



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

I am delighted to inform you all that the Ministry of Environment & Forests has released a document prepared by the ZSI on 'Animal Discoveries-2012' in a function held at New Delhi to celebrate the World Environment Day. The document highlights about 133 new species (to science) various animals being described by Indian researchers from different places in India. The document also has information about 109 species of animals being reported for the first time (new records) from within the Indian territories. The ZSI will continue to support the Ministry of Environment & Forests in bringing out such document to showcase to the world about our faunal biodiversity. Effects of climate change are evident when we had tsunami in 2004 and the recent devastating floods in Uttarakhand, but the consequent changes that had happened within the ecosystem will only be revealed at a much later stage. Who knows how many species associated with these ecosystems have borne the brunt and how many just simply vanished. I earnestly request all the animal taxonomists and researchers to contribute in terms of documenting the recent status of affected species. The ZSI also prepared a document on the 'Mangroves of India-Their biology and uses'. This compendium has various chapters dealing with biology of mangroves species and their uses for mankind. I hope that many readers, by now, might have had a glimpse of our DVD having archives of ZSI publications. For those you have not yet accessed the DVD, the good news is that we are working on a plan to upload the entire content in our website so that anyone from anywhere can access and download the papers they wish to read from the archives.

Dr. K. Venkataraman
Director, Zoological Survey of India, Kolkata

Back issues of *ZSI e-NEWS*
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Headquarters, Kolkata

Extensive field surveys have been undertaken in the States of Himachal Pradesh, Maharashtra, Odisha (Bhitarkanika NP) and West Bengal. In addition to that local surveys have been undertaken in and around the Indian Botanical Garden by scientific staff of Soil Zoology Section.

During the month, scientists of the headquarters have identified 12 species of Protozoa, 6 species of Collembola, 40 species of Platyhelminthes, 26 species of Hemiptera, 12 species of Coleoptera, 8 species of Hymenoptera, 1 species of Orthoptera, 6 species of Crustacea, 29 species of Fishes and 6 species of Mammals from the States of Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Delhi, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Manipur, Meghalaya, Mizoram, Odisha, Pondicherry, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal and Andaman & Nicobar Islands.

During the month, the genus *Omicroides* Giordani Soika and the species *Omicroides singularis* (Smith) (Hymenoptera: Vespidae: Eumeninae) have been recorded for the first time from India as new records. Similarly, 27 species of Collembola under 15 genera of 7 families have been recorded for the first time from the States of Arunachal Pradesh.

Identification and advisory services have been rendered on eighteen lots of specimens, received from different Institutions and Organizations. In addition to that, identification and advisory services have also been rendered on the specimens received from Ms. V. Ganapiriyaa, Associate Professor, Department of Zoology, Khadir Mohideen College, Adirampatnam of Tanjore district, Tamilnadu the crab specimens 1. *Halimede ochtodes* (Herbst, 1783) (Family Galenidae), 2. *Metopograpsus messor* (Forsk., 1775) (Family Grapsidae), 3. *Parasesarma plicatum* (Latreille, 1803), 4. *Perisesarma bidens* (De Haan, 1835) (Family Sesarmidae) and 5. *Metaplex distincta*

H. Milne Edwards, 1852 (Family Varunidae); received from Prof. P. K. Pal, Department of Botany, University of Burdwan, Golapbag, Burdwan, West Bengal.

Advisory services have been rendered to Shri. Dibakar Bhakta, Scientist, CIFRI, Barrackpore, West Bengal. Information on crustacean fauna of India, economically important crustacean species, methods to identify crabs etc. also have been explained to him. During the month, Shri. D. Balaraman, Taxidermist Group-I, Govt. Museum, Chennai and Shri. C. Marichamy, Taxidermist Group-I Govt. Museum Madurai were given training on taxidermy by scientists and experts of Museum & Taxidermy Section of ZSI.

Dr. P. Bhattacharya, Asstt. Director of Agriculture, Siliguri Naxalbari Block has been provided with identification and advisory services by General Non-Chordata Section.

Dr. Archuna Bahuguna, Scientist-C, Northern Regional Centre, of ZSI, Dehra Dun visited Mammal Section for collection of hair samples from Lesser cats and Scurids for studies related to Tricho-taxonomic and molecular study from 24-26 June, 2013.

Mr. Simon Poulton, Ph. D. Scholar, School of Biological Sciences, University of East Anglia, Norwich, NR47TJ, United Kingdom visited Mammals and Osteology Section for identification help and to study the specimens of Murids and Scurids present in National Zoological Collection of from 18-19 June, 2013 and also visited different Divisions/ Sections of ZSI, Headquarters. Miss. Swagata Mondal of Zoology Department, Calcutta University, Kolkata visited the Nematelminthes Section. Mrs. Iny Mukherjee, Sr. Research Fellow, University of Kalyani, West Bengal visited Platyhelminthes Section for the identification of parasites from vertebrates.

Shri Dibakar Bhakta, Scientist of Central Inland Fisheries Research Institute, Barrackpore visited the Freshwater Fish section as a trainee and Dr. L. Kosygin Singh, Scientist-C of the Section has

provided training on Fish Taxonomy to Shri Dibakar Bhakta from 31 May 2013 to 14 June, 2013.

Wildlife article received from the District Forest Officer, Wildlife-III Division, Cooch Behar, West Bengal has been identified as that of Asian Elephant *Elephas maximus*.

Dr. Ch. Satyanarayana, Scientist-B has participated in a meeting at Jamnagar from 3-5 June, 2013 in connection with Gulf of Kachchh World Bank Project. On 27 June, 2013, Dr. Gaurav Sharma, Scientist-C has participated in the "Meeting of Liaison Officers (Hindi) for Hindi Training Programmes and Schemes" organized by the Department of Official Language, Ministry of Home Affairs, Nizam Palace, Kolkata.

Dr. K. Venkataraman, Director has attended a meeting on 3 and 4 June, 2013 at Ministry of Environment and Forests (MoEF), New Delhi. Wherein he met the members of the Service Associations of ZSI and flowed up the agenda discussed during DCM. On 5 June 2013, the World Environment Day, Dr. Venkataraman has attended a function at MoEF where the Honorable Minister for Environment & Forests has released a book titled 'Animal Discoveries of India-2012'. He also has inaugurated an internship training programme on 'Animal Taxonomy' between 10 and 14 June, 2013 at S.R.C. ZSI, Chennai. He also attended a meeting at National Biodiversity Authority (NBA), Chennai on 15 June 2013. Dr. Venkataraman, also visited G.P.R.C., ZSI, Patna in connection with inspection and inauguration of new office building of G.P.R.C., ZSI, Patna on 22 June, 2013. Dr. K. Venkataraman, Director has attended a Database meeting at National Centre for Sustainable Coastal Management, (NCSCM), Chennai on 27 and 28 June, 2013.

Dr. Kailash Chandra, Scientist-F and Additional Director has attended the meeting of West Bengal Biodiversity Board on 4 June, 2013 at Paribesh Bhawan, Salt lake, Kolkata to organise the 2nd National Biodiversity Congress at Kolkata during Nov/Dec., 2013. Dr. Chandra has reviewed two research papers for publication in *Rec. zool. Surv. India*.

Dr. K. A. Subramanian and Dr. Dhriti Banerjee, Scientist-C, have participated in a training workshop entitled "Promotion of metadata use and data paper publication" jointly organized by Wildlife Institute of India and GBIF from 19-21 June, 2013. During the month, Dr. Subramanian, has reviewed four manuscripts for the Journal of Threatened Taxa and one manuscript for Indian National Science Academy Journal (Animal Sciences).

Publications

- Gantait, V. V. and Venkataraman, K. (2013) *Catalogue of Arthropod Parasitic Nematodes of India*. Technical Paper No. 345, Zoological Survey of India; 84 pp.
- Mandal, G. P., K. K. Suman and K. K. Bhattacharya (2012) On some collection of Collembola present in the Apterygota section. *Rec. Zool. Surv. Ind.*, 112(3): 95-100.
- Mandal, G. P. and A. K. Hazra (2013) New Records of Collembola from Arunachal Pradesh, India. *Bionotes*. 15(2): 50-51.
- Mandal, G. P. and A. K. Hazra (2013) A New Record of *Yosiia dehradunia* (Paronellidae: Collembola) from Jharkhand, India. *Bionotes*. 15(2):55.
- Shangningam, B., Kosygin L. and Vishwanath, W. (2013) Redescription of *Psilorhynchus rowleyi* Hora and Misra 1941 (Cypriniformes: Psilorhynchidae). *Ichthyological Research*. (DOI 10.1007/s10228-013-0344-0).
- Subramanian, K. A. (2013). "7 Edens and 70 Fairies". *Curr. Sci.*, 104(11): 1561-1562. (Book Review).
- Lal, B and Hegde, V. D. (2012) Notes on a collection of Dermaptera, *Rec. Zool. Surv. India*, 112 (Part 3): 45-51.
- Dasgupta, J and Hegde, V. D. (2012) Record of pleasing fungus beetles (Coleoptera: Erotylidae) from Tripura state, India, *Rec. Zool. Surv. India*, 112 (Part 3): 113-115.
- Hegde, V. D., Lal, B., and Kushwaha, R.K. (2013) Darkling beetles (Tenebrionidae: Coleoptera) of Dudhwa National Park, Uttar Pradesh, India, *Journal on New Biological Reports* 2(2):130-141.

- Sidhu, A. K., Chandra, K. and Palot, J. (2012) Observations on the status and diversity of butterflies in the fragile ecosystems of Ladakh (J & K). *Rec. zool. Surv. India*. 101-112.
- Jehamalar, E, and Chandra, K. (2012) New Records of Two Gerrinae (Gerridae: Heteroptera: Hemiptera) from Tamil Nadu"

Hexapoda. 19(1): 4750.

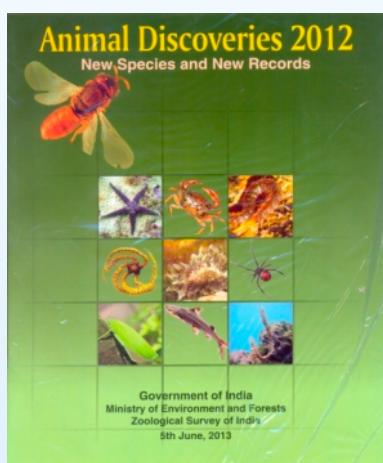
- Girish Kumar, P. (2012) New record of the genus *Omicroides* Giordani Soika (Hymenoptera: Vespidae: Eumeninae) from India. *Rec. Zool. Surv. India*, 112 (Part-3): 89-93.



Animal Discoveries 2012 — book released by Honourable Minister of Environment & Forests at New Delhi on 5 June 2013.



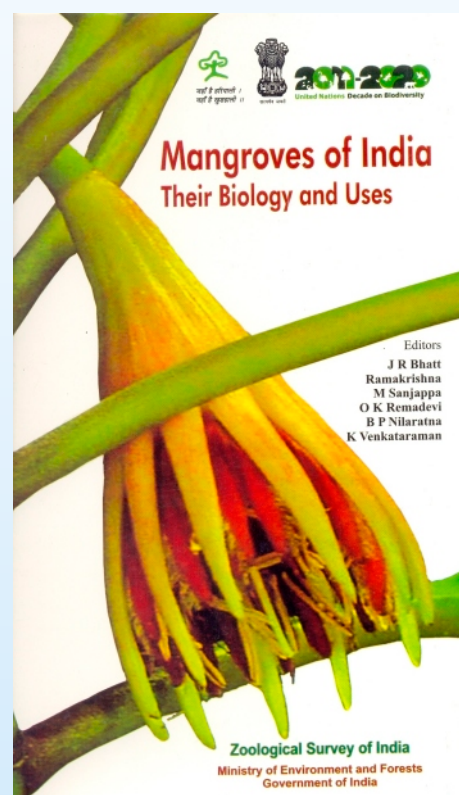
During Hindi training.



Animal Discoveries 2012



Mr. Simon Poulton, Ph. D. Scholar, School of Biological Sciences, University of East Anglia, Norwich, United Kingdom studied specimens of Murids and Scurids at Mammals and Osteology Section from 18-19 June, 2013.



Mangroves of India



Stilt Bug (Hemiptera: Brytidae) from Maharashtra.



Omicroides singularis (Smith) (Hymenoptera: Vespidae: Eumeninae), a new record from India.

Andaman & Nicobar Regional Centre, Port Blair

During the month, field surveys have been conducted in marine and terrestrial ecosystems of South, Middle and North Button Islands, Henry Lawrence Island, John Lawrence Island, Wall Island and Havelock Island in Ritchie's Archipelago from 10-15 June, 2013, and 5-days local survey in the terrestrial ecosystem of South Andaman at different dates have also been conducted to assess the faunal communities.

As a result of these surveys, a total of 325 species have been identified from these areas. Among them, 160 species of scleractinian corals, 8 species of polyclads, 8 species of opisthobranchs, 27 species of gastropods, 9 species of bivalves, 6 species of crabs, 1 species of shrimp and 16 species of fishes have been identified from marine habitats; while, 5 species of insects, 24 species of butterflies, 2 species of amphibians, 11 species of reptiles, 48 species of birds have been identified/observed from terrestrial environment. Of which, three species of scleractinian corals, *Acropora rosaria* (Dana, 1846), *Stylophora wellsi* Scheer, 1964 and *Porites mayeri* Vaughan, 1918 have been recorded from India for the first time India, while, a crab *Neopetrolisthes maculatus* (H. Milne

Edwards, 1837) is new to Andaman and Nicobar Islands.

A total of 161 specimens belonging to various faunal groups as follows have been recorded: 82 specimens of corals, 50 specimens of molluscs, 15 specimens of crabs, 9 specimens of butterflies, 3 specimens of diptera, and 2 specimens of hymenoptera have been registered in the National Zoological Collections of ZSI. One specimen of migratory bird brought by the Forest Range Officer of Mangultan Range, South Andaman has been identified as *Fregata minor* (Gmelin, 1789), and a lot containing 9 species of corals and 23 species of molluscs have been identified for the Forest Range Officer of Protection Range, Port Blair on request.

Four Rapid EIA proposals for the construction of Deficient single living accommodation, Workshop facilities for CASU (Fleet Maintenance Unit), Road, and Special repairs to the existing boundary and extension of boundary wall at CG DHQ-09, Ariel Bay, Diglipur, North Andaman have been submitted to the Garrison Engineer, Indian Coast Guard, Ministry of Defence, Port Blair on request. Final report on the 'Rapid

Environmental Impact Assessment studies on the road alignment from Shastri Nagar to Indira Point, Great Nicobar Island, Phase III & IV (Km 43.45 to Km 61.45) has been submitted to the Border Roads Organization, Ministry of Defence, Port Blair.

A proposal for organizing two-days workshop on the 'Value of Biodiversity in Island Biosphere Reserve' in collaboration with UNESCO, Paris has been submitted to ZSI headquarters. Walk-in-interview for the recruitment of JRFs in the grant-in-aid project of the Centre was conducted on 19th June 2013 in which Dr. C. Raghunathan, Scientist-C & Officer-in-Charge and Dr. C. Sivaperuman, Scientist-C served as members of selection committee. Mr. P.T. Rajan, Sr. Zoological Assistant and Mr. Tamal Mondal, SRF delivered lectures on 'Marine Biodiversity of Andaman and Nicobar Islands with special reference to Fishes' and 'Coral Reef Ecosystem of Andaman and Nicobar Islands' respectively on the occasion of World Environment Day observed at Anthropological Survey of India on 5 June 2013.

Dr. C. Sivaperuman edited 12 manuscripts for the *Journal of Andaman Science Association* while one manuscript for the *World Journal of Agricultural Sciences*. Dr. C. Raghunathan received a 'Certificate of Appreciation' from Central Agricultural Research Institute (CARI), ICAR, Port Blair on 23 June, 2013 for the meritorious services to CARI; served as an

External Member on 21 & 22 June, 2013 for the selection of 8 different categories of meritorious award winners including best scientist, best division etc. of CARI; served as an External Examiner for conducting Ph.D. viva-voce examination at Centre of Advanced Study in Marine Biology, Annamalai University, Tamil Nadu on 28 June, 2013.

Publications

- Mondal, T., Raghunathan, C., and Venkataraman, K. (2013) Description of *Favites monticularis* sp. nov. (Faviidae) off North Andaman Islands, India. *Journal of Threatened Taxa*, 5(10): 4510-4513.
- Sujana, K.A., Sivaperuman, C., and Anil Kumar, N. (2013) Lianas as a food source for arboreal mammals of Western Ghats, India. LAP Lambert Academic Publishing, Germany, 97p.



Gastropod *Cypraea talpa* Linnaeus 1758



Sponge *Stylissa massa* Carter 1887



Polyps of coral *Goniopora minor* Crossland 1952



Reptile *Xenochrophis tytleri* Blyth 1863



Lizard *Coryphophylax subcristatus* Blyth 1860 (male)



Coral *Psammocora digitata* MED H 1851



Coral *Lobophyllia robusta* Yabe Sugiyama and Eguchi 1936

Western Ghat Regional Centre, Kozhikode (Calicut)

During the month, scientific staff of the Centre have identified 7 species of Pteromalidae (Hymenoptera) including one new species, 8 species of Platygasteridae (Hymenoptera) including 4 new species, two species of Odonata, 3 species of Dermaptera (Insecta) and 3 species of Reptilia. Descriptions about three new species such as *Merismomorpha tamilnadensis* sp.nov. (Pteromalidae: Hymenoptera), *Baeus primitus* sp.nov. and *Calotelea laminaris* sp.nov (Platygasteridae: Hymenoptera) and a new record of Odonata species, *Lyriothemis acigastra* from Peninsular India have been published. Another 5 new species (of Hymenoptera) have been described and the manuscripts submitted for publication. During the month, *Cryptotermes dudleyi* Banks

(Isoptera), a new distribution record from Calicut has been identified and the species been re-described. During the month, scientific staff of the Centre, have rendered two identification and advisory services besides supervising dissertation works of M.Sc. students; also reviewed two research manuscripts for reputed journals. To mark the occasion of the World Environment Day-2013, on 05 June 2013, a painting competition for high school students on the theme 'Save Water-Save Nature' has been organized and a lecture on 'Environmental problems of India' delivered by Dr. P. M. Sureshan, Scientist-C and Officer in charge. On 11 June 2013, Dr. K. Rajmohana, Scientist-C has delivered a lecture on 'Exploring the Lesser known' at Academic Staff

College, University of Calicut. On 7 June 2013, Dr. Md. Jafer Palot, Asstt. Zoologist, has hosted a quiz competition for the students of Providence Women's College, Calicut on "Biodiversity of Kerala" in connection with the World Environment Day Celebrations. Prof. Raychaudhuri, University of Kolkata visited the Centre and delivered a talk on 'Translating Biodiversity in to Bioresources' to the students and researchers on 12 June 2013. During the month, 102 visitors paid their visits to the museum.

Publications

- Sureshan, P.M., Manickavasagam, S., and Dhanya, B. (2012) A review of the Oriental species of *Merismomorpha* Girault (Hymenoptera : Pteromalidae) with description of a new species parasitizing *Cerococcus* sp. (Hemiptera : Sternorrhyncha : Cerococcidae) from Tamil Nadu, India. *Hexapoda* 19(1): 15-21.
- Rajmohana, K. (2013) Insecta: Hymenoptera: Platygasteridae. Fauna of Bhadra wildlife sanctuary and Tiger Reserve. *Conservation Area Series*, **46**: 11-23.
- Rajmohana, K., and Bijoy, C. (2013) Insecta: Hymenoptera: Diapriidae. Fauna of Bhadra wildlife sanctuary and Tiger Reserve. *Conservation Area Series*, **46**: 25-29.
- Bijoy, C. and Rajmohana, K. (2013) First report of *Prosaspicera validispina* (Kieffer), 1910 (Hymenoptera: Figitidae) from Kerala (India), along with notes on range extension.

Journal of New Biological Records. 2(2): 127-129.

- Emiliyamma, K.G., Palot, M.J., Radhakrishnan, C., and Balakrishnan, V.C. (2013) *Lyriothemis acigastra*: a new addition to the Odonata fauna of Peninsular India. *Taprobanica* 5(1):73-74.
- Palot, M.J. (2013) Vertebrate faunal diversity of Western Ghats. In: *Proceedings of the UGC Sponsored National Seminar on Western Ghats: Biogeography, Biodiversity & Conservation*. Pp: 82-62. Department of Botany, NSS College Manjeri, Malappuram Dt, Kerala.
- Palot, M.J. (2013) Uragangal: Rajavembala. (Reptiles: Snakes of Kerala: King Cobra). *Koodu- An environmental Magazine in Malayalam* 2: 41.



Prof. D. Raychaudhuri, University of Kolkata delivering a lecture to the students and researchers at the centre.



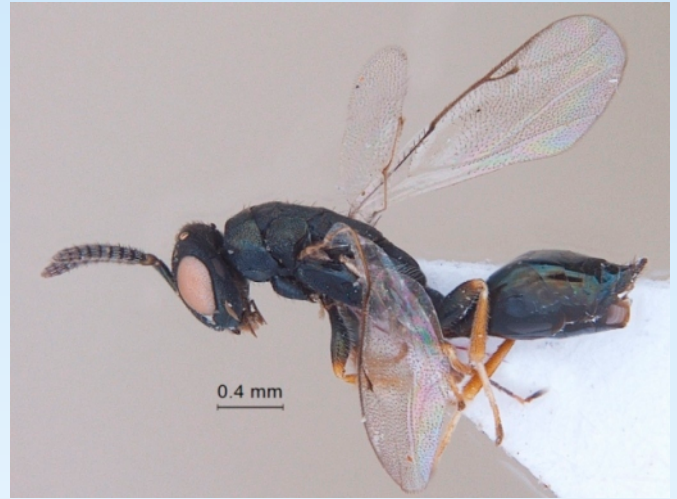
Painting competition for students held at the centre on World Environment day



Prize distribution of painting competition



Pteromalus puparum (Linnaeus) (Hymenoptera : Pteromalidae)



Syntomopus nigrus Sureshan & Narendran
(Hymenoptera : Pteromalidae)



Phylloneura westermanii (Odonata: Protoneuridae)



Lyriothemis acigastra (Odonata : Libellulidae)



Oligodon venustus (Reptilia : Colubridae)



Bangarus caeruleus (Reptilia : Elapidae)

Sunderbans Regional Centre, Canning

During the month, 6 species of Orthoptera from twelve examples, two species of Lepidoptera from three examples have been identified and

registered. Twenty-one school students visited the museum of our office during the month.

Estuarine Biology Regional Centre, Gopalpur-on-Sea

During the month, 3rd faunastic survey to Narmada and Tapi estuary, Gujarat has been conducted mostly from 14-25 June 2013. A total of, 613 samples of fishes, mollusca, crustacea and insects have been collected for taxonomic studies. Five species of Bivalve molluscs belonging to 2 genera and one family have been identified from 123 examples collections from Malacofauna of Pennera Estuary, Nellore, Andhra Pradesh. Thirty-seven, examples of mollusca belonging to 10 species under 10 genera and 10 families have been collected from Nua Nai estuary of Puri District. The Centre also celebrated the World Environment Day on 5 June, 2013 by organizing drawing

competition for underprivileged children of J.J. Children's Home, Gopalpur on the topic of 'Environment and Biodiversity'. The ceremony has been presided by Dr A.K. Panigrahi, Professor and Head of Department of Botany and Environment Science, Berhampur University. During the month, 20 specimens have been digitized. About 40 visitors visited National Zoological Collections at the Centre during the month.

On 27 June, 2013, Dr Swetapadma Dash, Scientist-C and Officer-in-charge of the Centre has attended a meeting of Similipal Biosphere Reserve Management Council (SBRMC).



Children of J.J. Children's Home, Gopalpur during drawing competition held at the Centre.



The Chief Guest Briefing the audience about environment conservation.



Prize distribution to the winners.



Fishing at Narmada Estuary, Jadeshwar.



Clarias batrachus (Lin.) from Tapi Estuary at Hazira.



Harpadon nehereus (Ham.)

Northern Regional Centre, Dehradun

The scientists of the Centre have identified following fauna during the month: 2 species of Amphibia and 10 species of nematodes from Punjab; 5 species of nematodes from Sultanpur National Park, Haryana; 7 species of Hymenoptera from Sunderban (WB); 6 species of nematodes from Govind WLS (Uttarakhand) and 5 species of Acridoidea from Dehradun.

One intensive survey around Dehradun has been conducted to collect butterfly fauna for molecular studies; DNA extracted from four species belonging to Family Pieridae, while Amplicons of COI gene using universal primers obtained from 4 species of subfamily Daninae: *Parantica aglea* (Stoll), *Euploea core* (Cramer), *Euploea mulciber* (Cramer), *Tirumala limniace* Cramer.

A scientist of the Centre has visited HQ office for collection of hair samples for trichotaxonomy and molecular studies of Lesser cats. Analysis of Primary Guard Hair from dorsal region of Leopard cat *Prionailurus bengalensis* has been done by SEM golden coating and DNA extracted from eight samples of Jungle cat *Felis chaus* and Leopard cat *Prionailurus bengalensis* mostly from skin and formalin immersed tissues. Amplified Cyt b and 12SrRNA gene of Leopard cat *Prionailurus bengalensis*.

One hundred and thirteen permanent wax slides of nematodes have been prepared from soil samples collected from Punjab, Sultanpur National Park and Govind Wildlife Sanctuary for morphological studies.

During the month, 52 examples of nematodes, 7 examples of Hymenoptera and 20 examples of amphibia have been registered, while 10 database entries have made for nematodes and 51 entries for Lepidoptera in Invertebrate datasheet. Eleven species of fishes have been digitized and their metadata entered. The World Environment Day (5-6-2013) was celebrated at NRC by planting some trees in the campus.

On 5 June, 2013, Dr. P.C. Tak, Scientist-D and Officer-in-Charge has acted as chief guest along with Dr. Archana Bahuguna, Scientist-C of the Centre during a function held at ASI on the occasion of the World Environment Day. Dr. Tak. also attended the inaugural function and a workshop on 'Modern Perspective in Himalayan Geosciences' and the Golden Jubilee of Indian Geophysical Union on 11 June, 2013 organised by the WIGH. Around 60 students visited the museum of NRC during June 2013.

Publications

- Rizvi, A. N., and Bhutia P. T. (2012) Prevalence of Helminth parasites in anuran amphibian of Dehradun (Uttarakhand), India. *Annals of Forestry* 20(2): 273-282.
- Sharma, N. (2012) Distribution of Satyrid butterflies in Himachal Pradesh, *Annals of Forestry* 20(2): 283-289.



The World Environment Day (5-6-2013) was celebrated at NRC by planting some trees in the campus.



Three IFS Officers from Uttar Pradesh, visited the Museum of NRC and Labs.



Marine Aquarium & Regional Centre, Digha

During the month, around 108 examples of live marine ornamental exhibits have been collected for exhibition in aquarium galleries; aquarium received an average of 690 tourists per day. The major attractions among the tourists are - tube worms; live mollusks *Tonna dolium*; Yellowtail blue damsel fish; Tripletail *Lobotes surinamensis*. In total, 275 specimens have been identified including 23 species of fishes (40 specimens) and 29 species of mollusks (235 specimens). The specimens identified include *Cheilopogon intermedius* which is a new record to the West Bengal coast and *Kyphosus vaigiensis* a new record to Odisha Coast. Dr. Anil Mohapatra, Scientist-C and Officer-in-Charge of this centre has delivered a

lecture on 8 June, 2013 at Digha Science city on the occasion of World Ocean Day. One survey has been conducted along Andhra Pradesh coasts from 21-28 June, 2013.

Publications

- Mohapatra, A., Tudu, P. C., and Yennawar, P. (2012) A note on occurrence of yellow-wing flying fish, *Cypselurus poecilopterus* (Valenciennes, 1847) from Digha, east coast of India. *Records of Zool. Surv. India* 112(3):119-120.
- Yennawar, P., Tudu, P. C., Mohapatra, A. (2012) First report of stargazer *Ichthyoscopus lebek* (Bloch and Schneider, 1801) from Digha, India. *Records of Zool. Surv. India* 112(2): 117-118.

- Yennawar, P., Ray, D., Mohapatra, A. (2012) Occurrence of Pennat coral fish, *Heniochus acuminatus* (Linnaeus, 1958) (Perciformes: Chaetodontidae) along Digha coast, India. *Records of Zool. Surv. India* 112(2):121-122.
- Tudu, P. C., Ray, D., Mohapatra, A. (2013) First record of Turrid Shell, *Gemmula vagata* from northern east coast of India (Mollusca: Littorimorpha: Turridae). *BIONOTES* 15(2): 58.



Tube worm

*Lobotes surinamensis*

Live mollusks in Aquarium tank

*Kyphosus vaigiensis*

Damsel fishes

*Cheilopogon intermedius*

Freshwater Biology Regional Centre, Hyderabad

Scientific staff of the Centre have examined 39 examples of fish specimens from the earlier collections of Cumbum Lake, A.P. and identified as 2 species under 2 genera belonging to 1 family viz. *Salmophasia balookei* and *Puntius sophore*; also examined 28 examples of fish specimens from the earlier collections of Krishnaraja Sagar Reservoir, Karnataka and identified as 13 species under 8 genera belonging to 4 families viz. *Puntius conchoni*, *Puntius vittatus*, *Puntius carnaticus*, *Puntius dorsalis*, *Cirrhinus reba*, *Cirrhinus fulungee*, *Garra mullya*, *Rasbora daniconius*, *Hypselobarbus*

micropogon, *Mystus malabaricus*, *Mystus armatus*, *Channa punctatus*, *Oreochromis mossambicus*.

Plankton samples of earlier collections made from lakes of Hyderabad have been analysed and identified as 4 species of rotifers- *Brachionus urciolaris*, *Brachionus patulus*, *Asplanchna brightwelli* and *Cephalodella forficula* and one species of cladocera- *Pseudochydorus globosus*.

As part of the digitization process, we have digitized 130 specimens belonging to 58 species of fishes, mollusks, rotifera and crustaceans.



▲ *Parambassis ranga*



▲ *Puntius sophore*



▲ *Salmophasia clupeioides*



▲ *Mystus malabaricus*



▼ *Glosogobius giuris*

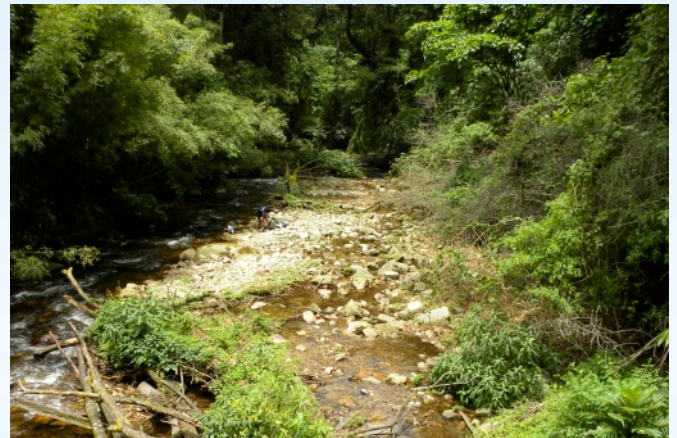
Arunachal Pradesh Regional Centre, Itanagar

During the month, Dr. Bikramjit Sinha, Scientist-C and Officer-in-Charge, has undertaken a survey tour to Lower Subansiri from 07-16 June, 2013 and collected more than 1000 examples of fishes and representative examples of other faunal groups. In continuation of the rejuvenation of the museum collections, 135 already registered fish specimens have been photographed for digitization and permanent and modified labelling have been done. Some of the notable

fish species digitized include *Aborichthys waikhomi*, *Amblyceps arunachalensis*, *Conta pectinata*, and *Lepidocephalichthys arunachalensis*. During the month, 96 examples of fishes collected during the recent surveys have been studied and identified; they include 12 species belonging to 06 families, 09 genera. Some of the interesting fishes are *Badis singenensis*, *Garra magnidiscus* (new species described by one L. Tamang) and *Oreochromis mossambicus*.



Sampling site of Kamla river near Pai village.



Sampling in Pange river at Aro Lenching, LSD.



Lepidocephalichthys arunachalensis



Conta pectinata



Amblyceps arunachalensis



Aborichthys waikhomi

Central Zone Regional Centre, Jabalpur

During the month, 18 species of moths (Lepidoptera), 2 species of Coleoptera, 6 species of Hemiptera and 34 species of Odonata have been identified and registered from Madhya Pradesh. One faunistic survey has been conducted at Ralamandal Wildlife Sanctuary, Indore and Kheoni Wildlife Sanctuary, Dewas of Madhya Pradesh from 17-28 June, 2013 and collected various faunal groups including Geometrid fauna.

Publications

- Chandra, K., and Kushwaha, S. (2013) Distribution and diversity of Hemiptera fauna of Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh, India. *Munish Journal of Entomology* 8(2): 677-681.
- Chandra, K., and Kushwaha, S. (2012) Addition to the true bugs (Hemiptera) Fauna Of Pachmarhi Biosphere Reserve, Madhya Pradesh, India. *Annals of forestry* 20(2): 250-254.
- Chandra, K., Pandey, K., Bhandari, R. and Sambath, S. (2013) Diversity of hawk moths (Lepidoptera: Sphingidae) in Veerangana Durgavati Wildlife Sanctuary, Damoh, Madhya Pradesh. *Biological Forum-An International Journal* 5(1): 73-77.
- Shrivastava, J. J., Talmale, S. S., Patil, U. K., and Sonar, G. R. (2013) Occurrence of Indian Tree Shrew *Anathana ellioti ellioti* (Waterhouse, 1850) in Khandesh, Maharashtra. *Small Mammal Mail - Bi-Annual Newsletter of CCINSA & RISCINSA* 5(1): 32-34.

Some new records of Hemipteran fauna of Madhya Pradesh



Adria parvula (Dallas): Pentatomidae



Adrisa magna (Ulher): Cydnidae



Cydnus varians (Fabricius): Family: Cydnidae



Guliemus laterarius Distant: Family: Pentatomidae



Macroscytus brunneus (Fabricius): Family: Cydnidae



Zicrona caerulea Linnaeus: Family: Pentatomidae

Marine Biology Regional Centre, Chennai

During the month, an internship training programme has been conducted for the Post graduate Zoology students of Loyola College, Queen Mary's College, Pachayappa's College, Chennai. During the training programme, procedures for collection, preservation and identification of various groups like Protozoa, Meiofauna, Sponges, Corals and birds have been taught. Dr. L. Bindu, Scientist-C has conducted a field survey along the coast of Tamil Nadu and collected representative faunal samples. Scientists of this Centre also identified five species each of Rhizopod and Arthropoda, six species of Nematodes, nine species of Pisces and 20 species of Mollusca out of the faunal collections made during Palkbay and Gulf of Mannar Biosphere Reserve surveys. During this month, 45 species have been digitized and their metadata compiled. Dr. C. Venkatraman, Scientist-C and Officer-in-Charge has attended an Institutional Animal Ethics Committee (IAEC) meeting at GLR laboratories, Madhavaram as external scientist and also

acted as an external examiner for conducting Ph.D. viva-voce examination at Department of Zoology, Maraimalai campus, University of Madras, Chennai. Drs. C. Venkatraman and Rajkumar Rajan, Scientist-C have supervised the research projects of SRF's of the Centre. Two identification and advisory services have been rendered to Station House Officer, Anand Vihar, East District, Delhi 92 regarding confiscated marine Molluscs and for Periyar Government College, Salem identified seven species of marine sponges. During the month, around 420 tourists visited the marine aquarium and museum.



Nematode *Quadricoma scanica*



Nematode *Stephanolaimus elegans*



Nematode *Filitonchus filiformis*



Nematode *Neochrpmadora poecilosomoides*

Publications

- Sivaleela, G., and K. Venkataraman (2012) Statistical studies and ecology of benthic foraminifera from Tamilnadu Coast. *Rec. zool. surv. India* 112(3):1-8.
- Sivaleela, G., and K. Venkataraman (2012) Variation of meiofauna during day time following full moon and new moon. *Rec. zool. surv. India* 112(3):9-11.
- Sivaleela, G. (2013) On some free-living marine nematodes from Tamil Nadu coast. *Bionotes* 15(2): 49.

Gangetic Plains Regional Centre, Patna

During the month, the scientific staff of the Centre have identified 11 species of Mollusca under six families, Corbiculidae Unionidadae Neritidae, Thiaridae Pleuroceridae and Bithinidae family: *Corbicula striatella*, *Lamellidens corrianus*, *Lamellidens marginalis*, *Parreysia favidens*, *Neritina violacea*, *Thiara lineate*, *Thiara scabra*, *Thiara granifera*, *Melanoides tuberculatus*, *Brotia costula*, *Digoniostoma pulchella*. Also identified 09 species of butterflies belonging to the family Noctuidae: *Nishada flabrifera* Moore, *Lyclene dharma* (Moore), *Micraloa lineola* (Fabricius), *Trignodes hyppasia* Cramer, *Cyana pregrina* (Walker), *Cyana subornata* (Walker), *Lyclene obsoleta* (Moore), *Miltochrista postnigra* Hampson, *Syntomoid imaon* Cramer.

Dr. Gopal Sharma, Scientist-C and Officer-in-Charge of the Centre has conducted one survey for aquatic Mollusca and Zooplankton of temporary and permanent water bodies in and around Valmiki Tiger Reserve, Kusheshwar Asthan, Saraiyammann Lake and Gogabill Pakshi Vihar. On 30, June 2013, Dr. Gopal Sharma, Scientist C & Officer-in-Charge has participated as one of the panel members in scrutinizing and selecting photos of birds received from various amateur photographers

for publication as 'Birds of Bihar' by the Department of Environment and Forests, Govt. of Bihar.

Dr. Navneet Singh, Scientist-C of the Centre has conducted one survey tour from 16-22, June 2013 in South Bihar (Banka, Rohtas, Rajgir). A total of 350 specimens under 20 species belonging to the family Noctuidae have been collected.

Publications

- Neseemann, H., and Sharma, G (2013) Observations on the life history of giant water bugs *Lethocerus* Mayr, 1853 (Heteroptera: Nepomorpha: Belostomatidae) in the Gangetic plains of India and Nepal. *Journal of Threatened Taxa* 5(10): 44744482.
- Singh, J., Singh, N. and Joshi, R. (In Press) A new species of genus *Capissa* Moore (Lepidoptera: Erebiidae: Arctiinae) from India. *Annales Zoologici*.

Gangetic Plains Regional Centre, Zoological Survey of India office-cum-museum has been shifted to a new address as follows.

Zoological Survey of India, Gangetic Plains Regional Centre, Bahadurpur Housing Colony, Sector-8, Patna-800 026, Bihar.

Western Regional Centre, Pune

During the month, 3 species of Bivalvia, 1 species of freshwater crab, 4 species of Collembola, 8 species of Hymenoptera, 3 species of Coleoptera and 12 species of freshwater fishes have been identified. Identification and advisory services have been rendered on collembolan specimens received from Entomology Division, UPASI TRF TRI, Nirar DAM, PO, Valparai, Tamil Nadu and molluscan specimens received from Department of Zoology, University of Pune. Dr. S.K. Pati has conducted a study tour to Zoological Survey of India, Western Ghats Regional Centre, Calicut to identify freshwater crabs, molluscs and terrestrial molluscs from 8-17 June, 2013.

Publications

- Pati, S.K., Rao, M. V., and Balaji, M. (2012) Recruitment dynamics of important foulers at Visakhapatnam harbour, India. *Ecotrópicos* 25(1): 114.
- Pande, S., Mahabal, A., Datar, M., Sharma, R. M., Pati, S.K., Deshpande, P., Bastwade, D. B., Padhye, A., Kulkarni, A., Joshi, R., Pandit, R., Mujumdar, N., Mhaske, P., Chhaya, K., Patil, R., and Patwardhan, A. (2013) Bio-diversity of the Parvati-Pachgaon hills: A 'habitat island' in Pune metropolis. *Ela Journal* 2(1): 2341.



Dry Sponge, *Eunapius carteri* (Bowerbank)



Hemidactylus maculatus (Dumeril & Bibron)

North Eastern Regional Centre, Shillong

During the month, a field survey has been undertaken in Nongkhylllem Wildlife Sanctuary and its adjoining areas from 1014 June, 2013 to study the fish fauna of the Sanctuary. Representative specimens of 154 fishes, 77 aquatic insects, 9 amphibia, 2 reptiles, 14 crabs, 8 prawns and 2 mollusca have been collected. From the backlog collections 15 species of aquatic and semi-aquatic insects were identified.

A specimen of bat collected from the office building of the Centre has been identified as *Barbastella leucomelas* (Hodgson).

Identification and advisory services has been rendered to the department of Zoology, Gauhati University, Assam on the identity of 13 species of fishes.

During the month, we have digitised two species of bats *Rousettus leschenaulti* and *Barbastella leucomelas* and six species of reptiles *Cyclophiops doriae*, *Ptyas nigromarginata*, *Amphiesma parallelum*, *Trimeresurus gumprechtii*,

Naja kaouthia and *Amphiesma stolatum* and their metadata entered. Apart from these, 87 entries related to fishes have been entered in the database. The Centre observed the World Environment Day on 5 June, 2013 and organized a cleaning drive-cum-saplings plantation within the office premises.

Publications

- Saikia, U., and Boro, A.R. (2013) Bat fauna of the western Himalayas of India: A zoogeographic perspective. *Taprobanica* 5(1): 50-59.
- Saikia, U., and Khyrnriam, D. (2013) Occurrence of Edward's rat *Leopoldamys edwardsi* (Thomas) (Rodentia: Muridae) in Mizoram, North East India. *Small Mammal Mail* 5 (1): 24-25.
- Boro, A.R., Saikia, U., and Saikia, P.K. (2013) First report of *Sascolaimus sascolaimus* Temminch, 1838 from Assam, North East India. *Small Mammal Mail* 5 (1): 2-3.



A bat *Barbastella leucomelas* (Hodgson)



A cat fish *Glyptothorax striatus* (McClelland, 1842)



During the observation of World Environment Day on 5 June, 2013 at NERC/ZSI, Shillong.



Collection site at Umnongpha stream, Nongkhylllem Reserve Forests, Ri-Bhoi district, Meghalaya.

Southern Regional Centre, Chennai

The Centre organized an Internship Training Programme on Animal Taxonomy for Post Graduate students of Zoology from 10-14, June 2013. The programme inaugurated by the Director, ZSI has extended to nearly 50 students from different colleges and universities within Chennai. All scientists of the Centre have delivered lectures on various topics of faunal diversity, taxonomy and classification and their conservation. As part of the programme, a field trip to Pallikarandai marsh, an important wetland ecosystem near Chennai has been made possible for the participating students to learn the techniques of collection and preservation of different faunal groups.

During the month, Dr. R. Venkitesan, Scientist-C has identified 222 exs. of Mollusca belonging to 20 species under 8 family and 11 genera from the collection of Southwestern Ghats and Porur Lake. Dr. Jayasree Thilak, Scientist-C has identified 2 examples of Protozoa belonging to 2 species, 2 genera under 2 families; 15 examples of Rotifera belonging to 7 species, 6 genera, 1 order & 3 families; 55 exs of Cladocera belonging to 13 species, 10 genera, 2 orders and 5 families; 17 exs of Ostracoda belonging to 6 species, 1 order, 4 genera, under 1 family and identified and registered 205 examples of Pisces belonging to 22 species, 14 genera, 3 orders & 8

families from Middle Eastern Ghats collections.

Dr. R. Babu, Scientist-C has identified and registered 20 specimens of Odonates and 12 specimens of Longhorn Beetles (Coleoptera: Cerambycidae). Dr. K. Ilango, Scientist-D and Officer-in-Charge, in addition to his routine official works has evaluated M.Sc. dissertations of Public Health Entomology and conducted public viva-voce examination on 28 June 2013 for Pondicherry University and Vector Control Research Centre. Dr. S. Prabakaran, Scientist-C has delivered a lecture for P.G. Zoology Teachers training programme conducted by Tamil Nadu State Council for Higher Education and rendered identification service on Membracid's specimen received from "Indian Institute of Science Education and Research Thiruvananthapuram". Dr. R. Aengals, Scientist-C has participated in the integrated Cooum River Eco Restoration Plan meeting on 14 June, 2013 held at Hotel Radisson Blue, Egmore, Chennai and the meeting of Board of Trustees held at Snake Park Trust, Chennai on 29 June 2013.

Publication

- Aengals, R. (2013) First record of Indian Slender Gecko *Hemiphyrodactylus aurantiacus* (Beddome, 1870) in Yelagiri hills, Tamil Nadu. *Cobra* 6(1): 25-26.



Director, ZSI during the inaugural function of the Internship Training on Animal Taxonomy.



Participating students at Paliakarani marsh.

Desert Regional Centre, Jodhpur

During the month, scientific staff of the Centre have identified and registered 6 species of ants and 4 species of fish from the jurisdiction area. Also digitized 10 specimens from NZC for Research Framework Document (RFD). Dr. Sanjeev Kumar, Scientist-C and Officer-in-Charge has conducted a field survey of the Chambal River from 20 June, 2013 to 01 July, 2013. Entire area along the length of the river bed has been surveyed significantly from *Garhi Tedawali* in Dholpur district up to *Garh Singadiya* in Chittorgarh district from where the river enters in to the territory of Rajasthan State. Some 24 point locations along the right and left bank of the Chambal River in the districts of Chittorgarh, Kota, Bundi, Sawai-madhopur, Karauli and Dholpur have been surveyed for vertebrate fauna and GPS data recorded. A total of 9 species of fishes, 2 species of amphibians, 16 species of reptiles, 157 species of aves and 21 species of mammals have been identified and recorded from different localities of the Chambal River. Fifteen vertebrate specimens have been collected. Besides, Dr. H. S. Banyal, Scientist-C has conducted a field survey from 6-15 June, 2013 in Sirohi, Jalore,

Barmer and Jaisalmer districts of Rajasthan. In total, 35 localities have been surveyed and GPS data recorded. Field photographs pertaining to habitats of different faunal groups have been taken. Around, 461 specimens of invertebrates and vertebrates have been collected. Dr. Sanjeev Kumar, Scientist-C has attended and presented a research paper as mentioned below under publication section. Dr. Sanjeev Kumar, Officer-in-charge has organized and attended quarterly meeting of *Rajbhasa Karaynvayan Samiti* at the Centre on 17 June, 2013 and also attended by Dr. H. S. Banyal, Scientist-C.

Publication

- **Kumar, S., and Banyal, H. S. (2013)** Threats to wetlands and its faunal diversity- a case study on Chambal River, Rajasthan in the post CBD-COP-11 seminar on wetlands and Biodiversity conservation and role of education for sustainable development (ESD). **Publ:** Indian Environmental Society, New Delhi. pp: 167-168. (*Abstract*).

High Altitude Regional Centre, Solan

A field survey has been conducted in the Cold desert of Spiti Valley, district Lahaul & Spiti from 24 May 2013 to 07 June 2013 and 601 examples belonging to 14 faunal groups (601exs) have been collected. Thirty six species of birds have been observed and the calls of 7 species of birds have also been recorded. Five species of mammals have been recorded during the survey. Faunal identification from the Centre for the month includes 8 species of butterflies (out of 16 examples), 1 species of Orthoptera (out of 3 examples) and 1 species of Pisces (out of 1 example) from Kalatop Khajjiar Wildlife Sanctuary, dist. Chamba (HP); 2 species of Amphibia (out of 03 examples) from

Chail WLS dist. Solan. A quarterly meeting of Hindi implementation committee was held in the office on 18 June, 2013.



Vanessa indica



Neptis hylas



Lanza Village near Kibber



Common Hoopoe (*Upupa epops*)



Chukar Partridge (*Alectoris chukar*)

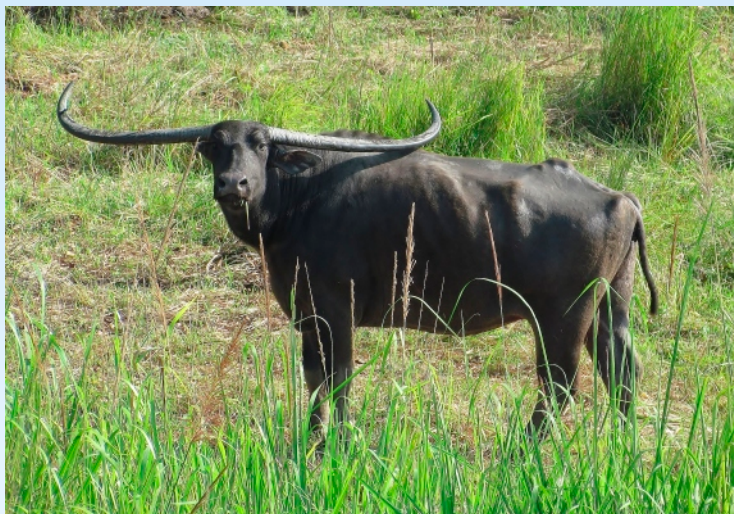


Blue Sheep (male individual)



Asiatic Ibex (*Capra ibex*)

ANIMAL OF THE MONTH



Text and photo by M. Kamalakannan,
Mammal & Osteology Section, ZSI, Kolkata

Indian Water Buffalo

(*Bubalus arnee*) (Kerr, 1792)

The Indian Water Buffalo or Wild Water Buffalo *Bubalus arnee* (Kerr, 1792) is one of the largest Bovine species of the world. It is considered as the ancestor of the domestic buffalo. The massive and larger body and widest horns of wild buffalo can be differentiated from the domestic buffalo. Its range extends from south to Southeast Asia. In India, wild buffalos are found in Arunachal Pradesh, Assam, Meghalaya, West Bengal, Odisha, Madhya Pradesh and Maharashtra. Around 90 % of the world population of the wild buffalos are found only in India,

especially in Northeast India, and 50 % of population is restricted to the Kaziranga National Park, Assam. Two valid subspecies have been recognised in India; *Bubalus arnee arnee* (Kerr, 1792) and *Bubalus arnee fulvus* (Blanford, 1891), which are known as the Indian Wild Buffalo and Assam Water Buffalo, respectively. It associates itself with large water bodies, swampy lands, grasslands and their surrounds, riparian forests, and woodlands. The global population of wild buffalos is estimated to be less than 4000 individuals, and its population trend is decreasing mainly due to major threats such as interbreeding with feral and local domestic buffalos, disease from domestic stock, poaching and habitat loss, etc. The present conservation status of this species is Endangered (IUCN Red List) and is listed under Part-I of Schedule-I of the Indian Wildlife (Protection) Act, 1972.

OUT OF THE BOX

Can we name earth's species before they go extinct?

<http://www.sciencemag.org/content/339/6118/413.full.pdf?sid=459d6a50-1c53-4de9-b26c-143ab4c541ac>

Global warming may raise sea levels by more than 2 metres: Study

<http://timesofindia.indiatimes.com/home/environment/global-warming/Global-warming-may-raise-sea-levels-by-more-than-2-metres-Study/articleshow/21104930.cms>

Animals produce ecologically harmful methane gas: Research

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/Animals-produce-ecologically-harmful-methane-gas-Research/articleshow/21090533.cms>

Birds indicate a planet in peril, but investing in conservation makes economic sense

<http://www.birdlife.org/community/2013/06/birds-indicate-a-planet-in-peril-but-investing-in-conservation-makes-economic-sense/>

Chinese scientists discover new dragonfly subspecies

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/Chinese-scientists-discover-new-dragonfly-subspecies/articleshow/21126812.cms>