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ZSI e-NEWS

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The Monthly Electronic Newsletter of Zoological Survey of India

*ZSI in the 100th year of Service to the Nation
(1916 to 2015)*

The decline of wildlife is known to have adverse effects on the ecology and environment in general. Hence to provide protection to the wildlife, The Wildlife (Protection) Act, was passed in 1972. Enforcement of the Act is brought about by agencies such as the Forest Department, the Police, the Wildlife Crime Control Bureau (WCCB), the Customs and the Central Bureau of Investigation (CBI). In order to raise awareness and to cater authentic and scientific information about the various animal groups coming under the different schedules of the Wildlife (Protection) Act, 1972, ZSI in collaboration with National

Biodiversity Authority, Chennai, organized a two-days' training workshop on "Scheduled Animals of India" for enforcement agencies, on 12th and 13th March 2015. Experts were called in to handle sessions on different faunal groups. The department is bringing out various manuals and guides aiding identification of scheduled animals of India.

I appreciate and congratulate all those who contributed towards making the programme a grand success.

Dr. Kailash Chandra
Zoological Survey of India, Kolkata

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HEADQUARTERS, KOLKATA

During the month extensive field surveys were undertaken in the states of Maharashtra (Nanded, Latur, Osmanabad, Beed and Parbhani) and Sundarbans Biosphere Reserve. The scientists of Headquarters identified 12 species of rhizopods belonging to 6 genera (4 families, 2 orders) from the water, soil and moss samples of Assam and Himachal Pradesh, 6 species of Platyhelminthes, 6 species of Collembola from Jharkhand, 5 species of Collembola from Northern West Bengal and Shola grassland of Western Ghats, 20 species of hemipterans from Maharashtra, 14 species from Chhattisgarh and 4 species from West Bengal, 2 species of Hymenoptera, 9 species of Coleoptera, 8 species of Orthoptera, 3 species of Lepidoptera, 28 species of fishes, and 6 species of mammals were identified from Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Manipur, Meghalaya, Odisha, Pondicherry, Nagaland, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. A new species of catfish, *Glyptothorax senapatiensis* was described from the Chindwin drainage of Manipur, India. Four species under 3 genera of 3 families of Collembola were newly recorded from Birsa Mrig Bihar, Khunti, Jharkhand. The species *Cyrtolabulus suavis* (van der Vecht, 1963) (Hymenoptera: Vespidae: Eumeninae) was a new record to Kerala and Uttarakhand. The species *Allorhynchium argentatum* (Fabricius, 1804) (Hymenoptera:

Vespidae: Eumeninae) was a new record to Andaman & Nicobar Islands, Arunachal Pradesh, Chhattisgarh, Himachal Pradesh, Mizoram and Tripura. This species formed a new record to Myanmar also. The species *Allorhynchium metallicum* (de Saussure, 1852) (Hymenoptera: Vespidae: Eumeninae) was a new record to Andhra Pradesh, Chhattisgarh, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Pondicherry, Rajasthan, Uttarakhand, Uttar Pradesh and also to Nepal, the neighbouring country. Six research papers were published, 11 accepted and 14 communicated. Identification and advisory services were rendered on 32 lots of specimens received from different Institutions and Organizations. From Mammal and Osteology section 16 examples of osteological collections (7 examples of *Elephas maximus*, 2 examples each of *Rhinoceros unicornis*, *Bubalus arnee*, *Gazelle benettii*, *Balaenoptera* sp. and 1 example of *Dicerorhinus sumatraensis*) were identified. Identification and advisory services were also rendered to the lots received from Shri Ankush M. Raut, Research Scholar, Deptt. of Agril. Entomology, B.C.K.V. Mohanpur, Nadia, W.B and also Nandini.V. Belamkar, Ph.D student from Department of Zoology, Gulbarga University, Gulbarga, Karnataka. A Training programme was organized on "Identification of Schedule Animals on 12th and 13th March, 2015 at ZSI Headquarters. There were 28 participants from Forest Department, Wildlife Control Bureau and Coast Guard, and they visited

different Sections/ Divisions of ZSI, Headquarters as a part of the said training workshop.

Mr. Pham Huy Phong, Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology, has been working as a Research Fellow with "Research Training Fellowship for Developing Country Scientists (RTF-DCS) 2014-2015" sponsored by Centre for Science & Technology of Non-Aligned and Other Developing Countries (NAM S&T Centre), Department of Science and Technology, Government of India, under the supervision of Dr. Girish Kumar, P. Sr. Zool. Asstt., Hymenoptera Section, ZSI, Kolkata.

Dr. Jasmine P and Dr. Chitra J, participated in training and workshop on scheduled animals held from 12th-13th March 2015 at ZSI, Headquarters Kolkata. Dr. Gaurav Sharma Sci. D and Officer-in-Charge, Mammal and Osteology Section identified the seized wildlife material received from D.F.O Baikunthapur Division, Rabindra Nagar, West Bengal, as bone and skin belonging to *Panthera pardus* (Linnaeus, 1758). He also identified a seized wildlife material as a fake rhinoceros horn which was received from D.F.O., Baikunthapur Division. He also identified another seized wildlife material as canine of *Rhinoceros unicornis* Linnaeus 1758, received from the DFO, Jaldapara Wildlife Division. Another seized wildlife material received from the same DFO, was identified by him, as fake Rhino Horn. Dr. Gaurav Sharma, participated in 'TEEB India Initiatives (TII) meeting' on 11th March, 2015 and 'STAG meeting' on 12th March, 2015

organized by Deutsche Gesellschaft für, Internationale Zusammenarbeit (GIZ) GmbH, Indo-German Biodiversity Programme Office, held at Teesta Conference hall, MoEFCC, New Delhi. He also delivered a lecture on 'Scheduled Mammals of India' to participants of enforcement agencies during the 'Training Workshop on Schedule Animals of India' at ZSI, Kolkata on 13th March, 2015. Dr. K. Venkataraman, Director, ZSI attended a meeting at National Biodiversity Authority, Chennai on 5th and 6th March, 2015. He also attended a meeting at MoEF & CC, New Delhi regarding Eco-sensitive zones on 2nd March, 2015 and also the 10th Annual Convocation of Thiruvalluvau University, Vellore, Tamil Nadu on 16th and 17th March, 2015. He attended a seminar on Taxonomy for the Conservation of Faunal Diversity at Western Regional Centre, ZSI, Pune on 17th and 18th March, 2015 and also an urgent meeting with CPWD on Himalayan repository at Dehradun on 20th and 21st March, 2015. From 21st to 24th March, he attended the Programme Monitoring Committee meeting of North Zone of ZSI at HARC, ZSI, Solan and later on 26th March, a meeting of High Powered Evaluation Committee at Paryavaran Bhawan, New Delhi regarding digitisation project of ZSI. Dr. K. Venkataraman and Dr. Kailash Chandra, Sci. F, attended a meeting regarding the approval of sites for construction plan of modern scientific laboratory and visiting scientists' hostel at Northern Regional Centre, Dehradun on 21st March, 2015.

Publications:

- Mandal, G.P. 2015. First Records of Collembola (Hexapoda) from Birsa Mrig Bihar, Khunti, Jharkhand, India. *Bionotes*, Vol.17 (1): 21-22.
- Premananda, N, Kosygin, L. and Saidullah, B. 2015. *Glyptothorax senapatiensis*, a new species of catfish (Teleostei: Sisoridae) from Manipur, India. *Ichthyological Exploration of Freshwaters*, 25(4): 323-329.
- Jasmine Purushothaman (2015). Diversity of planktonic Ostracods (Crustacea: Ostracoda) in the mixed layer of northeastern Arabian Sea during the summer monsoon. *Journal of Threatened Taxa*. 7(3): 6980–6986.
- P. Jasmine, K.R. Muraleedharan, K.V. Jayalekshmi & S.U. Pannampunnayil (2015). Diel vertical migration of mesozooplankton in the Arabian Sea during summer monsoon. In: *Marine and Coastal Biodiversity*, APH publishers, India, ISBN: 978-93-313-2566-2, pp.423.
- P. Girish Kumar, J. M. Carpenter and P.M. Sureshan. 2015. A taxonomic review of the genus *Cyrtolabulus* van der Vecht, 1969 (Hymenoptera: Vespidae: Eumeninae) from India. In: *Animal Diversity, Natural History and Conservation*. Ed.: V. K. Gupta and Anil K. Verma. Published by Daya Publishing House, New Delhi. 5: 49-55.
- P. Girish Kumar and Gaurav Sharma. 2015. A review of the genus *Allorhynchium* van der Vecht, 1963 (Hymenoptera: Vespidae: Eumeninae) from the Indian subcontinent. *Prommalia*. 3: 20-34.



Training Workshop on Scheduled Animals



Release of the Book 'Scheduled Molluscs of India'



Delegates of the workshop visiting Mollusca Section

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

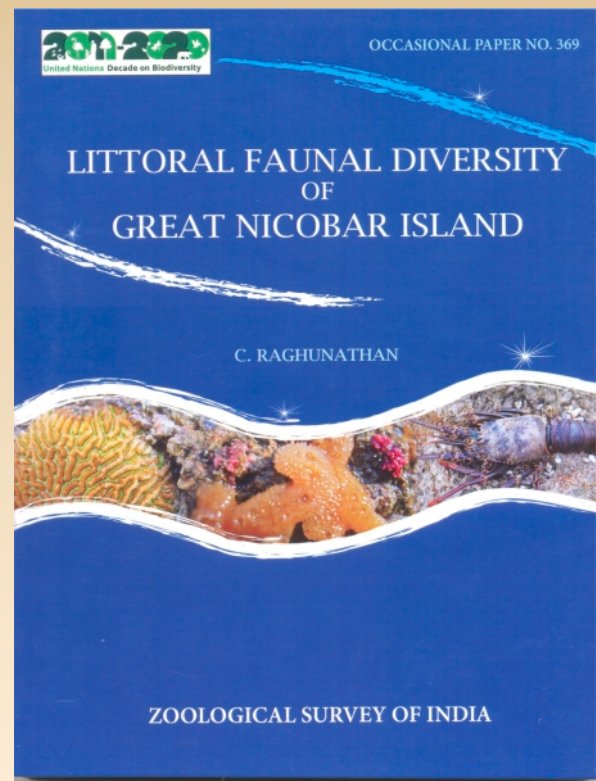
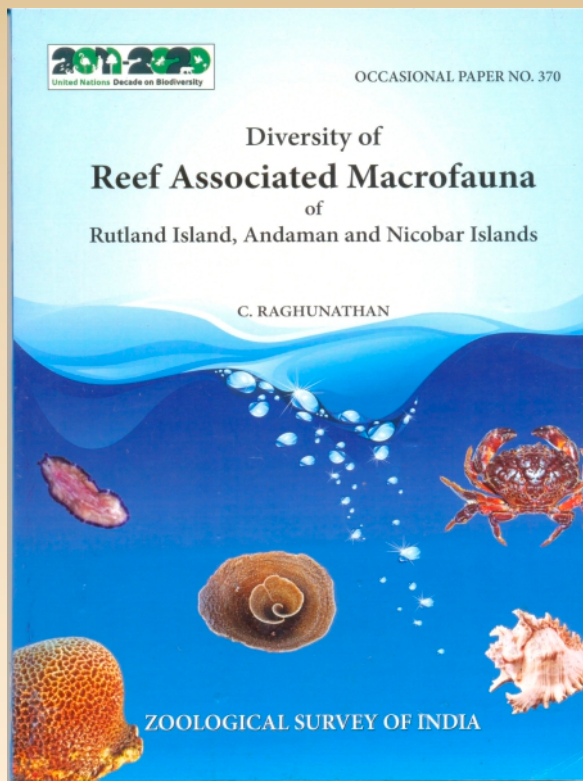
Surveys were conducted at Marine ecosystems of Landfall Island Sanctuary, Trilby Island Sanctuary, Craggy Island, Cape Price and Lamiya Bay of North Andaman from 4th to 10th March 2015, at Mahatma Gandhi Marine National Park on 11th and 12th March 2015; North Bay and Pongibalu of South Andaman on 18th and 19th March 2015; Long Island, North Passage Island, Sound Island, Ray Island and Saddle Peak adjoining areas of North and Middle Andaman on 23rd to 27th March 2015. In addition 17 local surveys were conducted in terrestrial ecosystem of South Andaman at different dates to study the faunal communities. A total of 417 species comprising of 107 species of scleractinian corals, 12 species of gorgonians, 4 species of soft corals, 12 species of sea anemones, 51 species of molluscs, 12 species of opisthobranchs, 3 species of polyclads, 12 species of echinoderms, 9 species of sponges, 10 species of crabs, 7 species of ascidians and 89 species of fishes were identified along with 13 species of butterflies, 1 species of Diptera, 1 species of amphibian, 2 species of reptiles, 71 species of birds and 1 species of mammal. Among them, 2 species of sea anemones *Actinodendron plumosum* Haddon, 1898 and *Edwardsianthus pudicus* (Klunzinger, 1877), 1 species of crab *Petrolistes kranjiensis* Johnson, 1970 and 1 species of Opisthobranch *Glossodoris poliahu* Bertsch & Gosliner, 1989 were new records to Indian waters. The faunal details of Rani Jhansi Marine National Park have been provided to the Range Officer,

Havelock Range, Department of Environment and Forests on request. As requested by National Institute of Ocean Technology, Port Blair, specimens of tunicates, hydroids, sponges and bryozoans were identified and report submitted. Logistic support for SCUBA diving was extended to three scientific staff of National Centre for Sustainable Coastal Management (NCSCM) during their field studies at Mahatma Gandhi Marine National Park as requested. Twelve popular articles have been prepared in different regional languages and submitted to ZSI headquarters for consideration of publication in ZSI's Centenary Celebration Souvenir. Dr. C. Raghunathan, Sci.D & Officer-in-Charge served as a resource person in the Training programme on 'Identification of Scheduled Animals for Enforcement Officers' organized by ZSI headquarters, Kolkata on 12th and 13th March 2015, in which he delivered a lecture on the 'Protected Marine Animals of India'. He also served as a Member in Andaman Aadim Jamjati Vikas Samiti meeting held at Secretariat of A & N Islands chaired by Chief Secretary of A & N Administration on 17th March 2015; served as a Member in the Doctoral Committee meeting for Ph.D. students held at Pondicherry University on 16th and 27th March 2015, served as a Secretary in the meeting of Central Government Employees Welfare Coordination Committee held on 27th March 2015; attended a meeting for the inaugural programme of the Multiparametric Geophysical Observatory

facilities of Indian Institute of Geomagnetism at Shoal Bay, South Andaman on 30th March, in which Hon. Union Minister for Science and Technology and Earth Sciences, Dr. Harsh Vardhan was the chief guest. Dr. C. Sivaperuman, -D, delivered a talk on 'Wildlife Census Techniques' on 10th March 2015, at Forest Training School, Whimberlygunj and attended a meeting at INS-Utkrosh of Indian Navy in connection with the bird hazards studies in the airports in Port Blair and Shibpur on 18th March 2015. Mr. P.T. Rajan, Senior Zoological Assistant, made physical inspection of one dive center and SCUBA diving equipments at Port Blair on 7th March 2015 as per the invitation of Directorate of Tourism, Andaman and Nicobar Administration; he delivered a lecture on 'Faunal diversity of Andaman and Nicobar Islands' and Wildlife wealth of A & N Islands', at Forest Training School, Wimberlygunj on 9th March 2015. Mr. Sudhanshu Dixit, Junior Research Fellow, attended Summer School on 'Recent Advances in Marine Biodiversity Conservation and Management' at CMFRI, Kochi from 15th February to 8th March 2015. Miss Smitanjali Choudhury and Miss Jhimli Mondal, Junior Research Fellows, attended 'Workshop on Bioinformatics tools with reference to targeted gene sequencing and analysis' on 26th and 27th March 2015 at Regional Medical Research Centre, ICMR, Port Blair.

Publications

- Raghunathan, C., 2015. Littoral faunal diversity of Great Nicobar Island, *Rec. zool. Sur. India*, Occasional Paper No.369: 1-172 (Published by the Director, Zoological Survey of India, Kolkata)
- Raghunathan, C., 2015. Diversity of reef associated macrofauna of Rutland Island, Andaman and Nicobar Islands, *Rec. zool. Sur. India*, Occasional Paper No.370: 1-152 (Published by the Director, Zoological Survey of India, Kolkata)
- Tamal Mondal, C. Raghunathan and K. Venkataraman, 2014. Continental Shelf of North, Middle and South Button Island National Parks of Andaman and Nicobar Islands: A Wide Platform for Reef Building Corals in India. *World Journal of Zoology*, 9 (4): 281-290. DOI: 10.5829/idosi.wjz.2014.9.4.86207.
- Rajeshkumar, S. and C. Raghunathan, 2014. Current status of population and demography of Nicobar crab-eating macaque (*Macaca fascicularis umbrosa*) in the Great Nicobar Biosphere Reserve, Andaman and Nicobar Islands, India. *Asian Journal of Conservation Biology*, 3(2): 120-126.
- Sudhanshu Dixit, C. Sivaperuman, and C. Raghunathan, 2015. Three new records of polyclad flatworms from India. *Marine Biodiversity Records, Journal of Marine Biological Association of United Kingdom*, 8: e29; doi:10.1017/S1755267214001043
- Sivaperuman, C. 2015. Odonata of Andaman and Nicobar Islands, India. pp. 153-162. In: *Aquatic Ecosystem: Biodiversity, Ecology & Conservation*. (Eds.) Rawat, M., S. Dookia and C. Sivaperuman. Springer. 280p.



Publications by ZSI

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE (CALICUT)

During the month, 8 species of Pteromalidae, 5 species of Platygastriidae (Hymenoptera), 2 species of scorpions, 13 species of Odonata, 3 species of Isoptera (termites), 4 species of butterflies, (Lepidoptera) and 4 species of Reptilia were identified, registered and added to the National Zoological Collections. In addition to one research paper published, one paper was submitted for publication and three papers were presented in seminars. Seven identification & advisory services were rendered to various students and researchers. As part of official language implementation ZSI, WGRC jointly with the Regional Science

Centre and planetarium, conducted one-day Hindi workshop on "Usage of simple Hindi in office work" on 23rd March 2015, at ZSI auditorium. Dr. Muhamed Jafer Palot, Asstt. Zoologist, served as a resource person for the training workshop on the "Schedule Animals" at, ZSI, Kolkata on 12-13th March 2015, organized jointly by ZSI Kolkata and National Biodiversity Authority, Chennai. He delivered a lecture on 'Scheduled Reptiles of India' at the workshop. He also attended a National Seminar on 'Biodiversity: Conservation and Management with special reference to Western Ghats' organized by the

Department of Zoology, Kannur University, Mananthavady Campus, Wayanad on 23-24th March 2015 and delivered an invited talk on "Herpetofaunal diversity of Western Ghats". Dr. K. Rajmohana, D, attended TOLIC subcommittee meeting (HINDI implementation), Calicut, on 30th March 2015. Under the AICOPTAX Project on Pteromalidae (Hymenoptera) assigned to Dr. P.M. Sureshan, Sci. D, one extensive and 5 local surveys to Trichur and Calicut districts, Kerala, were undertaken and 40 exs. of specimens collected. 03 species were identified from the collections received from



Ahaetulla dispar Gunther



Leptomantella parva Werner

Dr. Girish Kumar, ZSI, Kolkata. Dr. P. M. Sureshan, D, supervised the research project of five research scholars and Dr. K. Rajmohana, D, also supervised the research projects of five research scholars of the Centre for their doctoral degrees. During the month, 1062 visitors from different age groups visited the museum.

Publications

- Muhamed Jafer Palot. 2015. *Uragangal: Chooral aamakal* (Reptiles: Cochin forest Cane Turtle) *Koodu- An environmental Magazine in Malayalam*. Vol.2 (11): 40-41.



Humbertiella similis Giglio-Tos



Macrotelia crawfordi Kieffer

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA

During the month 16 examples of molluscs (Bivalves) belonging to 05 species under 02 genera and 02 families have been identified from the collections of Brahmani and Baitarani estuarine Survey. About 20 visitors including post graduate students, visited the National Zoological Collections at the Centre. Identification and advisory services were provided to one research scholar from Department of Zoology, Sri Krishnadevaraya University, Andhra Pradesh by Dr Swetapadma Dash, Sci. D. One paper was

published and another communicated.

Publications

- Dash, S. 2015. Aquatic Insect Diversity of Baitarani Estuary of Odisha, *Aquatic Ecosystem: Biodiversity, Ecology and Conservation*, Springer (India) Pvt. Ltd Pp 93-102.



Sterndrochusolohus rupipes (Farbricius), 1792



Eretes sticticus (Linnaeus), 1767

SUNDERBANS REGIONAL CENTRE, CANNING

During the month Mrs. Supriya Nandy, Sci. B and her team conducted a local tour in different fish landing centres of Raidighi, Sunderbans and collected 52 faunal specimens, which included 43 examples of fishes (including 1 Ray fish), 06 prawns, and 03 crabs. Scientists of this Centre identified &

registered, twelve specimens of different faunal groups. Officials from the Block Development Office of Canning, and Engineers of Soil Conservation Department of Canning visited the Centre during this month. Apart from this, twenty students from nearby schools visited the Centre's Museum.



Visitors from Block Development Office and Soil Conservation Department

NORTHERN REGIONAL CENTRE, DEHRADUN

During the month one local survey was undertaken in and around Dehradun for collection of butterflies for molecular studies. 2 species of Encyrtidae, 2 species of Acridoidea and 7 species of Pisces from Punjab; 5 species of Acridoidea, 13 species of Lepidoptera, 4 species of Pisces and 1 species of Amphibia from Sonanadi WLS, (Uttarakhand); 5 species of helminths and 4 species of Lepidoptera from Dehradun district and 4 species of Acridoidea from Rajaji National Park (Uttarakhand) were identified by the scientists of the Centre, during the month. DNA was extracted from 10 samples belonging to 5 species of butterflies and from 8 samples of *Felis silvestris*. Amplicons of CIO genes obtained from 4 samples of 4 species of butterflies, while NADH5, Cytb and 12SrRNA genes were amplified from Lesser

Cats. Accession numbers were received from NCBI for 7 COI genes of Lepidoptera and three 12sRNA genes from Lesser Cats. Sixty permanent slides of nematodes for morphological studies were prepared from soil collected from Sonanadi WLS and Dehradun surveys. Advisory services were provided by Dr A. Bahuguna, Sci. D to Research Scholar Mr. Randheer Singh from Birbal Sahni Institute of Palaeobotany, Lucknow, regarding the taxonomy, morphological study of the Mammalian remains. World Forest Day was celebrated at the Centre on 21st March'15 by releasing Centenary Celebration Poster and tree planting, by Dr. K. Venkataraman, Hon'ble Director, ZSI and Dr Kailash Chandra, Sci. F, ZSI-Kolkata. They also attended the meeting regarding the approval of sites for

construction plan of modern scientific laboratory and visiting scientists' hostel at Northern Regional Centre, Dehradun on 21st March. Dr. Archana Bahuguna, Sci. D, participated as External Subject Expert to select four Senior Project Fellows for the project titled Management Planning of Kushseshwarasthan and Baraila Sanctuaries in Bihar on 20th March 2015 organized at Wildlife Institute of India, Dehradun.

Dr. A.N. Rizvi, Sci.-D, was deputed by the Director, ZSI, to attend the National Biodiversity Authority- Ninth Meeting of the (Third of the Reconstituted) Expert Committee on Normally Traded Commodities, held on 16th March, 2015 at New Delhi. She also attended the PAC North zone meeting at HARC, ZSI-Solan on 23rd March and was deputed to attend the 33rd Meeting of the Training, Research & Academic Council (TRAC) held on 30th March 2015, at WII, Dehradun. She delivered a lecture on the mandates of ZSI and Sh. Parmod Kumar, Asstt. Zoologist, delivered a lecture on collection, preservation and identification of Lepidoptera to the M. Sc. Students from College of Horticulture, University of Kerala, on 23rd March. All

scientists of the Centre attended the lecture on "Diversity of Insects" by Dr. Kailash Chandra, Sci. F, ZSI, Kolkata at Dolphin Institute of Bio-Medical & Natural Sciences, Dehradun on 21st March. 62 students from College of Horticulture, University of Kerala, two students from Mumbai and 8 students from a college of Dehradun visited the Museum and Library of NRC.

Publications

- Bahuguna, A. 2015. Trichotaxonomy of species of Lagomorpha. *Rec. zool. Surv. India, Occ. Paper No.*, 371: 1-72 including 32 Plates. (Published by the Director, *Zool. Surv. India*, Kolkata).



Dr. K. Venkataraman, Director, ZSI and Dr. Kailash Chandra, Scientist-F attended the Meeting with CCU



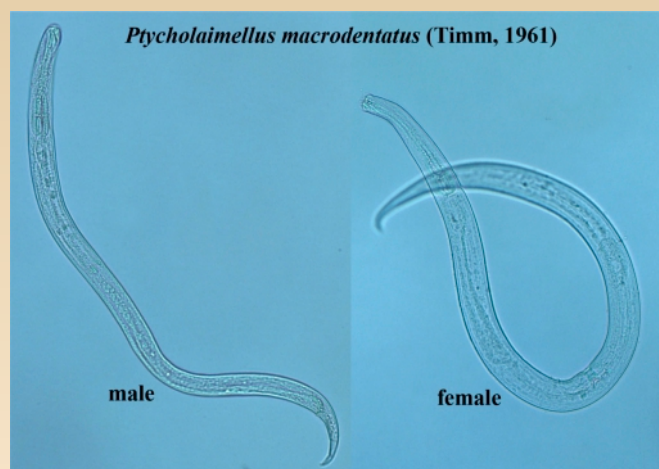
Celebrations of World Forest Day



World Forest Day - tree plantation

MARINE AQUARIUM & REGIONAL CENTRE, DIGHA

During the month 100 specimens were identified which included 8 species of nematodes (8 specimens) and 18 species molluscs (92 specimens). A nematode species identified as *Ptycholaimellus macrodentatus* (Timm, 1961) was a new record from Indian coast. A group of students from Berhampore Girls college' visited the centre on 20th March. A group of graduation students from Bajali College, Pathsala, Assam visited the centre as a part of their study tour on 30th of this month.



Ptycholaimellus macrodentatus

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

The scientists of the Centre examined 34 specimens of freshwater benthic and zooplankton samples collected from different wetland bodies of Andhra Pradesh and identified 5 species of molluscs viz. *Bellamya dissimilis*, *Angulyagra microchaetophora*, *Pila virens*, *Perreysia caerulea*, *Perreysia corrugata* and 2 species of Aquatic insects. One local survey was conducted on 10th March covering Umda Sagar & Talpalli. 65 ex. of insects collected. As part of the digitisation of the National Zoological Collections of the Centre 5 species of molluscs were digitized.

Publications

- Karuthapandi, M., Rao, D.V. and Xavier Innocent, B. Zooplankton composition,

diversity and physic-chemical features of Bandam Kommu pond, Medak District, Telangana, India. *Proc. Zool. Soc.* (DOI 10.1007/312595-015-0142-y)



Perreysia caerulea

*Angulyagra microchaetophora**Bellamya dissimilis**Pila virens*

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

During the month 104 examples of recently collected fishes have been studied and identified as belonging to 2 orders, 3 families, 7 genera and 9 species. The identified specimens have been registered and the data have been computerized and digitized. From earlier collections, 6 reptilian specimens belonging to 1 order, 3 families and 5 species have been studied and identified. The identified reptiles have been registered under 6 registration numbers and the data have been computerized and digitized. 12 nos. of reptile specimens have been photographed and

digitized as part of RFD. Dr. Bikramjit Sinha, Sci. C & Officer-in Charge of the Centre, attended as a member, in the 9th State Level Steering Committee Management Council meeting of Dihang-Dibang Biosphere Reserve on 4th March 2015. He also reviewed a manuscript for *Sky Journal of Agricultural Research*. Dr. S. D. Gurumayum, Sci. C of the Centre, undertook a local survey to Dikrong river on 24th March and collected 24 fish examples. She also attended the Chintan Shivir organized by MoEFCC at NEDFi, Guwahati on 20th to 21st March.

*Aborichthys cataracta*

DESERT REGIONAL CENTRE, JODHPUR

During the month, identified and registered 3 species of ants and 19 species of fishes from the jurisdiction area. Digitized 56 specimens from NZC for RFD. Under the research programme Status Survey of *Ardeotis nigriceps* (Vigors, 1831) (Great Indian Bustard) in Grasslands of Rajasthan, Dr. Sanjeev Kumar, Sci. D undertook a status survey of Great Indian Bustard in the grasslands of Pali, Jalore, Barmer and Bikaner districts from 18th February to 1st March. 11 major localities were surveyed, in aforesaid districts for the present evaluation of the species status. Apart from the status survey of GIB in the Pali, Jalore, Barmer and Bikaner districts of Rajasthan, 7 species of reptiles, 126 species of birds and 9 species of mammals were also recorded and identified in the field from different districts. Dr. Sanjeev Kumar, Sci.D & Officer-in-charge participated in the two day National Seminar on Technical Terminology & Science Teaching organized by Commission for Scientific and Technical Terminology (CSTT) under the Ministry of Human Resources Development (MHRD), New Delhi held at Dept. of Chemistry, Mahila P.G. College, Jodhpur from 2nd - 3rd March & also presided over the closing ceremony of the National Seminar. He organized a quarterly workshop on Official Language Hindi on 17th March, 2015 at the Center, in which all the officers and staff members participated. He attended the 4th Consultative Workshop on Alignment of National Action Programme on Combating Desertification to 10 years strategy of UNCCD organised by ICFRE, Dehradun

held at AFRI, Jodhpur on 18th March, 2015 and delivered a lecture on the 'Role of animal species in the desert and impact of desertification'. He also attended Programme Advisory Committee (North Zone) for Annual Programme of Research 2015-16 meeting as member PAC (North Zone), organized by ZSI, HARC, Solan on 23rd March.

Publications

- Bohra, P., Kumar, Sanjeev and Sharma, G. 2014. Faunal Exploration of Sitamata Wildlife Sanctuary, Rajasthan. *Conservation Area Series* 54: 1-158, Plate I-XVI. (Published: Director, ZSI, Kolkata).
- Banyal, H. S. and Kumar, Sanjeev, 2015. Exploration of fish diversity in the Mahi River at Semliya village near to Banswara city of Rajasthan State. *J. Env. Bio-*, 28(2): 323-324.
- Banyal, H. S. and Kumar, Sanjeev 2015. First record of Ichthyofaunal diversity from Barabarda stream near Pratapgarh city, Rajasthan. *Bionotes* 17 (1): 19-20.
- Kumar, Sanjeev, 2014. Herpetofauna: Faunal Exploration of Sitamata Wildlife Sanctuary, Rajasthan. *Conservation Area Series* 54: 87-105.
- Kumar, Sanjeev, 2014. Aves: Faunal Exploration of Sitamata Wildlife Sanctuary, Rajasthan. *Conservation Area Series* 54: 107-126.
- Kumar, Sanjeev, 2014. Mammals: Faunal Exploration of Sitamata Wildlife Sanctuary, Rajasthan. *Conservation Area Series* 54: 127-158.

- Banyal, H. S., 2014. Pisces: Faunal Exploration of Sitamata Wildlife Sanctuary, Rajasthan. *Conservation Area Series*, 54: 83-86.
- Banyal, H. S. and Kumar, Sanjeev 2015. Fish diversity of Chambal River, Rajasthan State. In: *Aquatic Ecosystem, Ecology &*

Conservation. Eds. M. Rawat *et al.* Springer Publishers, India. 15: 271-281.



Quarterly workshop on Official Language Hindi



The Fourth Consultative Workshop on Alignment of National Action Programme on Combating Desertification

CENTRAL ZONE REGIONAL CENTRE, JABALPUR

During the month, the scientists of the Centre identified and registered 15 species of Odonata, from Raisen, Damoh, Gwalior, Jabalpur, Chhindwara and Khandwa districts of Madhya Pradesh. Dr. S. Sambath, Sci. D and Officer-in-Charge attended PAC (North Zone) meeting held at HARC, ZSI, Solan on 23rd March. Shri Sandeep Kushwaha, Sr. Zoological Assistant attended a workshop on "Biodiversity Act: 2002 India, Constraints and opportunity for scientific community" on 19-

20 March 2015, organized by National Biodiversity Authority of India at Tropical Forest Research Institute, Jabalpur Madhya Pradesh. He also attended National Conference on "Environmental conservation: Challenges and Remedies" on 21st -22nd March 2015, organized by Department of Botany, Government Model Science College, Jabalpur Madhya Pradesh. Three species of Amphibia (frogs) were received on donation from Dr. Sanjay Paunikar, Research Officer (I), Tropical

Forest Research Institute, Jabalpur, Madhya Pradesh. Dr. S. S. Talmale, Asstt. Zoologist reviewed one research paper received from Editor, Ela journal, Pune, Maharashtra. The scientists of the Centre published 3 research papers during the period under report. 129 people visited the museum.

Publications

- Kailash Chandra and Sandeep Kushwaha. 2015. New Records of Hemiptera from Ghatigaon Wildlife Sanctuary, District Gwalior, Madhya Pradesh, India". *Bionotes*.17 (1):23-24.
- Kailash Chandra and Sandeep Kushwaha. 2015. New Record of *Bredenbachiuspictus* Distant, 1902(Hemiptera: Tingidae) from

India. Madhya Pradesh, India (Abstract) National Seminar On "Recent Advances and Challenges in Biological Sciences" (RACBS – 2015)". 17 March 2015, organized by Neuroscience and Endocrine Research Lab. Department of Zoology Dr. H. S. Gour Central University, Sagar. Pp 56.

- Sandeep Kushwaha and Shally Khurana. 2015. Assessing the knowledge, "Attitudes and practices of type 2 diabetic patients of J.P.N. Apex trauma center AIIMS, New Delhi, India. (Abstract) National Conference On Nutrition and Health 27-28th March- 2015: Issues and Challenges in the Global Perspective. Organized by Department of Nutrition/Home Science, Isabella Thoburn College Lucknow. Pp 42.



Agriocnemis pygmaea (Rambur)



Ceriagrion coromandelianum (Fabr.)



Disparoneura quadrimaculata (Rambur)



Libellago lineata lineata (Burmester)

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

A team under the leadership of Dr C. Venkatraman, Sci-D, of the Center proceeded for a survey tour to Gulf of Mannar in the project "Reef associated Bryozoan fauna in Gulf of Mannar" from 29th March. As an initiative to identifying the unnamed collection holdings of this centre, 684 examples have been identified this month. The total number of species identified being 134, which included 2 species of Foraminifera, 6 Ciliophora, 7 Nematoda, 19 Arthropoda,

1 Echinodermata, 37 Chordata, and 64 Mollusca.

Publications

- Bindu. L and Ruby Ghosh. 2014. Free-living Protozoa. *Zool. Surv. India, State Fauna Series, Faunal Inventory of Uttar Pradesh*, 15-22.
- Jasmine Purushothaman and Bindu. L. 2015. First record of *Centropyxis delicatula* Penard, 1902 (Arcellinida : Rhizopoda) from India. *Journal on new Biological Reports*, 4 (1): 41-45.



Elysia expansa (O' Domoghus, 1924)



Elysia ornate (Swainson, 1840)



Thallamoporella sp. – a live bryozoan associated with a coral



Tour party sorting bryozoan specimens

GANGETIC PLAINS REGIONAL CENTRE, PATNA

During the month 11 species of Lepidoptera were identified. Dr Gopal Sharma, Sci.D & Officer in Charge and Dr. Navneet Singh, Sci.D presented papers in a National Seminar on 'Bioscience for the Welfare of Mankind', held at Patna University, Patna, from 14th -15th March. They participated in Bihar Diwas celebrations by exhibiting the importance of National Zoological Collections. The event was organized by the Bihar State Govt. from 22nd to 24th March, at Gandhi Maidan, Patna. Dr. Gopal Sharma Sci. D, guided two M.Sc. students of Zoology Department, Patna University for identification of benthic macro-invertebrates of river Ganga as part of their M.Sc. dissertation.

Publications

- Gopal Sharma and Naveen Kumar. (2015).

Discovery of a new nesting and breeding colony of the Asian Open bill Stork (*Anastomus oscitans*) at Jehanabad, Bihar, *Bio-notes* Vol. 17 (1): 15-18

- Gopal Sharma and R. K. Sinha, (2015). Freshwater benthic macro-invertebrates diversity of Gangetic plains including Hooghly in India. Published in abstract book of National Seminar on Bioscience for the Welfare of Mankind held at Patna University, Patna from March 14-15, 2015. Pp.36-37.
- Navneet Singh. (2015). Entomology-A Service to mankind. Published in abstract book of National Seminar on Bioscience for the Welfare of Mankind held at Patna University, Patna from March 14-15, 2015. Pp.54.



Sri Vivek Singh IAS Secretary Dept of Env & Forest Govt of Bihar visiting the exhibits of ZSI, during the Bihar Diwas celebration



Students from different schools of Bihar in front of ZSI exhibits

WESTERN REGIONAL CENTRE, PUNE

During the month 06 species of Coccinellidae, 14 species of Odonata and 05 species of Collembola were identified. Identification and Advisory services were rendered for identification of specimens belonging to Araneae, fresh water Mollusca, Aquatic Coleoptera, Aquatic Hemiptera, Collembola, and Fake tiger skin to different organizations. A two day seminar was organized on "प्राणी विविधतेच्या संवर्धनात वर्गीकरण विज्ञानाचे महत्त्व" (Role of Taxonomy in Conservation of Faunal Diversity) in Marathi on 18th and 19th March, 2015 at WRC, Pune. It was jointly organized by Western Regional Centre, ZSI, Pune and ENVIS Centre on Faunal Diversity, Zoological Survey of India, Kolkata. The inaugural session was attended by Dr. K. Venkatraman, Director, ZSI, Kolkata, Dr. Madhav Gadgil, Retd. Eminent Scientist and Dr. Erach Bharucha, ex-Chairman, Maharashtra State Biodiversity Board. The chief guest of the valedictory function was Shri. Sunil Limaye, IFS, Chief Conservator of Forests (Wildlife), Pune. Dr. P. S. Bhatnagar, Sci. D & Officer-in-Charge delivered a lecture on "Primates: Taxonomy and Conservation"

at Department of Zoology, Savitribai Phule University, Pune in a National Seminar on 'Recent trends in Biology' on 23rd March, 2015.

Publications

- Jadhav, S. S. and Bhatnagar P.S. 2015. महाराष्ट्रातील कमी माहिती असणारे प्राणी In : Venkatraman, *et al.*, 2014 Proceedings of the Seminar on 'Importance of Taxonomy in Conservation of Faunal Diversity' in Marathi, 1-86 . (Published – ENVIS Centre, Zoological Survey of India, Kolkata). Pp 21-30.
- Aparna Kalawate and Kiran M.C. 2015. Effect of CSI preservative on the mechanical properties of rubber wood plywood. International Journal of fundamental and applied science. 4 (1): 19-22.
- Patil, Sachin R. 2015. 'Spider Taxonomy in relation to their Conservation' in Proceedings of the Seminar on 'Importance of Taxonomy in Conservation of Faunal Diversity' in Marathi, ENVIS Centre, Zoological Survey of India, Kolkata: 31-34.



Felicitatation of Shri. Sunil Limaye, IFS



Lighting of the lamp



Releasing of the Proceedings



Valedictory session

NORTH EASTERN REGIONAL CENTRE, SHILLONG

During the month 33 specimens of fishes were identified into 6 species, 99 specimens of amphibians into 3 species, 3 specimens of bats were identified into 2 species and 10 specimens of aquatic hemiptera were identified into 4 species. Thirty three specimens of fishes and 3 specimens of bats have been digitized and databased. Identification service was rendered to the Conservator of Forests, Govt. of Uttarakhand, India on the identity of a species of bat *Hipposideros armigen*. Students of S.S. College, Hailakandi, Assam and St. Edmund's College, Shillong visited the Centre. Mrs. J. Lyngdoh, Sci. D & Officer-in-charge and Mrs. I.J. Kharkongor, Sci. D of the Centre attended the Chintan Shivir for East and North East Zone at Guwahati, Assam, organized by the Ministry of Environment, Forests and Climate Change from 20th – 21st March, 2015. One manuscript on the Ichthyofauna of

Nongkhylllem wildlife sanctuary and its adjacent areas, Ri-Bhoi district, Meghalaya was submitted to Publication division, ZSI Headquarter Kolkata.

Publications

- Anil Kumar, R. Paliwal and Uttam Saikia. 2014. Avifauna of Kalatop-Khajjian Wildlife sanctuary and adjacent areas, Himachal Pradesh, *India Birds populations* 13: 36-48.



Students of S.S. College, Hailakandi, Assam

HIGH ALTITUDE REGIONAL CENTRE, SOLAN

Faunistic identification from the Centre for the month includes 05 species of butterflies (out of 31 examples), 02 species of earthworm (out of 20 examples) from Cold desert of Spiti Valley, district Lahaul and Spiti, (HP); 04 species of Orthoptera (out of 07 examples), 03 species of Pisces (out of 08 examples) and 01 species of Amphibia (out of 02 examples) from Chail Wildlife Sanctuary, district Solan. The document on fauna of "Faunal diversity of Chail Wildlife Sanctuary, district Solan (HP)" containing 296 species referable to 244 genera have been submitted to Headquarters. The Centre hosted the Programme Advisory Committee Meeting (North Zone) held on 23rd March, 2015. A meeting in connection with the Himalayan Repository has been held on 24th March, 2015 in presence of the Director, Zoological Survey of India and was also attended by Dr. Kailash Chandra, Sci. F, ZSI, Kolkata, Dr. J. M Julka, Retd. Sci., ZSI, Officer-in-Charge and Scientists of High Altitude Regional Centre, and by Suptd. Engineer and Executive Engineer from CPWD side. A scientist of the Centre

attended and acted as resource person in Workshop on "Insect Taxonomy" held at Department of Zoology and Environmental Science, Punjabi University, Patiala and delivered two lectures one on "Taxonomy and role of Zoological Survey of India" and other on "Collection, preservation and identification of Lepidoptera" on 9th March. The Officer-in-Charge attended Wildlife Board (Himachal Pradesh) subcommittee meeting held at Shimla on 13th March. An Assistant Zoologist delivered an invited talk at Department of Zoology, Punjab Agriculture University, Ludhiana on "Biodiversity & Mankind" on 26th March, 2015. Hindi committee meeting was held on 27th March 2015 at the Centre and it was suggested to incorporate Hindi programmes (pamphlet / poster of Himalaya) for the centenary year. Two articles for publication in souvenir for centenary celebrations have been submitted in the Headquarters. A Checklist of family Lecithoceridae (Microlepidoptera: Gelechioidea) from India (Part-III) has been submitted to Headquarters.



Group at the PAC meeting



PAC meeting at Solan

SOUTHERN REGIONAL CENTRE, CHENNAI

During the month, Dr. R. Venkatesan, Sci. D identified 20 species under 12 genera of 9 families from 218 specimens of land & fresh water mollusca deposited in the National Zoological Collections of SRC, ZSI, Chennai and also rendered identification services on Land mollusca to Mr. Prabakaran, research scholar, UPASI TRF TRI- Valparai. Dr. Jayasree Thilak, Sci. D identified 71 specimens of Pisces belonging to 9 species, 9 genera, 1 order under 3 families from the collections of State Fauna of Andhra Pradesh survey. Dr. R. Babu, Sci. D identified 30 specimens of Odonates belonging to 15 species, 13 genera, under 4 families from the survey materials collected from the Western Ghats of Tamil Nadu. Dr. R. Aengals, Sci. D identified 7 reptile specimens into 3 species under 3 genera, belonging to 3 families collected from Andhra Pradesh State. Dr. S. Prabakaran, Sci. D identified 10 specimens of Lepidoptera belonging to 10 species, 9 genera; 10 specimens of Blattids belonging to 10 species, 8 genera from the collections of Middle Eastern Ghats of Andhra Pradesh and also identified 10 examples of Trichoptera belonging to two genera. Shri. D. Prabakar, Sci. B identified 19 specimens of Acridoidea and Grylloidea (Grasshoppers and Crickets) as 7 species under 6 genera, 4 subfamilies and 2 families collected from the Western Ghats of Tamil Nadu. Dr. V. M. Sathish Kumar, Assistant Zoologist isolated DNA and PCR was done for the following species : 1. *Hydrophis cyanocinctus* Daudin, 1803 2. *Enhydrina schistose* (Daudin, 1803) and also for

a few species belonging to order Ephemeroptera. All scientists of the Centre delivered lectures on different taxonomic groups to post graduate students of Pachayappas College, Kanchipuram, University of Madras, Chennai on 17th March, during their visit to ZSI, SRC.

Publications

- Babu, R. 2014. Odonata. In: *Faunal Diversity of Churdhar Wildlife Sanctuary, Himachal Pradesh. Conservation Area Series No. 53*: 7-21. Zoological Survey of India, Kolkata.
- Thilak, J. 2014. Diversity of Pisces recorded from Middle Eastern Ghats of Andhra Pradesh. *National Journal of Life Sciences*, Vol. 11(1): 41-44.
- Venkatesan, R and Mahapatra, A. 2014. Land and freshwater Molluscs. In. *Faunal inventory of Uttar Pradesh.*, P. 343-362. Ed. Hegde, V. D and Venkataraman, K. Published by Zool. Surv. India. Kolkata.
- Prabakar, D. 2015. The biogeographical distribution of species of the superfamily Coreoidea: Hemiptera in India. *Biolife* 3(1): 291-316.
- Prabakar, D., Prabakaran, S. and Chezhian, Y. 2015. Diversity of Insecta: Orthoptera of Kanchipuram district in Tamil Nadu. *Biolife* 3(1): 342-352.
- Prabakar, D. 2015. An updated checklist of Insecta: Orthoptera of Tamil Nadu with new distributional records. *Biolife* 3(1): 263-290.



Orthetrum chrysis (Selys)



Post graduate students from Pachayappas College,
Kanchipuram