



ZSI e-NEWS

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ZSI in the 98th years of Service to the Nation (1916 to 2013)

From the Director's desk

Over the years, the Zoological Survey of India has conducted many Environmental Impact Assessment (EIA) studies especially in Arunachal Pradesh, Rajasthan and Kerala to assess the impact of constructing hydroelectric power plants, setting up of iron ore mines and related mega industries on associated fauna found near some of the protected areas. In December 2012, our scientists have documented various faunal groups available in and around iron ore mines owned by the National Mineral Development Corporation (NMDC) in Danthewada district of Chhattisgarh. Similarly, on the direction of West Bengal government, in February 2013, we have taken up a study to document the impact of high-rise building on the movements of migratory birds in Kolkata especially to waterbirds that visit East Kolkata wetlands. Furthermore, many agencies have approached us to take up studies in West Bengal on bird-aircraft collisions both in and around civil aerodromes and air force stations. As a part of the on-going World Bank assisted Integrated Coastal Zone Management programme, this month, again we have conducted a week-long programmes at our Digha office targeting coastal communities living near the Digha coast of West Bengal wherein participants were appraised of the importance of coastal conservation.

Dr. K. Venkataraman
Director
Zoological Survey of India
Kolkata

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Headquarters, Kolkata

During the month, extensive field surveys have been undertaken in the States of Himachal Pradesh, Maharashtra, Assam and West Bengal. In addition, two more local surveys have been undertaken to assess the possible impact of high-rise buildings on the migratory birds that visit East Kolkata wetlands. One survey was conducted on 16 February 2013 in and around Nalban area of East Kolkata wetlands and another survey was conducted in Bakreshwar dam and the surrounding areas. Similarly surveys had been conducted in the desert ecosystem of Rajasthan especially in Tal Chhappar Wildlife Sanctuary and Churu area.

During the month, Scientists of Headquarters have identified, 1 species of Protozoa, 3 species of Collembola, 22 species of Hemiptera, 4 species of Hymenoptera, 19 species of Crustacea, 24 species of Fishes and 1 species of mammal from the States of Andhra Pradesh, Assam, Arunachal Pradesh, Chhattisgarh, Kerala, Tripura, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Manipur, Meghalaya, Odisha, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal.

Scientist of the HQ also described *Aborichthys waikhomi* - a new species of fish (Teleostei: Nemacheilidae) from Arunachal Pradesh, India. Similarly, *Paraxonchium maximus* sp. n. (Dorylaimida, Aporcelaimidae) and *Dorylaimoides (Dorylaimoides) geraldii* sp. n. (Dorylaimida, Mydonomidae) have been described by the scientists of ZSI during the month.

Eighteen species of collembola under 11 genera belonging to 3 families were recorded for the first time from Andaman & Nicobar Islands. One species of Archeognatha and 1 species of Zygentoma have been recorded for the first time from Andaman & Nicobar Islands. Similarly, *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.

Prof. Y. Ranga Reddy, of Dept of Zoology, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur, Andhra Pradesh has deposited one Holotype and Paratype of *Bogidiella totakura* sp. nov. (Crustacea: Amphipoda: Bogidiellidae) in the repository of National Zoological Collections and got registration numbers issued against those types.

During the month, 17 research papers have been published and nine have been accepted besides fifteen such papers communicated to various Journals. Identification and advisory services were rendered on seventeen lots of specimens, received from different institutions and organizations. In addition to that identification and advisory services were also rendered for the lot received from the Divisional Forest Officer, Jalpaiguri Division, Jalpaiguri on bringing a large piece of Elephant tusk for the purpose of scientific examination. During the month, our HQ office has received a part of animal remnant from the Divisional Forest Officer, Wildlife III Cooch Behar for identification. After examination the sample has been identified as hoof of Indian Bison *Bos frontalis* Lambert and accordingly a report has been report submitted.

JIYA Infotech, Kolkata has given a demonstration of GIS software on 28th February, 2013 and a group of Scientists and Scientific Staffs were attended demonstration of GIS software for its comprehension and better utilization at ZSI, Headquarters.

Programme Advisory Committee (PAC) meeting of East Zone was held on 14 & 15th February, 2013 under the Chairmanship of Prof. D. N. Raychaudhuri. Dr. K. Venkataraman, Director, ZSI welcomed the Chairman and Members of PAC and thanked them for their continued support for the activities of ZSI. Director, ZSI provided an over view of activities and achievements of ZSI from April 2012 to December 2012 and details of survey and amount of money spent on the surveys were upraised to PAC. Dr.J.R.B.Alfred

in his introductory remarks fully supported the views of the Chairman and also emphasized the importance of international peer reviewed publications. Scientists of ZSI, Headquarters and Regional Centers (East Zone) were presented progress of completed/ongoing Programmes and new Programmes.

Dr. Andrey A. Lissovsky, Curator of Lagomorph & Osteological collection, Zoological Museum of Moscow State University, Russia visited Mammal and Osteology section on 5 February, 2013 to study the specimens of Pikas and Hispid hare. Ms. Nishima Dahal, a Junior Research Fellow of National Centre for Biological Sciences (NCBS), TIFR, Bangalore visited ZSI HQs office on 4 February, 2013 to study the mammalian fauna present in National Zoological Collection.

Fifty-two graduate students of Forestry from Kerala Agricultural University, Trissur along with three faculty members visited different Divisions/Sections of the ZSI HQs office on 13 February, 2013 and familiarized themselves with various groups of animals by seeing different specimens.

Mrs. Madhumita Biswas, Director (RE) and Shri A.C. Ojha, Under Secretary, MoEF visited the Bird Section on 27 February 2013 in connection with the OM Inspections.

Mrs. J. Chitra, Assistant Zoologist has participated in the 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" and also attended a training workshop for young scientists.

Shri S.S. Mishra, Scientist-B has 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. He also imparted field training to the trainees those who have participated at MARC, ZSI, Digha on 27 & 28 February, 2013. Dr. M. K. Dev Roy, Scientist B

has attended an in-house seminar on 'Life and Livelihood of the inhabitants of Sundarbans' being organized by SEBA and Lokmata Rani Rasmoni Mission (LRRM) at Joynagar on 24 February 2013.

Dr. Gaurav Sharma, Scientist-C has delivered a lecture on the "Faunal diversity and conservation of habitats in India" to the M.Sc. Zoology students of Lachoo Memorial College of Science and Technology, Jodhpur on 19 February, 2013.

Dr. Gopinathan Maheswaran, Scientist-C of HQ has attended two meetings in the Ministry of Environment & Forests, New Delhi. First meeting on 4-5 February, 2013 on 23rd meeting of the Advisory Committee for Ecosystems Research Programme and another meeting on Consultative Committee on Wildlife Matters for International Negotiations held on 25 February 2013, wherein, the agenda items of the 16th Meeting of Conference of Parties of CITES.

Dr. K. Venkataraman, Director has attended a meeting regarding brainstorming issues related to National Taxonomic Congress held on 4 February, 2013 at Ministry of Environment and Forests (MoEF), New Delhi. He also attended a Programme Advisory Committee (PAC) meeting held HARC, ZSI, Solan; he also acted as one of the panel members at the National Centre for Sustainable Coastal Management (NCSCM) to select scientific staff during interviews held at Anna University Campus, Chennai from 6-13 February, 2013.

Dr. Venkataraman, also attended a meeting at National Biodiversity authority (NBA), Chennai on 26 February, 2013. He also also has attended a Phase II interview and selection of scientific staff (for Scientist-C & D) of NCSCM on 28 February 2013 and 1 March, 2013 at Ministry of Environment and Forests (MoEF), New Delhi.

Publications

1. Mandal, G. P. and Hazra, A. K. (2012). Insecta: Collembola (Apterygota). Fauna of Andaman & Nicobar Islands. *Zool. Surv. Ind. State fauna series*, 19(1): pp: 7-14.
2. Mandal, G.P. and Hazra, A. K. (2012). Insecta: Thysanura (Apterygota). Fauna of

- Andaman & Nicobar Islands. *Zool. Surv. Ind. State fauna series*, 19(1): pp: 15-18.
3. Kosygin, L. (2012) *Aborichthys waikhomi*, a new species of fish (Teleostei: Nemacheilidae) from Arunachal Pradesh, India. *Rec. zool. Surv. India*, 112(1): 49-55.
 4. Dev Roy, M. K. (2012). Crustacea: Decapoda. In: *Fauna of India, Occ. Paper No. 333*: 62-63.
 5. Girish Kumar, P., Roy, A. K. Mahato and Patel, Y. (2012). On a collection of Vespidae and Apidae (Insecta: Hymenoptera: Aculeata) from Bhuj, Gujarat. *Bugs R All, Newsletter of the Invertebrate Conservation & Information Network of South Asia*, No. 19: 10-13.
 6. Chandra, K., Kushwaha, S. And Biswas, S. (2012). Additional Records of Hemiptera (Insecta) from Jabalpur District, Madhya Pradesh, India. *National Journal of Life Sciences*, 9(2): 159-161.
 7. Chandra, K. Sharma, R.M. and Sambath, S. (2012). A preliminary study on the Lepidoptera Fauna of Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh. *National Journal of Life Sciences*, Vol. 9(1) 2012: 109-111.
 8. Chandra, K. and Sambath, S. (2013). Moth diversity of Tawang District, Arunachal Pradesh, India. *Journal of Threatened Taxa*, 5 (1): 3565-3570.
 9. Tiple, A. and Chandra, K. (2013). Dragonflies and Damselflies (Insecta, Odonata) of Madhya Pradesh and Chhattisgarh States, Central India. *Journal Care4Nature*, 1 (issue-1): 1-10.
 10. Chandra, K. and Kushwaha, S. (2013). Record of Hemipteran Insect Pest Diversity on *Lablab purpureus* L.: An Economically Important Plant from Jabalpur, Madhya Pradesh. *Research Journal of Agricultural Sciences*, 4(1): 66-69.
 11. Jehamalar, E.E. and Chandra, K. (2013). On the genus *Tenagogonus* Stal (Hemiptera: Heteroptera: Gerridae) from India with a description of a new species. *Zootaxa* 3616 (4): 378-386.
 12. Gupta, S. K. and Chandra, K. (2010) Diversity of Orthoptera in Achanakmar Wildlife Sanctuary, Chhattisgarh, India. *Indian J. Trop. Biodiv.* 18(2): 211-217.
 13. Chandra, K. and Thilak, J. (2010) Avifauna of Veerangana Durgavati Wildlife Sanctuary, Damoh district, Madhya Pradesh, India. *Indian J. Trop. Biodiv.* 18(2): 225-229.
 14. Chandra, K. and Kushwaha, S. (2012) New Records of Hemiptera (Insecta) in Tawang District, Arunachal Pradesh India. Abstract published in *Second National Conference on Environment and Biodiversity of India*, December 29-30, 2012, New Delhi. North East Center for Environment, Education and Research, Imphal. p.43.
 15. Chandra, K. and Gupta, D. (2012) *Bolbohamatum achanakmarini* sp.nov. (Coleoptera: Geotrupidae: Bolboceratinae) from Chhattisgarh, India. *J. ent. Res.*, 36(4): 383-385.
 16. Sen D., Chatterjee, A. and Manna, B. (2012) A new and a known species of Aporelaimidae (Nematoda: Dorylaimida) from West Bengal, India. *International Journal of Environmental Science* 1(3): 273-277.
 17. Sen D., Chatterjee, A. and Manna, B. (2012) One new and two known species of *Dorylaimoides* Thorne and Swanger, 1936 (Nematoda: Mydonomidae) from West Bengal, India. *Journal of Parasitic Diseases* (Doi 10.1007/s12639-012-0223-z.)



Mrs. Madhumita Biswas, Director (RE) and Shri A.C. Ojha, Under Secretary, MoEF visited the bird section on 27 February 2013 in connection with the OM Inspections.



Mrs. Madhumita Biswas, Director (RE) and Shri A.C. Ojha, Under Secretary, MoEF visited the mollusca section on 27 February 2013 in connection with the OM Inspections



Ropalidia brevita Das & Gupta
(Hymenoptera, Vespidae)



Prof. D.N. Roy Choudhury of Calcutta University and Chairman of PAC, Eastern Region addresses the gathering during PAC meeting on 13 & 14 February, 2013 at HQ office, Kolkata.



Xenorhynchium nitidulum (Fabricius)
(Hymenoptera, Vespidae)



Dr. J.R.B. Alfred, Former Director of ZSI during PAC on 13 & 14 February 2013 at HQ office, Kolkata.



Director, ZSI during APC on 13 & 14 February, 2013 at HQ office, Kolkata.



A flock of Large Egrets Khariberi wetland in the outskirts of Kolkata.



A flock of migratory Bar-headed Goose at Bakreshwar dam.



Dr. K. Vemkataraman, Director, ZSI observing birds at Nalban, East Kolkata wetlands along with scientist of ZSI.



A flock of White Ibis near Kharibehri wetland observed during the month of February 2013.



Dr. Andrey A. Lissovsky Curator of Lagomorph & Osteological collection, Zoological Museum of Moscow State University, Russia and Ms. Nishma Dahal, JRF, NCBS, Bangalore.



Dr. Binu N.K., Asstt. Professor from College of forestry, Kerala Agricultural University, Trissur, Kerala along with his team of students.

Andaman & Nicobar Regional Centre, Port Blair

Marine and terrestrial ecosystems of Rutland Island, Burmanella, north Andaman (Kamatang, Avis Island, Rail Island, Karlew Island, Danapur, Sound Island and Rampur)

and Grub Islands were surveyed on 5 & 6 February, 2013, 10 February, 2013, 18-24 February, 2013, 26 February, 2013, respectively, during the month. As a result of surveys, 134

species of corals, 2 species of sea anemones, 7 species of echinoderms, 28 species of opisthobranchs, 25 species gastropods, 7 species of crabs and 1 species of shrimp were identified from marine habitat while 15 species of butterflies, 1 species of honey bee, 1 species of mosquito, 1 species of amphibian, 6 species of lizards, 1 species of snake and 10 species of birds were identified/observed from terrestrial habitats.

A total of 155 specimens comprised of 67 specimens of corals, 20 specimens of echinoderms, 53 specimens of molluscs and 15 specimens of butterflies were registered in National Zoological Collections of ZSI during the month. As a part of identification and advisory services, one species of ascidian received from National Institute of Ocean Technology, Port Blair and a confiscated elephant tusk from Central Crime Station, Port Blair has been identified and reports submitted. Upon request from the UNEP, a status report on Long-tailed Macaque *Macaca fascicularis umbrosa* Miller, 1902 has been prepared for possible inclusion in the review of significant trade at AC26/PC20 in the forthcoming CoP 15 (CITES meeting) to be held at Bangkok on March 2013 and submitted to the administrative Ministry.

In addition, as required by Embassy of United States of America, New Delhi, inputs on the USA proposal to list 66 species of reef-building corals under US Endangered Species Act have been prepared and submitted to the administrative Ministry for further action. A book on 'Taxonomy of Sponges of Andaman and Nicobar Islands' has been submitted to ZSI headquarters for publication.

Dr. C. Raghunathan, Scientist-C & Officer-in-Charge reviewed one paper received from *Journal of Threatened Taxa* and another paper from *Records of Zoological Survey of India* and submitted the reviewers comments. Mrs. Kamla Devi, Assistant Zoologist and Mr. M.C. Patel, Zoological Assistant have attended the

Official Language Workshop on 16 February, 2013 at Port Blair. Dr. C. Sivaperuman, Scientist-C has participated and presented a paper in the International Conference on Insect Science-2013 held at Bangalore from 14-17 February, 2013. Dr. C. Raghunathan served as an external examiner to conduct viva-voce of Ph.D. degree in Marine Biology and Oceanography for two research scholars at Centre for Advanced Study in Marine Biology, Annamalai University, Parangipettai on 22 February, 2013.

Publications

1. Mondal, T., Raghunathan, C. and Venkataraman, K. (2012) Diversity and Distribution of Corals in Andaman and Nicobar Islands. *Journal of Coastal Environment* 3(2):101-110
2. Sivaperuman, C. and Venkataraman, K. (2013) Butterfly communities of Ritchie's Archipelago I Andaman and Nicobar Islands, pp. 124. In: *Proceedings of the International Conference on Insect Science 2013*, Bengaluru (Eds). A.K. Chakravarthy *et al.* (Abstract)
3. Sadhukhan, K., and Raghunathan, C. (2013) Diversity and abundance of crinoid population in Mahatma Gandhi Marine National Park, Andaman Islands. *Proceedings of the 100th Session of the Indian Science Congress* (Animal, Veterinary and Fishery Science), 180 p.



Gastropod *Ovula ovum*



Coral *Psammocora digitata* Milne Edwards and Haime 1851



Coral *Pachyseris foliosa* Veron 1990



Coral *Leptoria phrygia* Ellis and Solander 1786



Coral *Echinopora gemmacea* Lamarck 1816

Estuarine Biology Regional Centre, Gopalpur-on-Sea

A field survey was conducted around Narmada and Tapi Estuary of Gujarat from 19 February 2013 to 02 March 2013 to study the faunal groups of the estuaries. Field observations and sampling from the estuaries were made. Around 368 representative

samples of pisces, molluscs, crustacea, and insects were collected during the survey for taxonomic studies. About 30 Visitors Visited National Zoological Collections at the Centre during the month.



Benthic fauna collection from Narmada Estuary



Faunal collection at Narmada Estuary

Western Ghat Regional Centre, Kozhikode (Calicut)

During the month, one extensive field survey to southern Western Ghats (Silent Valley N.P. and Vazhachal Reserve forests) and two local surveys to Malabar Wildlife Sanctuary, Kerala have been conducted and representative faunal samples were collected. Three new species of Platygasteridae (Hymenoptera), *Fidiobia nagarajae* Veenakumari, Buhl and Rajmohana; *Fidiobia viraktamathi* Veenakumari, Buhl and Rajmohana; *Plutomerus veereshi* Veenakumari, Buhl and Rajmohana have been described. Other taxonomic identifications during the month include 5 species of Pteromalidae, 2 species of Platygasteridae, 4 species of Ceraphronidae (Hymenoptera), 2 species of Mantodea and 4 species of Reptilia. During the month, four papers have been published and four more papers have been accepted. Four identification and advisory services rendered to various persons.

Dr. K. Rajmohana, Scientist-C has delivered a lecture on the 'General Insect Diversity' to B.Sc. students of Providence Women's College, Calicut on 1 February 2013. She also delivered an invited lecture on 'Invertebrate Diversity of Western Ghats' at the national seminar on 'Western Ghats - Biogeography, Biodiversity & Conservation' on 15 February 2013 at Manjeri NSS College, Malappuram. She organized an interactive session on the 'Zoological Survey of India and Taxonomic studies', on 27 February, 2013 to a group of graduate students of Govt. Arts and Science College, Calicut under the 'Walk with a Scholar' Programme-2013.

Dr. Md. Jafer Palot, Assistant Zoologist of the Centre has delivered a talk on 'Mangrove Biodiversity of Kerala' at the Department of Zoology, Zamorin's Guruvayurappan College, Kozhikode on 2 February 2013 in connection with the celebration of World Wetlands Day. He also delivered yet another lecture on the "Biodiversity assessment and conservation protocols" on 8 February 2013 at the Department of Botany, University of Calicut as a part of the National Environmental

Awareness Campaign of the Ministry of Environment of Forests. Dr. Palot also delivered a lecture on the "Wonderful world of Butterflies" at the Agri-Food-Flower Festival-2013' organized by the University of Calicut at University Campus on 11 February 2013. He delivered a lecture on 'Invertebrate diversity in the Western Ghats' at an workshop on 'Recent Trends in Biodiversity Documentation' at the Department of Zoology, Government College Kodancherry, Kozhikode on 12 February 2013 and another invited lecture on 'Vertebrate Faunal diversity of Western Ghats' at the National Seminar on Western Ghats - Biogeography, Biodiversity & Conservation on 15 February 2013, at Manjeri NSS College, Malappuram.

During the month, Dr. P. M. Sureshan, Scientist-C has supervised a research project of JRF of the Centre. Similarly, Dr. K. Rajmohana, Scientist-C, has supervised the research projects of the two SRF and one JRF of the Centre in February 2013. During the month, 1103 visitors paid their visits to the museum.

Papers Published:

1. Veenakumari, K., P. N. Buhl, Rajmohana K. and P. Mohanraj (2012) Three new species of Sceliotrachelinae (Hymenoptera: Platygasteroidea: Platygasteridae) from South India. *Entomofauna, Zeitschrift für Entomologie* 33(33):469-480.
2. Palot, M. J. (2013) Vertebrate faunal diversity of Western Ghats. Abstract. book Page No. 31 on the three days National Seminar on 'Western Ghats - Biogeography, Biodiversity & Conservation' at Department of Botany, N.S.S. College, Manjeri, Malappuram district on 4-6 February, 2013.
3. Sureshan, P. M. (2013) "Thanneerthadangaalude charamakurippu" (Popular scientific article in Malayalam published in Sasthrakeralam, Malayalam science Magazine).



Hierodula membranacea Burmeister (Insecta: Mantodea)



Hemidactylus prashadi Smith (Reptilia: Agamidae)

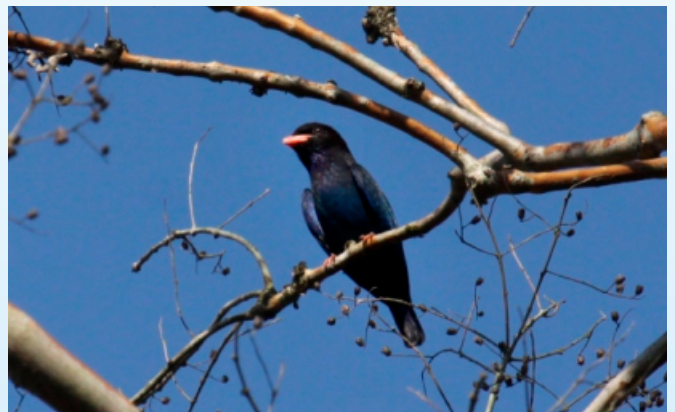
A pair of Malabar
Giant squirrel (*Ratufa
indica*) at Vazhachal
Reserve Forest,
Kerala



Green whip snake at Parambikulam Tiger Reserve,
Kerala



Libellago lineata indica (Fraser) (Insecta : Odonata)



Dollar bird at Vazhachal Reserve Forest, Kerala

Sunderbans Regional Centre, Canning

During the month, 4 species Orthoptera and 4 species of crab from have been identified and registered. Dr. D. Suresh Chand, Scientist-C and Dr. Madhumita Roy, Sr. Zool. Asstt., of this Centre, attended the Project Advisory Committee (PAC) meeting held at Head Quarter, ZSI, Kolkata, from 14-15 February, 2013. Thirty school students and public visited the museum during the month.



Northern Regional Centre, Dehradun

One extensive faunistic survey has been undertaken at five districts of Punjab and representative fauna collected and registered in the National Zoological Collections. Observations were also made on the fauna of the area surveyed, beside collecting soil samples for the study of soil nematodes. The scientists of the Centre identified following fauna during the month: 5 species of Acridoidea and 8 species of soil nematodes from district Dehradun, 5 species of soil nematodes from Sultanpur National Park and 3 species from Govind WLS, one species of amphibia from Punjab and 7 species of Encyrtidae from Uttar Pradesh. Twenty permanent wax slides of nematodes from Govind WLS & Sultanpur NP have been prepared for morphological studies. Helminth parasites have also been collected from the intestine of amphibian hosts collected during Punjab survey.

Fifty-four examples of amphibians and 26 examples of soil nematodes have been registered during the month. Invertebrate database has been updated by making entries related to Scolopendromorpha (10), Soil nematodes (41); similarly vertebrate database has also be updated by including 20 entries of reptiles. During the month, metadata pertained to 10 species of fishes have been completed and digitisation made.

Shri P.T.Bhutia, Scientist-F and Officer-in-Charge has attended the North Zone PAC meeting from 6-7 February, 2013 held at High

Altitude Regional Centre, Solan and presented progress of report for the Centre, while Dr. S.I. Kazmi, Scientist-C, has submitted a new project proposal for the year 2013-14. Dr. P.C. Tak, Scientist-D has attended the XXIX meeting of the Training, Research & Academic Council (TRAC) meeting at Wildlife Institute of India, Dehradun on 14 February 2013. Shri P.T. Bhutia, Scientist-F, Dr. P.C. Tak, Scientist-D, Dr. Archana Bahuguna, Scientist-C & Dr. Vinita Sharma, Scientist-C, have attended the Science Day function on 28 February 2013 at ONGC auditorium, Dehradun.

Mr. Simon, from University of East Anglia, Norwick, United Kingdom who is pursuing his Ph.D on the small mammals has visited our museum during the month apart from around 15 local students who also visited our museum.

Papers Published:

1. Kazmi, S. I. and Kumar, P.G. (2012) Encyrtinae (Hymenoptera: Chalcidoidea: Encyrtidae). Zool. Surv. India, Fauna of Maharashtra: *State Fauna Series*, 20(Part-2): 587-604.
2. Kazmi, S. I. and & Kumar, P.G. (2012) Tetracneminae (Hymenoptera: Chalcidoidea: Encyrtidae). Zool. Surv. India, Fauna of Maharashtra: *State Fauna Series*, 20(Part-2): 605-618.
3. Kumar, P.G. and Kazmi, S. I. (2012) Scoliidae (Hymenoptera: Chalcidoidea: Encyrtidae) Zool. Surv. India, Fauna of Maharashtra: *State Fauna Series*, 20(Part-2): 619-625.



Mr. Simon, doing PhD on small mammals from University of East Anglia, Norwick, NR4TJ, U.K visited the Museum of NRC.



Director, ZSI and Chairman of PAC along with scientists from regional centres from northern regional Centres during PAC at Solan.



Release of poster: rare amphibia *Uperodon systoma* Schneide (photographed by Mr. P.T.Bhutia, Additional Director, Officer-in-Charge, NRC,ZSI) by PAC chairman Dr. Arun Kumar on 7th Feb'13 at Solan.



Release of poster by PAC Chairman, Dr. Arun Kumar 'Turtle and tortoises of Uttarakhand' prepared by Dr. Archana Bahuguna, NRC, Dehradun, on 7th Feb'13 at Solan.

Freshwater Biology Regional Centre, Hyderabad

During the month, 76 specimens of fishes collected from Krishnaraja Sagar Reservoir have been identified as 18 species belonging to 9 families: *Notopterus notopterus* (Pallas), *Heteroneustes fossilis* (Bloch), *Hemibagrus punctatus* Jerdon, *Mystus cavasius* (Hamilton), *Mastacembelus armatus* (Lacepede), *Crossochelus latius latius* (Hamilton), *Barilius gatensis* (Valenciennes), *Puntius conchoni* (Hamilton), *Puntius sophore* (Hamilton), *Puntius ticto* (Hamilton), *Puntius sarana subnasutus* (Valenciennes), *Garra mullay* (Sykes), *Hyporhamphus limbatus* (Valenciennes), *Oreochromis mossambica* (Peter), *Wallago attu* (Sch.), *Ompok malabaricus* (Valenciennes), *Channa punctata* (Bloch). Besides, some aquatic insects such as *Cybister tripunctatus*, *Berosus indicus*, *Guignotus flammulatus*, *Guignotus inconstans*, *Eretes stictus*, *Hydrochus bindosus*, *Laccotrephus ruber*, *Hydrovatus confertus* have also been identified during the month.

Similarly, the following group of animals have also been identified and entered in the database of the Centre. **Rotifers:** *Keratella tropica*, *Keratella procurva*, *Asplanchna brightwelli*, *Filinia longiseta*, *Filinia opoliensis*, *Brachionus diversicornis*, *Brachionus falcatus*, *Brachionus angularis*. *Testudinella patina*, *Brachionus calyciflorus* var. *hymani*, *Brachionus caudatus*, *Brachionus diversicornis*, *Filinia longiseta*,

Pleosoma lenticulere (Herrick); **Osatracoda:** *Cypris subglobosa* Soweby and *Chrissia hislopi* (Ferguson); **Cladocera:** *Ceriodaphnia cornuta*, *Alona rectangula rectangula*, *Pseudosida bidentata*, *Bosmina longirostris*, *Chydorus barroisi*, *Simocephalus exspinosus*, *Pleuroxus aduncus*, *Macrothrix spinosa*. *Pseudosida bidentata*, *Macrothrix spinosa*, *Alona rectangula rectangula*, *Ceriodaphnia cornuta*, *Pleuroxus aduncus* (Jurine), *Biapertura karua* (King) and *Alona costata* Sars were identified from the collections of the reservoirs/lakes of Andhra Pradesh. 76 specimens belonging to 18 species of fishes were digitised during the month.

Dr. D.V. Rao, Scientist-C & Officer-in-Charge has delivered a lecture on "Role of ZSI in Conserving faunal resources in the Country" in the IFS officer's workshop held on 12 February 2013 being conducted by the A.P. Forest Academy, Hyderabad. Dr. Rao also attended the Andhra Pradesh State Biodiversity Board expert committee meeting held on 28 February 2013 in the conference hall of Office of Addl. PCCF, Aranya Bhavan, Hyderabad.

Shri S.P. Choubey, Ex-Director & consultant of Official Language Implementation Cell, MoEF, New Delhi visited the Centre for inspection with regard to compliance of Official Language Policy for a period of 4 days from 19-22 February, 2013.

Paper published:

1. Deepa, J., Karuthapandi and Sultana, R. (2013) Aquatic Coleoptera from Durgam

Cheruvu, Hyderabad. *International Journal of Applied Life Sciences* 6(1):145-148.



Notopterus notopterus



Puntius conchoni



Oreochromis mossambicus



Barilius gatensis



Annelida- Oligochaeta larva



Annelida - Hirudinea larva

Arunachal Pradesh Regional Centre, Itanagar

During the month, eight species of identified fishes of the National Zoological Collections have been digitized. Dr. Bikramjit Sinha, Scientist-C & Officer-in-Charge of the Centre has attended the Programme Advisory Committee (PAC), East Zone meeting held during 14-15 February 2013 at ZSI HQ, Kolkata.

The Scientist-in-Charge and another Scientist from G. B. Pant Institute of Himalayan Environment & Development, North East Unit, Itanagar visited the Centre during the month. Around 20 students from different schools of Itanagar visited the Centre during the month.

Central Zone Regional Centre, Jabalpur

During the month, 3 species of mammals one each from Soricidae, Sciuridae and Muridae and 5 species of Araneae were identified from Madhya Pradesh. Identification and advisory services rendered to Dr. Yashashri A. Gadhihar, Assistant Professor, P.G. Dept. of Zoology, Govt. Vidarbha Institute of Science and Humanities, Amravati, Maharashtra for identification of moths (Lepidoptera). Accordingly, the specimens have been identified as 28 species belonging to 26 genera under 07 families. The Officer-in-Charge, Regional Tiger Strike Force, Byoharbag, Jabalpur has brought a specimen of dead owl for identification. It was later on identified as *Strix ocellata* (Lesson). After identification, the reports have been sent to the respective departments.

Dr. S. Sambath, Scientist-C & Officer-in-Charge has attended the following meetings: Programme Advisory Committee (North Zone) held at High Altitude Regional Centre, Solan, Himachal Pradesh on 07 February 2013; Central Government Employee Welfare Coordination Committee meeting at Office of the Commissioner, Income Tax Office, Jabalpur on 22 February 2013; 4th Kamta Prasad Sagreiya Memorial Lecture delivered by Dr. C.T.S. Nair, former 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 February 2013. Our Centre has actively participated in the 'Scientific Mela- 2013' held at Jabalpur from 24-26 February, 2013 being organized by the Madhya Pradesh Council of Science and Technology. During the mela, we have displayed various animal exhibits and their importance for common public of the Mahakhoshal Region. Stall put up by our Centre has been adjudged as the best amongst all and won first prize.

Papers published

1. Chandra, K., Sharma, R.M. and Sambath, S. (2012) A preliminary study on the Lepidoptera Fauna of Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh. *National Journal of Life Science* 9(1): 109-111.
2. Chandra, K. and Kushwaha, S. (2013) Record of Hemipteran Insect Pest Diversity on *Lablab purpureus* L: An Economically Important Plant from Jabalpur, Madhya Pradesh. *Research Journal of Agricultural Sciences* 4(1): 66-69.
3. Chandra, K., Gupta, D., Uniyal, V. P., Sanyal, A.K. and Bhargav, V. (2012) Taxonomic Studies on Lamellicorn Scarabaeids (Coleoptera) of Simbalbara Wildlife Sanctuary, Sirmour, Himachal Pradesh, India. *Rec. zool. Surv. India*, 112 (Part-1): 81-91.



ZSI stall showing animal exhibits of Mahakhoshal region.



Honourable Chief guest Dr. D.P. Lokwani, Vice-Chancellor, Medical University, Jabalpur inaugurating Scientific Mela-2013 at Jabalpur



Honourable Chief guest Dr. D.P. Lokwani, Vice-Chancellor, Medical University, Jabalpur visiting scientific stall set up by ZSI.



Officer and staff of ZSI, CZRC, Jabalpur interacting with visitors during Scientific Mela-2013

Desert Regional Centre, Jodhpur

A Field survey to Chambal River area has been conducted from 12-23 February 2013. Nearly 19 locations in the entire Chambal River under six districts *viz.* Chittorgarh, Kota, Bundi, Sawai-madhopur, Karauli and Dholpur have been surveyed for vertebrate fauna. Six lots of fishes were collected. During the month, we have identified and registered 11 species of nematodes, 6 species of fish and 3 species of ants. Also digitized 19 specimens from NZC for Research Framework Document.

Dr. Padma Bohra, Scientist-D and Dr. Sanjeev Kumar, Scientist-C (as member of PAC North Zone) have attended the Programme Advisory Committee (PAC) meeting held on 7 February, 2013 at High Altitude Regional Centre, ZSI, Solan. Dr. H. S. Banyal, Scientist-C has provided information on the fauna displayed in

the Centre's museum to 22 (B. Sc.) students and teachers of MDM College, Jodhpur on 2 February 2013. Dr. Banyal also interacted with the trainees belonging to 69th forest guard's trainee group from Rajasthan State Forest Department on 06 February 2013 besides interacting with some M.Sc. (Zoology) students from Aligarh Muslim University (A.M.U), Aligarh on 25 February, 2013. He also has attended lectures during Laboratory Accreditation held at DMRC, Jodhpur on 05 February, 2013.

Publication

1. Bohra, P. (2012) Nematoda. *State Fauna Series 20. Fauna of Maharashtra. Part-2 Invertebrates*. Zoological Survey of India P. 217-248.



M.Sc. (Zoology) students from A.M.U. Aligarh at the museum of DRC, ZSI on 25-02-2013.



On 06-02-2013, 69th forest guard's trainee group of Rajasthan State Forest Department Visited DRC, ZSI, Jodhpur.

Marine Biology Regional Centre, Chennai

During the month, our Centre has participated in the 'Chennai Science Festival-2013' held at Anna Gem Park School, organised by the Science City, Chennai. The fish species such as Yellow damsel, Banner fish, Sweet lips, Razor fish and Grouper are the major attraction in the marine aquarium tank. More than 10,000 visitors paid their visit to marine aquarium stall.

Shri. Chowbey, Hindi Officer, Ministry of Environment and Forests, New Delhi inspected our Centre regarding Hindi implementation as a part of Official Language Implementation programme of the Ministry.

Scientists of the Centre has identified 10 species of Nematodes, 8 species each of Bryozoans and Rhizopods and 1 species of Mollusca out of the materials collected from Palkbay, Gulf of Mannar Biosphere Reserve and Bhitarkanika, Odisha. During the month, 27 species were digitized and their metadata compiled.

Dr. C. Venkatraman, Scientist-C & Officer-in-Charge has delivered four lectures, one each on the "Endangered and Endemic birds of India" in the Zoology Association, Department of Zoology, Pachaippa's College, Chennai, second on the "Marine Biodiversity and its conservation in the national seminar on "Endangered species and conservation measures" organized by Meenakshi College, Chennai, third and fourth on the "Marine ecosystems of India: Their biodiversity and conservation" in the "National seminar on the "Biodiversity and Bioresources: A fragile balance" organized by St. Xavier college, Palayamkottai, Thirunelveli and fourth one in the "Prof. R. Balasubramanian endowment lecture" organized by A.V.C College, Mayiladuthurai, respectively. He also supervised the research projects of SRF's of the Centre.

Around 700 visitors visited our marine aquarium and museum during the month. Draft report on the "Status and assessment of sea cucumber species in Palkbay and Gulf of

Mannar" has been submitted to The Director, Gulf of Mannar Biosphere Reserve Trust, Ramanathapuram.

Publications

1. Bindu, L and Saha, D. (2012) Free-living Protozoa. Fauna of Maharashtra. State Fauna Series, 20 (Part 2) :195-214.
2. Bindu, L., Das, A. K. and Nandi, N. C. (2012) Protozoa. In: Fauna of Indian Museum Tank, *Rec. Zool. Surv. India, Occ. Paper No. 333*:17-27.
3. Nandi, N. C., Kalavati, C., Nikam, S. Bindu, L., Nandi, R and Ghosh, R. (2012) Parasitic Protozoa. Fauna of Maharashtra. State Fauna Series, 20 (Part 2) :1-193.
4. Sasidharan, K.R., Ramesh, G., and Mahesh, S. (2012) CITES as a tool for conservation of insect diversity. In: Awareness Training Programme on CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora). Edited by The Director, Institute of Forest Genetics and Tree Breeding, Coimbatore, Tamil Nadu, India. 153-162pp.
5. Venkatraman, C. (2013) Marine biodiversity and its conservation. Proceedings of the national seminar on endangered species and conservation measures. 41-44pp.



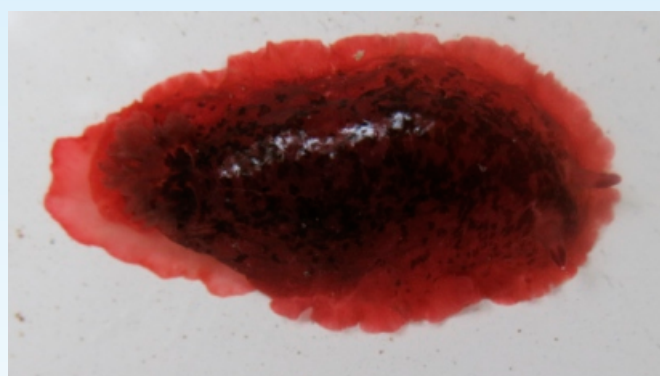
Honourable Education Minister of Tamil Nadu visiting the marine aquarium stall during Chennai Science Festival-2013



Shri. Chowbey, Hindi Officer, MoEF, New Delhi during inspection.



Nudibranch *Pleurobranchus forskalii*



Nudibranch *Dendrodoris fumigata*

Gangetic Plains Regional Centre, Patna

Dr. Gopal Sharma, Scientist-C of the Centre has undertaken a survey in and around Valmiki Tiger Reserve, Kusheshwa Asthan, Saraiyaman Lake and Gogabil Pakhsi Vihar in Bihar from 31 January, 2013 to 09 February, 2013. During the month, we have identified 10 species of family Noctuidae such as *Aegocera venulia* (Cramer), *Aganais ficus* (Fabricius), *Grammodes geometrica* (Fabricius), *Leucania yu* Guenee, *Ophiusa disjungens* Walker, *Syntomoides passalis* (Fabricius), *Sarbinissa albifascia* Walker, *Ophiusa tirrhaca* Cramer, *Rajendra biguttata* (Walker), *Microloa emittens* (Walker). We have also identified 09 species collected from various protected areas as follows: *Lamellidens marginalis* 16exs. *Lamellidens corrianus*-2exs. *Lamellidens jenkinsianus*- 2exs. *Lamellidens mainwaringi* - 1ex. *Radiatula pachysoma*-6exs. *Radiatula caerulea*-1exs. *Radiatula lima*-124exs. *Radiatula occata*-23exs. *Parreysia favidens*-15exs. Dr. Gopal Sharma, Scientist C & Officer-in-

Charge has participated in a consultation and capacity building workshop on Conservation and Sustainable management of wetlands of Bihar being organized by the Dept. of Environment and Forests, Govt. of Bihar & Wetland International-South Asia, New Delhi at Indian Council of Agricultural Research, Patna on 23 February, 2013. Dr. Sharma, also participated in a bird watching programme on Big Bird Day on 24 February, 2013 with the IBCN members in and around Patna and some part of the River Ganga near Patna. More than 27 students of different Schools and colleges visited our museum.

Publication

1. Singh, N. and Duggal, G. (2012) '*Kirian da ajab sansaar*' (in Punjabi). Nirantar Soch 15 (6): 26-27. (Nirantar Soch is published by Punjab State Council for Science & Technology, Chandigarh.

Western Regional Centre, Pune

An extensive field survey was undertaken at Phansad Wildlife Sanctuary and the surrounding areas district Raigad from 13-22 February, 2013. During the month, one species of Collembola, 7 species of Odonata, 9 species of Hymenoptera, 28 species of Pisces and 13 species of Reptilia have been identified.

Identification and advisory services have been rendered on Mud Turtle received from RFO Karad, Satara, two fake skins received from Forest Department Shirur and Forest Department, Junnar. Besides, advisory services have also been rendered on fishes received from R.R. Shinde Junior College, Hadapsar and Ramakrishna More College, Nigdi and Acridids received from Nowrosjee Wadia College, Pune.

Dr. R. M. Sharma, Scientist-D & Officer-in-Charge and Dr. R. Bano, Scientist-C have attended PAC (North) meeting held on 7 February, 2013 at HARC, ZSI, Solan (HP) and presented new and progress on ongoing research programmes as per annual programme of research work of the Centre. Dr. R. M. Sharma, Scientist-D & Officer-in-Charge

has attended a meeting as member convened by the Vice-Chancellor, Shivaji University, Kolhapur on 22 February, 2013. He also delivered an invited lecture "Outline of Entomology" for Insearch Outdoors, Pune (an NGO) on 24 February, 2013 at Aksharnandan School, Pune.

Published paper:

1. Chandra, K., Sharma R.M. and Sambath, S. (2012) A preliminary study on the Lepidoptera fauna of Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh. *National Journal of Life Sciences*, 9 (1): 109-111.
2. Kavta, G., Shashi, B., Beche, L., ManjuLata, K., Charan, S., Bano, R. (2011). Detection of Arthropod Pests in Imported Vegetative Planting Material during 200610. *Indian Journal of Plant Protection*, 39: (4) 258-263
3. Theurkar, S.V., Takalakar, D.L., Jadhav. S.S. and Pawar R.M. (2013) Diversity and composition of fishes of Chaskaman Dam, Rajgurunagar, part of Northern Western Ghats, Pune, India. *J. Animal Veterinary and Fishery Science*, Vol. 1(1): 1-4.



Delta conoideum



Phimenes flavopictum continentalis

North Eastern Regional Centre, Shillong

During the month, 7 species of aquatic and semi-aquatic Hemiptera have been identified out of the 116 examples from the backlog collections of the Centre. Identification and advisory services have been rendered to St. Peter's College, Shillong on the identity of 26 species of fishes and to St. Anthony's College,

Shillong on the identity of one species of fish. Eleven entries of mammals and 121 entries of fishes have been made in the Centre's database. Photographs of two species of bats *Myotis longipes* and *Pipistrellus minus* were digitized and metadata entered.



A catfish *Hemibagrus menoda* (Hamilton, 1822).

High Altitude Regional Centre, Solan

During the month, one species of Oligochaeta collected from the cold desert of Spiti Valley, 5 species of butterflies, 5 species of Orthoptera and 2 species of Pisces from Kalatop Khajjiar Wildlife Sanctuary, Distt. Chamba and 4 species of Pisces from collection of NRC, Dehradun have been identified. The Programme Advisory Committee (PAC) meeting (North Zone) is held at our Centre on 07 February, 2013 for review of ongoing, newly proposed and completed programmes of Regional Centers. The PAC was chaired by Dr.

Arun Kumar, Former Additional Director of ZSI. Three staff of the Centre have also been honoured during the PAC meeting for their successful completion of 33 years of services in ZSI.

Dr. Anil Kumar, Scientist-C of the Centre has attended an International Conference at Jawaharlal Nehru University, New Delhi, from 8-9 February, 2013 and presented an oral presentation on "Faunal diversity of Arunachal Pradesh: Conservation issues and possible solutions for sustainability".



Dr. K. Venkataraman, Director, ZSI and Dr. Arun Kumar, Chairman of PAC and Former Additional Director of ZSI during Programme Advisory Committee (PAC) meeting.

Southern Regional Centre, Chennai

Two Field surveys to Pallikaranai marshland led by Dr. K. Ilango, Scientist-D & Officer-in-Charge and Dr. S. Prabakaran, Scientist-C have been undertaken one each on 20 February 2013 and another on 28 February, 2013, respectively. Other Scientists of the Centre have also participated in these surveys.

As part of the official language implementation policy of Government of India, Mr S. P. Choubey, Director of Official Language, MoEF visited the Centre on 5 February, 2013. He was appraised of the Centre for the compliance of official language policy.

Identifications of different faunal groups made from Andhra Pradesh and the Southern & Middle Eastern Ghats include Planktons: 36 spp. (identified by Dr. Jayasree Thilak, Scientist-C); Odonata: 8 spp. (Dr. R. Babu, Scientist-C); Cockroaches: 3 spp. (Dr. S. Prabakaran, Scientist-C); Molluscs: 20 spp. (Dr. R. Venkitesan, Scientist-C) and Reptiles: 4 spp. (Dr. R. Aengals, Scientist-C). During the month,

two identification and advisory services have been rendered. Dr V. M. Sathish Kumar, Sr. Zoological Assistant has carried out PCR on one species of snake (*Uropeltid sp.*) as part of the DNA Bar-coding work. During the month, he also reviewed a paper for International Journal of DNA Barcodes.

Papers Published:

1. Thilak, J., and Shukla, A. (2012). Heavy metal accumulation pattern in food fishes from Gandhisagar Reservoir, Mandasour district, Madhya Pradesh. *National Journal of Life Science* 9(1):31-33.
2. Kulkarni, P.P, Babu, R., Talmale, S.S., Sinha, C., and Mondal, S.B. (2012). Insecta: Odonata. In: *Fauna of Maharashtra. State Fauna Series*, 20 (Part-2): 397-428, Zoological Survey of India.
3. Mitra, T.R., Babu, R. and Subramanian, K.A. (2013). *Anax panybeus* Hagen, 1867: An addition to the Odonata (Aeshnidae) of India. *J. Threatened Taxa* 5(2):3682-3683.

Marine Aquarium & Regional Centre, Digha

A week-long second training programme for the community people of West Bengal on Integrated Coastal Zone Management has been inaugurated by Director, Zoological survey of India on 23 February 2013 at our auditorium. The inaugural programme was presided over by the Director, Zoological Survey of India and Dr Somenath Bhattacharyya, Director-in-Charge, SPMU has participated as the Guest of Honour. Dr Somenath Bhattacharyya through his speech introduced all participants with the ICZM Project and its progress in West Bengal. During the training programme, five participants those who have also participated

in the previous training programme have been awarded for their active involvement in coastal conservation. Two leaflets in local language have been released during the inauguration ceremony. The participants of this training programme are from different coastal communities like fishermen, hoteliers, shopkeepers, live fish traders, taxi association persons etc. Four days of the training program has been spent exclusively for technical presentations on various objectives of Integrated Coastal Zone Management followed by two days for field training.

Dr. Anil Mohapatra, Scientist-C & Officer-in-

Charge of the Centre has attended a review meeting regarding the progress of ICZM Project, West Bengal held on 5 February, 2013 at the Chief Minister's Conference Hall-II at Writers' Building, Kolkata in the presence of Hon'ble Minister-in-Charge, Department of Environment, Government of West Bengal. The World Bank team also visited the Centre on 9 February 2013.

During this month, around 426 examples of live marine ornamental exhibits have been collected for exhibition in aquarium galleries. During the month, the Ghost crab (*Ocypode macrocera*) and Puffers (*Takifugu oblongus*) are the main attraction among the tourists. The

aquarium received an average of 865 tourists per day. In total 183 specimens were identified including 2 species of nematodes, 25 species of mollusks and 10 species of fishes. During the month, three meiobenthic marine nematodes have been identified as *Oncholaimellus brevicauda*, Timm, 1969 reported for the first time from India and another nematode identified as *Oncholaimellus calvadosicus*, De Man, 1890 as first record from the West Bengal coast. Also two fish species identified as *Bleekeria kallolepis*, Gunther, 1862 and *Carangoides talamparoides* (Bleeker, 1852) have been reported for the first time from the West Bengal Coast.



Inaugural Speech by DZSI, Dr. K. Venkatraman



Speech of Dr. Somenath Bhattacharyya briefing about the ICZM



Release of Booklets



Awarded participants for their efforts in Coastal conservations



Field trip to Bichitrapur Mangrove



Releasing of live sea animals to the sea by the participants in filed



Carangoides talamparoides



Bleekeria kalliolepis



Oncholaimellus calvadosicus



Oncholaimellus brevicauda



World Bank Mission visit during 9th Feb, 2013 to MARC, ZSI

ANIMAL OF THE MONTH

Assamese King Fish

Semiplotus semiplotus (McClelland, 1839)



[Photo & Text by Laishram Kosygin, Freshwater Fish Section, ZSI, Kolkata]

The Assamese King Fish, *Semiplotus semiplotus* is a delicious carp, which may attain at least 2 feet in length. It was originally described from Brahmaputra, River, Assam. The fish often termed 'Rajah-mas' in upper Assam as it was asserted that when captured it has to be taken to the Rajahs for their own consumption. It is distinguished from its congeners by having last simple dorsal fin ray not serrated; 23-25 branched dorsal fin rays; a transverse row of 10-12 open pores across the snout posteriorly directed toward middle of orbit. The species is so far known from India (Assam, Arunachal Pradesh, North Bengal, Sikkim); Nepal (Narayangarh, Khairanitar, Tribeni, Nepal Terai) and Bhutan (Tora River, Phuntshaling). It perhaps present only in the Ganga-Brahmaputra drainage and report from Myanmar requires confirmation.

The species inhabits moderate to fast flowing mountain streams and rivers with rocky beds. Juveniles inhabit shallow and fast flowing water, while larger ones inhabit deeper water where water current is comparatively slow. *S. semiplotus* is benthopelagic and susceptible to population depletion. It has a 'sector mouth' which is characterized by its inferior position, great width, exposed cornified mandibular cutting edge and a dentary with a broad deflected labial surface for scraping epilithic materials from the rocks. This species is threatened mainly due to overexploitation, deforestation, habitat loss, pollution and other anthropogenic activities. The species is listed as Vulnerable in the IUCN Red List of threatened species-2010.

OUT OF THE BOX

Backyard bird count goes global, shatters records

<http://phys.org/news/2013-02-backyard-bird-global-shatters.html#jCp>

Shark overfishing pushes many species to the brink

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/Shark-overfishing-pushes-many-species-to-the-brink/articleshow/18761589.cms?>

Fossil tooth hints dogs were domesticated 33,000 years ago

<http://timesofindia.indiatimes.com/home/science/Fossil-tooth-hints-dogs-were-domesticated-33000-years-ago/articleshow/18851994.cms>

Indian species on most threatened list

<http://timesofindia.indiatimes.com/home/environment/wild-wacky/Indian-species-on-most-threatened-list/articleshow/16359525.cms>

Caught on camera: Rising tiger population

<http://timesofindia.indiatimes.com/home/environment/wild-wacky/Caught-on-camera-Rising-tiger-population/articleshow/18473517.cms>