'D' and O/C attended Ph. D. (Zoology) admission meetings as subject Expert at Dept. of Zoology, Pune University on 12th January 2013; at Modern College, Shivajinagar, Pune on 14th January 2013 and at Garware College, Pune on 18th January 2013.
241. Dr. R.M. Sharma, Scientist-'D' and O/C attended Selection Committee Meeting at Dept. of Zoology, Shivaji University, Kolhapur on 17th September, 2012. He also delivered an invited talk on "Zoological Survey of India and Indian Zoology" at Dept. of Zoology, Abasaheb Garware College, Pune on 18th September, 2012 as part of activities of their Zoology Association.
242. Dr. R.M. Sharma, Scientist-'D' and O/C attended to the proceedings of the Scientific Audit for the years 2007-8 to 2012 from 25th July to 3rd August. He also attended high level meetings convened by Chief Engineer, Irrigation Department, Govt. of Maharashtra on 04.08.2012 and by Municipal Commissioner on 24.08.2012 at Sinchan Bhawan (Pune) and PMC (Pune), respectively.
243. Dr. R.M. Sharma, Scientist-'D' and O/C delivered an invited talk on "The World of Insects" on 23rd November 2012 organized by JIVIDHA an NGO.





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244. Dr. R.M. Sharma, Scientist-'D' and O/C delivered an invited talk on "The World of Insects" on 1st October, 2012 on the occasion of Wildlife Week organized jointly by State Forest Department, Pune Municipal Corporation and Nature Walk an NGO.
245. Dr. R.M. Sharma, Scientist-'D' and O/C evaluated one M.Sc. (Biodiversity) dissertation received from Garware College, Pune.
246. Dr. R.M. Sharma, Scientist-'D' and O/C evaluated one Ph.D thesis from University of Pune and conducted viva-voce exam at Zoology Department, Pune University on 3rd October, 2012.
247. Dr. R.M. Sharma, Scientist-'D' and O/C participated as member of the expert committee to evaluate and declare Critical Wildlife Habitats in Bhimashankar Wildlife Sanctuary, Pune district on 13th and 14th October, 2012.
248. Dr. R.M. Sharma, Scientist-D and O/C delivered a keynote Address in the Seminar on "Exploitation of Ocean Resources and Opportunities for Indian Entrepreneurs" organized by the Indian Maritime Foundation (IMF), Maratha Chamber of Commerce, Industry and Agriculture (MCCIA) and the Society for Underwater Technology, London (SUT) at MCCIA, Pune on 18th April, 2012.
249. Dr. S. Sambath acted as a member of committee constituted for the evaluation of the progress report of Mr. Devanshu Gupta, JRF for up gradation to SRF. Meeting was held on 13.07.2011 in office Auditorium.
250. Dr. S. Sambath attended 9th State Wildlife Board Meeting on 27.11.2012 at Bhopal, Madhya Pradesh.
251. Dr. S. Sambath Attended a meeting as a member on Narmada Sagar and Sardar Sarovar project at PCCF, Office (Wildlife), Bhopal on 18.01.2013.
252. Dr. S. Sambath attended as a member in the 39th Research Advisory Committee (RAC) of State Forest Research Institute, Jabalpur, Madhya Pradesh on 08.03.2013.
253. Dr. S. Sambath attended as a member of Board of Studies meeting of St. Aloysius College (Autonomous) Jabalpur on 24.08.2012.
254. Dr. S. Sambath attended as an invited member for the opening of tender for Technical bids at RMRCT, Jabalpur on 26.02.2013.
255. Dr. S. Sambath attended as an outside expert in the Departmental Promotion Committee meetings of Regional Medical Research Centre for Tribals, Jabalpur on 07th June, 2012.
256. Dr. S. Sambath attended as an outside expert in the first meeting of IAEC (Institutional Animal Ethical Committee) of Regional Medical Research Centre for Tribals, Jabalpur (M.P.) on 4th March, 2013.
257. Dr. S. Sambath attended as an outside expert to prepare question paper for the





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- recruitment of Technical Assistant and Technician post by the RMRC, Jabalpur on 08.01.2013
258. Dr. S. Sambath attended Central Government Employee Welfare Coordination Committee meeting at Office of the Commissioner, Income Tax Office, Jabalpur on 22.02.2013.
259. Dr. S. Sambath attended Fourth Kamta Prasad Sagreiya Memorial Lecture delivered by Dr. C.T.S. Nair, formerly Chief Economist, Forestry Department, FAO of the United Nations on "Forests and Forestry in a changing society: *Challenges and possible responses*" organized by the State Forest Research Institute, Jabalpur on 23.02.2013
260. Dr. S. Sambath attended PAC (North Zone) Meeting at ZSI, Solan, Himachal Pradesh on 07.02.2013
261. Dr. S. Sambath delivered an invited lecture on Insect Taxonomy delivered to the participants of Summer School Trainees on Integrated Pest and Disease Management organized by the Jawaharlal Nehru Krishi Vishwa Vidhyala, Jabalpur on 22.06.2012.
262. Dr. S. Sambath Participated as an outside expert for the opening of Technical bid for Meseum development at SFRI, Jabalpur on 28.01.2013.
263. Dr. S. Sheela, Scientist-C attended the Biodiversity Day celebrations organized by the West Bengal Biodiversity Board at Sri Ramakrishna Mission Institute of Culture at Golpark, Kolkata. Santhanu Mithra, Zoological Assistant also attended above said celebration as an invitee.
264. Dr. S.I. Kazmi, Scientist-C attended North Zone PAC meeting on 6th -7th February, 2013 held at High Altitude Regional Centre, Solan and presented a new project proposal for the year 2013-14.
265. Dr. S.K. Pati, Zool. Asst. conducted a tour to Headquarters, ZSI, Kolkata from 25th to 28th January 2013 for receiving High Performance Award for the year 2012 on 26th January 2013.
266. Dr. S.K. Pati, Zoological Assistant conducted a tour for studying types of freshwater Crabs at Crustacea Section of ZSI, Kolkata from 4th to 13th March, 2013.
267. Dr. S.S. Jadhav, Senior Zoological Assistant attended 24th Regional Council Meeting (RCM) at ZSI, HQ, Kolkata on 6th July, 2012 thereafter he studied some type specimens at fish section, HQ, from 9th to 13th July, 2012.
268. Dr. S.S. Jadhav, Sr. Zool. Asst. attended and successfully completed "Training on GIS in faunal studies, Databasing and Digitization of faunal collections" at Headquarters, Kolkata on 21st and 22nd January, 2013.
269. Dr. S.S. Talmale attended six monthly meeting of "Nagar Rajbhasha Karyanvain Sameeti" at Officer's Mess of Gun Carriage Factory, Jabalpur on 10.07.2012.
270. Dr. S.S. Talmale attended six monthly Nagar Rajbhasha Karyanvain Samiti,





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- Jabalpur meeting held at Gun Carriage Factory, Officers Mess, Jabalpur on 03.01.2012.
271. Dr. S.V. Chandrasekhar, Sci.-B, made a poster presentation on “Comparative Limnology of two Deccan Wetlands” in 4th International Conference on Anthropogenic Impact on Environment and Conservation Strategy’ conducted by ‘National Environmentalists association’, at Ranchi from 2 – 4th Nov., 2012.
272. Dr. Sanjeev Kumar, Scientist-C as a Special Guest attended the Wildlife Week Closing and Prize Distribution Ceremony on 7th October, 2012 at ZOO, Jodhpur.
273. Dr. Sanjeev Kumar, Scientist-C has attended and delivered lectures as a subject expert on the occasion of Wildlife Week Celebrations organized by Office of the D.F.O. (Wildlife, SFD), Jodhpur on 3rd October, 2012 at Guda Bishnoi, Jodhpur.
274. Dr. Sanjeev Kumar, Scientist-C has attended and presented research paper entitled “Terrestrial vertebrate diversity of Kumbhalgarh Wildlife Sanctuary-an important protected area of Rajasthan” in the National Seminar on Science for shaping the future of India: Faunal Diversity – Challenges and Opportunities held at University of Kashmir, Srinagar, J and K from November 19-21, 2012.
275. Dr. Sanjeev Kumar, Scientist-C has attended National Seminar on Science for shaping the future of India: Faunal Diversity – Challenges and Opportunities held at University of Kashmir, Srinagar, J and K from November 19-21, 2012.
276. Dr. Sanjeev Kumar, Scientist-C has attended the dialogue on “Strengthening Environmental Governance in the context of Sustainable” Development in India: The case of Desert Ecosystem” jointly organised by TERI, New Delhi, Konard Adenauer Stiftung, New Delhi and National Law University, Jodhpur held on 15-16 November, 2012 at Gateway Hotel and NLU, Jodhpur and participate as discussant in the Session I: Diverse viewpoints on natural resource management and problems of environmental governance in the Desert region.
277. Dr. Sanjeev Kumar, Scientist-C has attended the Programme Advisory Committee (PAC) Meeting (North Zone) as member of PAC North Zone held on 7th February, 2013 at High Altitude Regional Centre, ZSI, Solan, H. P. to review the progress of ongoing and new research programme proposals of the NRC, CZRC, WRC, DRC and HARC for the year (s) 2013-2016.
278. Dr. Sanjeev Kumar, Scientist-C has delivered a lecture on fauna of Gujarat and Rajasthan to 160 Students of class 11th and 12th (Biology) and ten faculty members (Teachers) from D. N. J. Adarsh High School, Deesa, Banaskantha District, Gujarat on 10th August, 2012 and they also visited the museum of the centre and were given information on fauna of Rajasthan and Gujarat displayed in the museum.





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279. Dr. Sanjeev Kumar, Scientist-C has delivered invited lecture on Status of avian diversity of the Thar Desert and its conservation on March 6th, 2013 in the National Conference on “Conservation of Desert Biodiversity” held at the Deptt. Of Zoology, J.N.V. University, Jodhpur.
280. Dr. Sanjeev Kumar, Scientist-C has Delivered lecture in Hindi under the awareness campaign programme organised by Aliens clubs International, District – 124, Jodhpur Chapter at Geeta Bhawan, Jodhpur on 6th June, 2012 and distributed a two page write-up entitled to more than two hundred women participants and also organized quiz competition and distributed 15 prizes to the winners sponsored by DRC, ZSI, Jodhpur.
281. Dr. Sanjeev Kumar, Scientist-C has delivered lecture on Biodiversity under the training programme on New Techniques in Forest Management organized by Office of the Dy. Conservator of Forest, Desert Forest Training Centre, Jodhpur on 7th November, 2012.
282. Dr. Sanjeev Kumar, Scientist-C has delivered lecture on Biodiversity of Rajasthan (Faunal Diversity) under the Biodiversity Conservation and Enrichment programme on Biodiversity Convention 2002, Biodiversity constitution of committees and People’s Biodiversity Register preparation jointly organized by Office of the DFO (Wildlife) and AFRI, Jodhpur on 13th December, 2012 at AFRI Auditorium, Jodhpur.
283. Dr. Sanjeev Kumar, Scientist-C has delivered lecture on Rational use of Eco Tourism under the training programme on Eco Tourism development Programme organized by Office of the Dy. Conservator of Forest, Desert Forest Training Centre, Jodhpur on 30th November, 2012.
284. Dr. Sanjeev Kumar, Scientist-C has delivered two invited lectures on Biodiversity and Man-Animal Conflict under refreshers course training programme for the Front-line employees organized by Office of the DFO, Desert Forest Training Centre, Jodhpur on 5th December, 2012.
285. Dr. Sanjeev Kumar, Scientist-C has presented research paper on Wildlife Conservation in the Border Security Areas of India - Perspective and technique (*Bharat ke raksha seemavrti shetro me vanyajeev sanraksharan - paripeksh avum takniki*) in Official Language Seminar on New Dimensions of Defense Development on 15 March, 2013 at Defence Laboratory (DRDO), Jodhpur
286. Dr. Varadaraju, Scientist ‘B’ attended 14th Appreciation Course on Legislative Drafting organised by Ministry of Law and Justice, held at Institute of Legislative Drafting and Research, Shastri Bhawan, New Delhi from 18.06.2012 to 29.06.2012.
287. Dr. Vikas Kumar, Scientist-C has attended DBT meeting on 7th June, 2012 regarding “Prioritization of Indian Insects for Genome Sequencing” at DBT New Delhi. He has also attended training





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- on Genetic Analyzer (DNA Sequencer) at Invitrogen Bioservices India Pvt. Ltd., Gurgaon from 20th to 22nd June 2012. Under his supervision two M. Sc. Students, Mr. Biswarup Roy and Mr. Wasim Mullick have submitted their M. Sc. thesis at Department of Zoology, West Bengal State University.
288. Dr. Vinita Sharma, Scientist-C Attended National Conference on Advances in Biosciences and Health Education held at Bareilly, U.P. and Participated in Poster session on Preliminary study of nematodes from GWLS, Uttarkashi and was awarded IIIrd Best poster presentation.
289. Dr. Viswa Venkat Gantait, Zoological Assistant attended and presented the Project on “Taxonomic and Ecological Studies on Nematodes of Schirmacher Oasis, East Antarctica” in the National Workshop on “Evaluation of Research Projects for Planning the XXXII Indian Scientific Expedition to Antarctica” at NCAOR, Goa on 27-28th June, 2012.
290. Dr. Viswa Venkat Gantait, Zoological Assistant has attended the Pre-Antarctic snow/ice acclimatization training course for 32nd Indian Scientific Expedition to Antarctica during 10th - 26th September, 2012 at Auli, Uttarakhand. He has also delivered the lecture on “Floral and Faunal Community of Antarctica”.
291. First ‘PROMALIA’ seminar was organized on 3rd September, 2012 at Annandale Hall, Headquarters. This occasion was graced by two renowned taxonomists, Prof. T. C. Narendran and Prof. Veena Tandon where they have given lectures on “Some Aspects of Taxonomy” and “Molecular Taxonomy: A unified approach from Classical towards Modern” respectively. Officers, Scientific staffs and Scholars of different Sections / Divisions of ZSI, Headquarters have attended first ‘PROMALIA’ seminar and Dr. K. Venkataraman, Director has given introductory remarks on this occasion.
292. Independence Day was organized in the campus
293. K.G. Emiliyamma, Scientist-C Attended a training programme on ‘GIS and Database usage for the faunal studies’ at HQ, ZSI, Kolkata from 21-22nd January 2013.
294. Kailash Chandra and Sandeep Kushwaha Diversity of True Bugs (Insecta: Hemiptera) of Madhya Pradesh India. Abstract published in Search and Research Youth Conclave-2012; Second International Conference on *Development and Prosperity of Nation through Young Minds* “December 12-13, 2012. Organized by Search and Research Development Society, Bhopal, India. Page no.5.
295. M. Karuthapandi and D.V. Rao. Made poster presentation on “Freshwater malacofauna of Hyderabad “ in the Second Indian Biodiversity Congress held at Bangaluru during 9-12th December, 2012.
296. Mr. Koushik Sadhukhan, SRF delivered a lecture entitled ‘Conservation of





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- Endangered Species' on 4th October 2012 at 58th Wildlife Week Celebration of Department of Environment and Forests.
297. Mr. Koushik Sadhukhan, SRF participated in 'National Training cum Workshop on DNA Barcoding of fish and marine life – molecular analysis and bioinformatics approaches (Fishcode-2012)' held at Bharathidasan University, Thiruchirapalli, Tamil Nadu during 12th to 14th September 2012.
298. Mr. Koushik Sadhukhan, SRF participated in 100th Indian Science Congress 2012 at University of Calcutta during 3rd to 7th January 2013 and presented a paper entitled, 'Diversity abundance of crinoid population in Mahatma Gandhi Marine National Park, A and N Islands'.
299. Mr. P.C. Mazumdar attended 36th Annual Conference of "Ethological Society of India" and National Symposium on "Live Organisms and their expressions in the environment" organized by Dept. of Botany (Centre of Advanced study), University of Calcutta and Ethological Society of India on 26th-28th November, 2012.
300. Mr. P.T. Rajan, Senior Zoological Assistant delivered a lecture on 'Faunal diversity of A and N Islands' at Forest Training School, South Andaman on 14th December 2012.
301. Mr. P.T. Rajan, Sr. Zoological Assistant delivered a lecture on 'Faunal diversity of A and N Islands' at Forest Training School, Wimberligunj on 24th August 2012.
302. Mr. S. Kumaralingam, SRF attended the 'Workshop on taxonomy of brachyuran crabs' at University of Kerala during 9th to 11th January 2013
303. Mr. S. Kumaralingam, SRF attended the UGC-NRCBS winter training programme on Bioresources Management from 8th to 22nd October 2012 at Madurai Kamaraj University.
304. Mr. S. Rajesh Kumar, JRF made two presentations on 'Avifaunal diversity of Andaman and Nicobar Islands' during 5th and 6th October 2012 organized by CPR Foundation, Chennai held at Port Blair.
305. Mr. Tamal Mondal, Senior Research Fellow has participated in summer school on 'Ecological Informatics' at Indian Institute of Information Technology and Management-Kerala, Trivandrum from 9th to 13th April 2012
306. Mrs. I.J. Kharkongor, Scientist-C attended the 6th meeting of the state Board for Wildlife Assam on 18th April, 2012 at the Assam Secretariat, Dispur, Assam.
307. Mrs. J. Lyngdoh, Sc-C attended the lecture series on Current Perspectives in Zoological Science organized by the department of Zoology, North Eastern Hill University on 20th March, 2013.
308. Mrs. J. Lyngdoh, Scientist-C attended the 1st Regional meeting of State Boards of North East India, organized jointly by National Biodiversity Authority, Govt. of India and Dept. of Forests and Environment, Govt. of Meghalaya on the





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- 4th and 5th May, 2012 at Pinewood Hotel, Shillong, Meghalaya.
309. Mrs. J. Lyngdoh, Scientist-C attended the 3rd Meeting of the Governing body of the Meghalaya Zoo Project Implementation Society held on 05.10.2012 at the conference room of the Principal Chief Conservator of Forests (PCCF) and Head of Forest Force (HOFF), Meghalaya, Shillong.
310. Mrs. J. Lyngdoh, Scientist-C attended the General body meeting of the Meghalaya Zoo implementation society on 15th May, 2012 at the Meghalaya main Secretariat, Shillong organized by the Dept. of Forests and Environment, Govt. of Meghalaya.
311. Mrs. Kamla Devi attended the 4th meeting of State Animal Disease Emergency Committee at Secretariat, A and N Administration on 30th January 2013.
312. Mrs. Kamla Devi attended training programme of 'Effectiveness of Work' on 17th and 18th January 2013 in Rajiv Gandhi Co-operative Training College, Port Blair.
313. Mrs. Kamla Devi, Assistant Zoologist and Mr. M.C. Patel, Zoological Assistant attended the Official Language Workshop on 16th February 2013 at Port Blair.
314. Mrs. Kamla Devi, Assistant Zoologist attended Core Committee meeting of Environmental Education held at Secretariat, A and N Administration on 18th September 2012; and served as a resource person for 45th Batch of Forest Trainees while visiting ZSI Regional Museum on 29th September 2012.
315. Mrs. Kamla Devi, Assistant Zoologist attended meetings for 'proposed Oceanarium' and 'Implementation of Environmental Education in School' held at Secretariat of A and N Administration on 7th and 8th August 2012 respectively.
316. Mrs. Kamla Devi, Assistant Zoologist served as a resource person to the 'Master trainers of the Department of Education, A and N Administration' on 3rd January 2013
317. On behalf of Director, Zoological Survey of India, Shri S.S. Mishra, Scientist-B and Officer-in-charge of Marine Fish Section attended the meeting of the Similipal Biosphere Reserve Management Council (SBRMC) at Odisha Secretariat, Bhubaneswar.
318. Participated in the regional workshop 'Capacity Building for Coral Reef Monitoring: Identifying indicators for Regional Adaptation and Resilience' organized by SAARC coastal Zone Management Centre, at Hikkaduwa, Sri Lanka, from 21-24 May 2012.
319. Shri B. Mitra, Scientist-B attended the 8th Heritage site and sacred grove meeting at West Bengal State Biodiversity Board, Kolkata on 28th September, 2012
320. Shri G.R. Salunke, Lab. Asstt. attended 5 days training program on working with Computer using Hindi language and on I.T. tools.
321. Shri K.C. Gopi, Scientist 'E' attended as a resource person in the National Consultation on "Allen Fish species





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- in Aquaculture and Aquarium Trade” conducted by National Bureau of Fish Genetic Resources (NBFGR), Lucknow on 6th and 7th September, 2012.
322. Shri P.T. Bhutia, Officer-in-Charge and Dr. P.C. Tak, scientist-D attended the meeting of the “Study visit of the Department-related Parliamentary Standing Committee on Science and Technology” Environment and Forest on 4th July, 1012 at the Forest Research Institute, Board Room, Dehradun and presented the activities of the Centre through Power Point Presentation.
323. Shri P.T. Bhutia, Officer-in-Charge, Scientist-F and Dr. A. Bahuguna, Scientist-C, attended Annual Research Seminar at Wildlife Institute of India from 17 to 18th Sep 2012.
324. Shri P.T. Bhutia, Officer-in-Charge, Scientist-F and Dr. P.C. Tak, Scientist-D represented ZSI Dehradun in meeting of the “State Wildlife Board” chaired by the Hon’ble Chief Minister of Uttarakhand on 4th August 2012.
325. Shri P.T. Bhutia, Scientist-F and officer-in-Charge and Dr Archana Bahuguna, Scientist-C attended a meeting on 21st March, 2013 on Creation of New Biodiversity committee by UBB.
326. Shri P.T. Bhutia, Scientist-F attended a meeting at UCOST, Dehradun for conducting interview for selection of Sr.Scientific Officer, Jr. Scientific Officer, Stenographer, Plant Operator and Demonstrator on 30.10.2012.
327. Shri P.T. Bhutia, Scientist-F attended a meeting at Uttarakhand Science and Technology, Dehradun for conducting interview for selection of Scientific Officer, Assistant Scientific Officer and Jr. Scientific Assistant on 25.8.2012.
328. Shri P.T. Bhutia, Scientist-F attended North Zone PAC meeting on 6th -7th February, 2013 held at High Altitude Regional Centre, Solan and presented progress report of the Centre.
329. Shri P.T. Bhutia, Scientist-F, Dr. A.N.Rizvi, Scientist-C, Dr. Archana Bahuguna, Scientist-C attended 7th Uttarakhand State Science and Technology Congress held at Graphic Era University, Dehradun from 21-23rd November, 2012.
330. Shri P.T. Bhutia, Scientist-F, Dr. P.C. Tak, Scientist-D, Dr. Archana Bahuguna, scientist-C and Dr. Vinita Sharma, Scientist-C Attended Science Day function on 28th Feb. 2013 sponsored By ONGC and UCOST.
331. Shri. A. Rana, Senior Zoological Assistant and Shri. M. Singh, Insect setter attended the Town Official Language Implementation Committee (TOLIC) meeting at Assam Rifles HQ, Laitkor on 27th June, 2012.
332. Shri. S.K. Pati, Zoological Assistant presented a paper on ‘Marine Faunal Resources of Maharashtra: Diversity, Conservation and Management’ in a seminar on “Exploitation of Ocean Resources and Opportunities for Indian





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- Entrepreneurs” at MCCIA, Pune on 18th April, 2012.
333. Smt. Sk. Rahnuma Sulthana, Zool. Asst. participated training programme in Official Language work in Hyderabad during March, 2013.
334. Sri Arunendra Mohapatra, Assistant Zoologist has been honoured with Globally reputed “Bharat Jyoti Award” of India International Friendship Society, New Delhi at a befitting function and seminar-“Economic Growth and National Integration” held at New Delhi on 4th May, 2012.
335. Sri S.S. Mishra, Scientist ‘B’ delivered a lecture on coastal fish Diversity of West Bengal at 2nd Training Programme on ICZM for Community People at MARC, ZSI, Digha on 26th February, 2013.
336. Sri S.S. Mishra, Scientist ‘B’ imparted field training to the trainees at 2nd Training Programme on ICZM for Community People at MARC, ZSI, Digha on 27th and 28th February, 2013.
337. The action taken report to the assurances given during the inspection to the Third Sub Committee on Official Language was supervised by Shri S.P.Choubey, Director/Consultant (OL), MoEF, New Delhi on 5th July, 2012 and submitted to DZSI for onward transmission.
338. The centre organized a training Program for Inspector trainees from Tamil Nadu Fisheries Training Institute, Chennai on taxonomic perceptive of Ichthyology, fisheries conservation and threats.
339. The centre organized a Workshop for School students on the ‘Diversity and Classification of Insects’. This workshop was arranged in association with the Entomology Academy of India. During the workshop Dr. K. Ilango, Scientist-‘D’ had given a lecture on the ‘Classification and Diversity of Insects’.
340. The Centre organized the second Programme Advisory Committee (PAC) meeting (South Zone) of ZSI on 29th January, 2013. The PAC was chaired by Dr. T. C. Narendran, former professor, University of Calicut, Kerala along with Dr. P.T. Cherian, former Additional Director, ZSI. The programme began with a warm *welcome address* by the Director, ZSI followed by the presentations from the various ongoing and new research proposals by various Scientists of SRC, MBRC, WGRC, FWBRC and ANRC. All the Scientists of the Centre participated in the PAC.
341. Two posters namely, ‘Aquatic Mollusca and Insecta – Diversity of River Yamuna’ and ‘The Yamuna Biodiversity Park in New Delhi’ have been prepared during the month for display in the wildlife week 2012.





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Books:

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- Pradhan, M.S. and Talmale, S.S., 2012. *Indian Mammals: Checklist with comments on Type Locality, Distribution, Conservation Status and Taxonomy*: 1-488; 76 colour Plates (Published by Nature Books India, Kolkata).
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Venkataraman, K., Raghunathan, C., and Sivaperuman, C., (Eds.) 2012. *Ecology of Faunal Communities on the Andaman and Nicobar Islands*, Springer-Verlag Berlin Heidelberg, 340p.

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Venkataraman, K., Raghunathan, C., Sreeraj, C. R. and Raghuraman, R. *Guide to the Dangerous and Venomous Marine Animals of India*. Zoological Survey of India publication.

Research papers

Aengals, R. 2012. Studies on the Family Gekkonidae (Reptilia) from Karnataka and Tamil Nadu. *Rec. zool. Surv. India*, **112**(1): 103-112.

Babu, R. 2011. New Distributional record of Coenagrionids (Odonata: Zygoptera: Coenagrionidae) from Himachal Pradesh, India. *Rec. zool. Surv. India*, **111**(4): 73-77 (published during 2012).

Bahuguna, A. (2012) Molecular characterization of some species of freshwater turtles of Geoemydidae from India by using 12S rRNA gene, *Annals of forestry*, **20**(1): 145-152.

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