

Vol.06 | No.04

ZSI e-NEWS

Apr 2014

The Monthly Electronic Newsletter of Zoological Survey of India

*ZSI in the 99th year of Service to the Nation
(1916 to 2014)*

FROM THE DIRECTOR'S DESK

I have already written to you in the last couple of month that the ZSI will celebrate its centenary celebrations from July, 2015 onwards to commemorate 100 glorious years of its existence. We have already started the preparations as we are left with very little time as this sort of occasion will be an event of 'once in a life time' for many of us. It would be unethical if we do not remember the stalwarts who once worked for the ZSI. And amongst them, Late Dr. Thomas Nelson Annandale-ZSI's founder Director requires special mention as because recently we have paid homage at his mortal remains at Scottish Cemetery in Kolkata. I decided to start the preparations for the

centenary celebrations by placing a wreath on the tomb of Annandale along with the staff of ZSI on 10 April, 2014 on his 90th death anniversary. Born on 15 June, 1876 at Edinburgh, Dr. Annandale had served in the British India as naturalist and later on went on to become the founder Directors of ZSI in 1916. Though died at a very young age of 48 his contributions in the field of zoology and anthropology of the country were enormous. I hope that his legacy will remain for long time to be revered by many generations of animal taxonomists of the country.

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, Kerala and Mizoram. Local survey has also been conducted in Sunderban Biosphere Reserve (West Bengal). Scientists of Headquarters have identified, 10 species of Protozoa, 31 species of hard corals, 5 species of Platyhelminthes, 17 species of Earthworms 4 species of Collembola, 15 species of Coleoptera, 36 species of Hemiptera, 16 species of Lepidoptera, 2 species of shrimps, 7 species of marine crabs, 17 species of crabs, 2 species of isopods, 1 species of staomatopods and 10 species of freshwater crabs, 23 species of Fishes and 1 species of Mammal from the States of Himachal Pradesh, Maharashtra, Andhra Pradesh, Assam, Kerala, Gujarat, Rajasthan, Tamil Nadu, Uttarakhand, Odisha, Chhattisgarh, Uttar Pradesh, West Bengal, Andaman and Nicobar Islands and also from Pakistan.

A new species namely *Epsilon manasicum* Girish Kumar & Carpenter, 2014 (Hymenoptera: Vespidae: Eumeninae) is described from Manas National Park, Assam. Similarly, a new subspecies namely *Rhynchium haemorrhoidale andamanicum* Girish Kumar & Gaurav Sharma, 2014 (Hymenoptera: Vespidae: Eumeninae) is described from Andaman & Nicobar Islands. The species *Rhynchium brunneum* (Fabricius, 1793) (Hymenoptera: Vespidae: Eumeninae) is reported for the first time from Andhra Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Manipur, Mizoram and Tripura.

The species *R. carnaticum* (Fabricius, 1798) (Hymenoptera: Vespidae: Eumeninae) is reported for the first time from Andhra

Pradesh, Assam, Bihar, Delhi, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Meghalaya, Odisha and Uttarakhand. This species is also been recorded for the first time from the neighbouring Pakistan.

The subspecies *R. haemorrhoidale haemorrhoidale* (Fabricius, 1775) (Hymenoptera: Vespidae: Eumeninae) is reported here for the first time from Andaman & Nicobar Island. The subspecies *R. oculatum leviscutis* (Cameron, 1908) (Hymenoptera: Vespidae: Eumeninae) is recorded for the first time from Delhi. *Aborolabis pervicina* (Burr, 1913) recorded for the first time from Terai Ecosystem of Uttar Pradesh, India. *Lutjanus erythropterus* Bloch reported for the first time from West Bengal coast.

One species of Cladocera *Moina hemanti* (11 examples) (1 Holotype and 10 Paratypes), sent by Mr. S. M. Padhye from Pune, Maharashtra has been deposited in NZC.

Identification and advisory services have been rendered on 22 lots of specimens received from different institutions and organizations. In addition to that, identification and advisory services have also been rendered on the material received (8 vials, 114 exs.) from Mr. Angshuman Raha, JRF, Chhattisgarh; Dr. Ranjit Kr. Khaluna, Asstt. Prof. & Head, Dept. of Zoology, Nerajole Raj College, West Midnapore, W.B., Dr. Paulami Maiti, Asstt. Prof., Dept. of Zoology, Lady Brabon College, Kolkata. Dr. S. A. Ansari, Institute of Forest Productivity, Ranchi, Gumla, NH-23, Lalgutura, Ranchi and Dr. S. K. Gupta, Guest Faculty, Integrated Rural Development and Management, Ramkrishna Mission Vivekananda University, Naredrapur. Dr. Arvind Kumar, Scientist-C and Head of

Entomology Division visited Hemiptera Section in connection with identification of lac insects. Zeeshan Mirza & Rajesh Sanot, National Center for Biological Sciences, Bangalore, Karnataka visited the Amphibia Section of ZSI, HQ, Kolkata.

A research paper entitled "On a collection of Butterflies (Lepidoptera :Rhopalocera) from Kaimur Wildlife Sanctuary, Mirzapur (U.P.) by Chandra *et al.* was sent to Mr Subrat Kumar Behera, Field Officer, Wildlife Trust of India. Dr Filippo M. Buzzetti, WBA - World Biodiversity Association, Via Trento, Italy has been supplied with a paper entitled 'On the genus *Hydrometra* Latreille (Hemiptera: Heteroptera: Hydrometridae) from India with description of two new species on request [Zootaxa, 3779 (5): 501- 517]. Debashis Talukder, Chemist, Vivekananda Pharmacy, Madhyamgram, North 24 Parganas, West Bengal has been provided with identification and advisory services by General Non-chordata Division, ZSI HQ, Kolkata.

Dr. K. Venkataraman, Director, Zoological Survey of India has participated in a workshop on "Biodiversity and Livelihood" organized by MoEF, New Delhi at India Habitat Centre on 3 April, 2014. Dr. Venkataraman, also has attended a meeting at MoEF, New Delhi on 7 April, 2014 in connection with the finalization of date for PMC of ZSI and on the proposed National Conference on faunal diversity and centenary celebration of ZSI. Dr. K. Venkataraman, has also attended a meeting on the role of insects pollinator on the conservation of major mangrove species in Sunderban Islands, West Bengal on 16 April, 2014 at MoEF, New Delhi. He also attended a meeting at S.R.C. and M.B.R.C., ZSI, Chennai and New Delhi from 22-25 April, 2014.

Dr. Gaurav Sharma, Scientist-C & Officer-in-

Charge of Mammal & Osteology Section has identified 4 rodent specimens as *Rattus rattus gangutrianus* Hinton. Dr. Sharma, has also identified the following seized material: (a) 4 canines belongs to Warthog, *Phacochoerus africanus* (Gmelin, 1788) and skin belongs to Kangaroo, *Macropus* sp. received from Shri C. Behera, IFS., Reg. Dy. Director, W.C.C.B., E/R. Kolkata and seized material received from The D.F.O, Baikunthapur Division, Siliguri, W.B. identified as it belongs to Leopard *Panthera pardus* (Linnaeus) and one skin of Smooth Coated Otter *Lutrogale Perspicillata*. Dr. Gaurav Sharma, Scientist-C & Officer-in-Charge Mammal & Osteology Section has participated in "National Workshop on Strategies of Biodiversity Conservation and Rural Livelihood improvement in Little Rann of Kutchh, Askot, Agasthyamalai and Satpura Landscapes" being organized by the Ministry of Environment & Forests, New Delhi held on 3 & 4 April, 2014. He has also participated in the '7th CITES Cell Meeting' being organized by the Ministry of Environment and Forests, New Delhi on 25 April, 2014.

Prof. S.B. Roy, Chairman, Indian Institute of Bio-Social Research & Development (IBRAD), Kolkata visited Lepidoptera and Mammal sections, ZSI HQ, Kolkata on 04 April, 2014. On 7 April, 2014, M. Sc., Students (Zoology) from Bangobase College, Kolkata have also visited the Section.

Publications

- Acharya, S and Basu, P. (2014) Diversity and Distribution of Soil Oribatid Mites (Acari: Oribatida) in Himachal Pradesh -An overview. *Environ. & Ecol.* 32(2): 522-526.
- Barman, R.P., Das, A. and Mishra, S.S. (2014) On the occurrence of Crimson Snapper, *Lutjanus erythropterus* (Perciformes: Lutjanidae) from West

- Bengal, India. *Rec. zool. Surv. India*, 113 (2) [2013]: 81-84.
- Bindu, L., Chitra J and A.K. Sanyal. (2013) On some Protozoa and zooplankton of sewage systems in Kolkata. *Rec. Zool. Surv. India.*, 113(2): 141 - 143.
 - Chandra. K., Raha, A., Majumdar., Parida, A. and Sarsavan, A. (2013) First record of Banded Krait, *Bungarius fasciatus* (Schneider,1801), (Reptilia: Elapidae), from Guru Ghasidas National Park, Koriya district, Chhattisgarh, India. *Rec. zool. Surv. India*: 113(2): 77- 80.
 - Chatterjee, T.K., Barman, R.P. and Mishra, S.S. (2014) Mangrove associate gobies (Teleostei: Gobioidae) of Indian Sundarbans. *Rec. zool. Surv. India*, 113(3) [2013]: 59-77.
 - Ghosh, S., and Mandal, G.P. (2013) Aquatic Beetles of Nayachar Island, East Midnapore Dist., West Bengal. *Rec. zoo. Surv. Ind.* 113(3): 93-95.
 - Mishra, S.S., Das, A. and Barman, R.P. (2014) Notes on some snakehead fishes of India with an aid to their identification. *Rec. zool. Surv. India*, 113(2) [2013]: 145-152.
 - Jasmine, P. (2014). *An overview of Role of Plankton in Fisheries* FISH VOICE, Souvenir of Orissa State Fisheries 47(2): 41-42.
 - Chitra J. (2013) Diversity, Abundance and Seasonal fluctuation of Zooplankton from few wetlands in and around Kolkata, Records *Zool. Surv. India., Occ. Paper.* 352: P. 1-48, i-iv; 12 plates.
 - Hegde, V. D. & Lal, B. (2013). Record of *Aborolabis pervicina* (Burr, 1913) from Terai Ecosystem of Uttar Pradesh, India. *Rec. zool. Surv. India* 113(2): 201-202.
 - Hussain, M. B., Dev Roy, M. K. and Lee, B. Y. (2014) First record of the brachyuran crab, *Baruna trigranulum* Dai and Song, 1986 (Crustacea: Brachyura: Camptandriidae) from Sungai Brunnei Estuary, Brunnei Darussalam. *Asian J. Anim. Sci.*, pp. 1-5. DOI: 10.3923/ajas.2014 (Uploaded Online)
 - Jehamalar, E.E. and Chandra, K. (2013) On the genus *Anisops* (Heteroptera: Nepomorpha : Notonectidae) from Andaman and Nicobar Islands, with a new record to India. *Rec. zool. Surv. India* 113(2): 55-59.
 - Mitra, S., & Pattanayak, J.G. (2014) Diversity and Distribution of Sea-Anemones (Cnidaria: Actinaria) in the Estuaries and Mangroves of Odisha, India. *Rec. zool. Surv. India* 113(3): 113-118.
 - Mitra, S., & Pattanayak, J.G. (2014) Studies on *Lingula anatina* (Brachiopoda: Inarticulata) In Subarnarekha estuary, Odisha with Special references to habitat and Population. *Rec. zool. Surv. India* 113(3): 49-53.
 - Mitra, S., & Pattanayak, J.G. (2014) Mangrove associated *Sipunculids* (Sipuncula: Phascolosomatidae) and Echiurids (Echiura: Thalamematidae) From Odisha Coast, India. *Rec. zool. Surv. India* 113(3): 55-58.
 - Girish Kumar, P., Carpenter, J.M., and Kishore, L. (2014). A review of the genus *Epsilon* de Saussure (Hymenoptera: Vespidae: Eumeninae) from India. *Journal of Threatened Taxa* 6(1): 5380-5385.
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 - Girish Kumar, P., and Sharma, G. (2014). Studies on a collection of aculeate Hymenoptera from Nayachar Island, West Bengal. *Zoo's Print* 29(4): 22-26.

- Seth, J.K., Sahoo, S. and Mitra, S. (2014) First record of Isopod parasite *Nerocila phaeopleura* on the host Fish *Rastrelliger*



Director along with the senior scientists of ZSI on the occasion of senior officer's meeting at ZSI, HQ, Kolkata.



Drs. Kailash Chandra and K. Venkataraman during meeting of senior officers of ZSI held at ZSI HQ, Kolkata.



Scottish Cemetery where the tomb of Dr. T.N. Annandale was discovered.

kanagurta, collected from Bay of Bengal, Odisha. *International Journal of Current Research* 6(4): 6092-6093.



Dr. Gurupada Mondal, Scientist-C with DZSI during meeting to discuss about new RDF format.



Mr. M. Kamalakannan of Mammal Section, ZSI, Kolkata at the Department of Zoology, Cambridge University, U.K. during his poster presentation.



Director, ZSI along with staff of ZSI paid floral tributes to Dr. T.N. Annandale's tomb.



Tombstone of Dr. T.N. Annandale at Scottish Cemetery, Kolkata.



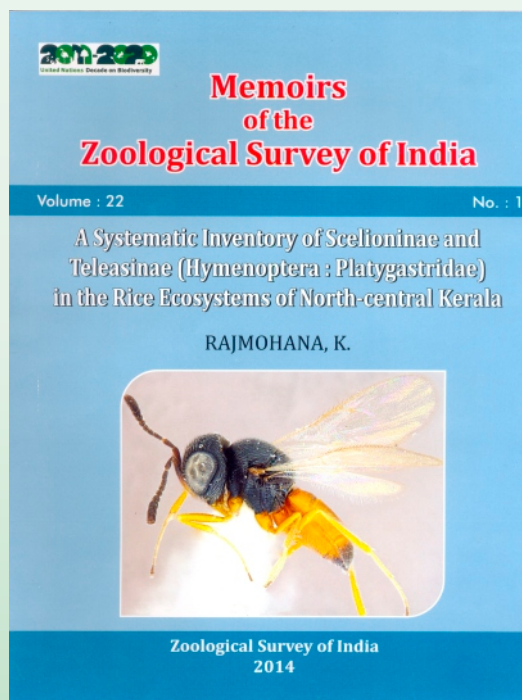
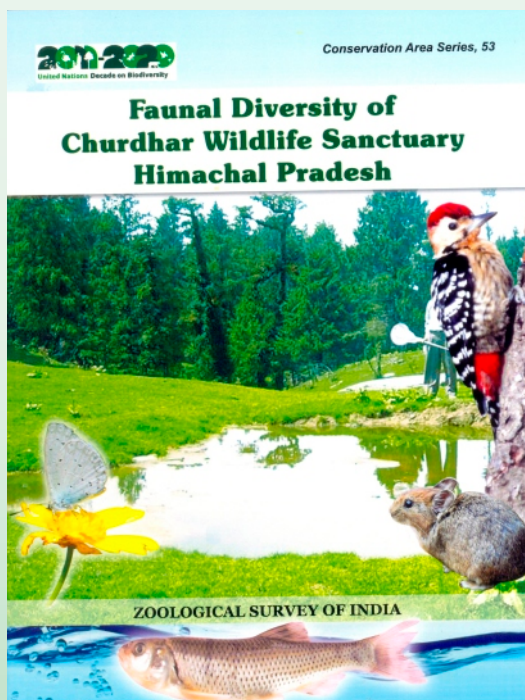
Staff of ZSI at Dr. T.N. Annandale's tomb on his 90th death anniversary.



Dr. K. Venkataraman with the staff of ZSI at Dr. Thomas Nelson Annandale's tomb at Scottish Cemetery, Kolkata.



Staff of ZSI HQ pay homage to Dr. T.N. Annandale at his tombstone on the occasion of his 90th death anniversary.



ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

During the month, faunal surveys have been conducted in marine and terrestrial ecosystems of Neil Island in Ritchie's Archipelago from 24-27 April, 2014 besides local surveys at different places in South Andaman to assess the faunal communities. A total of 260 species including 67 species of scleractinian corals, 2 species of polyclads, 4 species of sea anemones, 2 species of jelly fishes, 10 species of opisthobranchs, 26 species of gastropods, 1 species of bivalve, 25 species of echinoderms, 9 species of crabs, 5 species of ascidians and 31 species of fishes have been identified from marine habitat; 7 species of butterflies, 11 species of odonates, 5 species of amphibians, 2 species of lizards, 4 species of reptiles and 49 species of birds have been identified/observed from terrestrial environments. Among them, scleractinian corals *Acropora akajimensis* Veron, 1990 and *Psammocora vaughani* Yabe and Sugiyama, 1936 are new records to Indian waters.

Besides, a total of 146 specimens comprising of 49 specimens of corals, 7 specimens of opisthobranchs, 4 specimens of jellyfishes, 50 specimens of molluscs, 16 specimens of crabs, 5 specimens of ascidians, 2 species of hymenoptera, 3 specimens of lepidoptera, 3 specimens of amphibians, 1 specimen of reptile, 1 specimen of bird and 1 specimen of mammal have been registered in National Zoological Collections. An article on 'Protochordates' has been submitted to ZSI headquarters for the publication in the proposed book 'Faunal Resources of India'. REIA report on the biotic components in the project areas for the extension of existing jetty and construction of wet basin in Naval Wharf, Port Blair has been submitted to the Military Engineering Services, Ministry of Defence,

Government of India. Final report of the research project 'Ecological studies on bird hazards in airports in Andaman' has been submitted to Indian Navy, Port Blair.

A Ph.D. public viva-voce examination for Mr. Tamal Mondal has been conducted at the Centre on 15 April, 2014. Dr. (Ms.) R. Dalwani, Advisor, MoEF/GOI and Dr. S.V. Reddy, Director, MoEF/GOI visited the Centre on 17 April, 2014 and held a discussion on the progress of scientific programmes. Dr. C. Raghunathan, Scientist-C & Officer-in-charge has reviewed a manuscript for *Indian Journal Geo-Marine Sciences* on request. Dr. Raghunathan and Mrs. Kamla Devi, Assistant Zoologist participated the RFD meeting held at ZSI HQ on 8 April, 2014 in which the former made a presentation on the Action Plan of ZSI/ANRC for the centenary celebration of ZSI during the year 2015. Dr. Raghunathan has served as a member in the 44th General Body Meeting of *Andaman Adim Janjati Vikas Samiti* held on 28 April, 2014 at Raj Niwas, Port Blair chaired by Hon'ble Lieutenant Governor of A&N Islands. Mrs. Kamla Devi has represented the ANRC, ZSI, in the meeting regarding the installation of crocodile proof net being organized by the Department of Environment and Forests, A&N Administration on 14 April, 2014. Mr. Rajan, Senior Zoological Assistant has been deputed to serve as member of the committee constituted by Department of Tourism, A&N Administration to inspect Scuba dive centres at Neil Island and Wandoor in April, 2014.

Publications

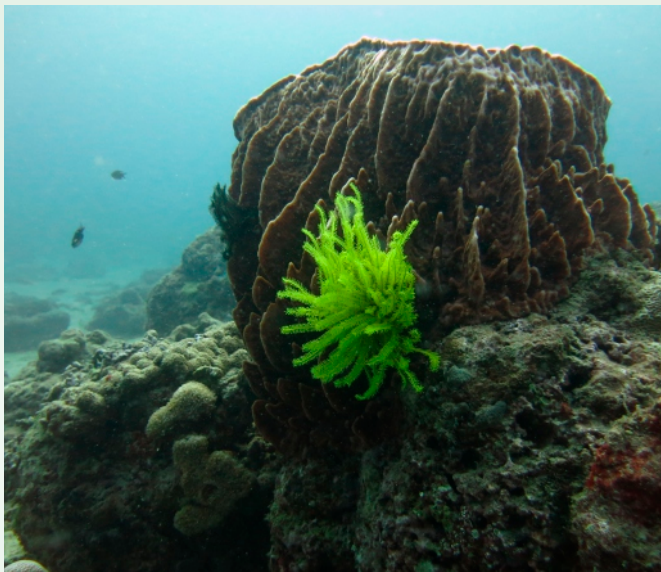
- Mondal, T., Raghunathan, C., and Venkataraman, K. (2014) Report on one caryophylliid and two dendrophylliid

corals in Indian waters from Andaman and Nicobar Islands. *Indian Journal of Geo-Marine Sciences*, 43(4): 538-541.

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Technology, 5(2): 52-56.

- Rangasamy, V., Sivaperuman, C., and Raghunathan, C. (2014) Occurrence and observation on morphological colour pattern changes of *Ramphotyphlops braminus* (Daudin, 1803) in Andaman and Nicobar Islands, India. *Reptile Rap-Newsletter of the South Asian Reptile Network*, 16: 36-38.



Feather star *Comanthina schlegeli* Carpenter 1881



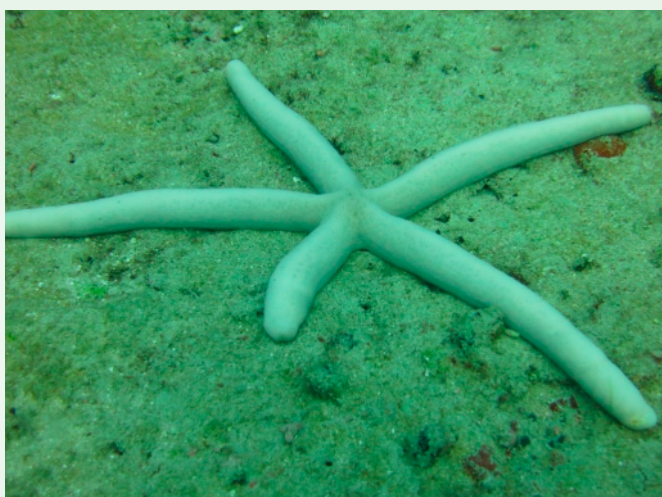
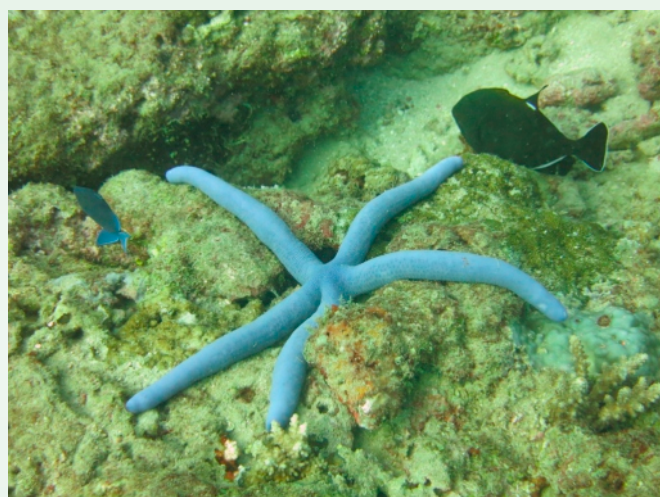
Feather star *Himerometra magnipinna* A. H. Clark 1908



Jelly fish *Porpita porpita* Linnaeus 1758



Polyclad *Pseudoceros* sp.

Sea cucumber *Holothuria leucospilota* Brandt 1835Sea cucumber *Holothuria notabilis* Ludwig 1875Sea star *Linckia guildingi* Gray 1840Sea star *Linckia laevigata* Linnaeus 1758

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE (CALICUT)

During the month, scientific staff of the Centre has conducted an intensive survey in southern Western Ghat ecosystems of Wayanad district, Kerala from 31 March, 2014 to 07 April, 2014 besides two local surveys in Peruvannamuzhy and Puzhithodu (Calicut district) and collected representative faunal samples. A rare specimen of snake *Dendrelaphis girii* (Reptilia) is collected from Malabar WLS, Calicut district for the first time. During the month, 5 species of Pteromalidae (Hymenoptera), 3 species of

Mantodea (Insecta), 4 species of Platygastriidae (Hymenoptera), 9 species of Odonata and 3 species of Reptilia have been identified. The genus *Titta* Mineo, O' Connor & Ashe (Platygastriidae: Hymenoptera) has been reported for the first time from Kerala and species *Titta festiva* (Kieffer) (Hymenoptera) is been re-described. Dr. P. M. Sureshan, Scientist-C has imparted four-days training on the 'Identification of Mantodea' to Mr.V. Naveen, SRF, ICAR, NBAII, Bangalore from 22-25 April, 2014.

Eight identification and advisory services have been rendered to various persons and organizations. Dr. P.M. Sureshan and Dr. K. Rajmohana, Scientist-C, have attended the RFD meeting held at ZSI Kolkata on 8 April, 2014. Dr. Md. Jafer Palot, Asstt. Zoologist, has performed as judge for the Annual Media Award-2014 for the 'best environmental news' organized by the Kerala State Forest Protection Staff Association, Thiruvananthapuram. He also participated in the pelagic sea bird survey at the coast of Kozhikode on 29 April, 2014 being organized by the Kerala Forests & Wildlife Department and Malabar Natural History Society, Kozhikode. Mr. Ratnakaran, UDC has attended a one-day workshop on "Preparation and submission e-reports of Hindi implementation' being organized by the Town Official Language Implementation Committee (TOLIC) at Calicut on 29 April, 2014. Dr. P. M. Sureshan, Scientist-C has supervised the research projects of three research scholars of the Centre and Dr. K. Rajmohana, Scientist-C has supervised the research projects of four research scholars of the Centre for their doctoral degrees. During the month, 100 visitors paid their visits to the museum.



Travancore Tortoise, *Indotestudo travancorica* from Malabar WLS

Publications

- Dipu, K., Das, V.N and Palot, M.J. (2014) Sighting of Common Swift, *Apus apus* from southern India. *Indian Birds*. 9(3): 78-79.
- Palot, M.J. (2014) *Uragangal: Perumbabu* (Reptiles: Indian Rock Python) Koodu- An environmental Magazine in Malayalam. Vol.1 (12): 40.
- Peter, A., and Rajmohana, K. (2014) Re-description of *Titta festiva* (Kieffer) (Hymenoptera: Platygasteridae) with new distributional record from India. *PROMMALIA* 2: 37-42.
- Smart, U., Smith, E.N., Murthy, B.H.C.K. and Mohanty, A. (2014) Report of Nagarjunasagar Racer *Coluber bholanathi* Sharma, 1976 (Squamata: Serpentes: Colubridae) from the Gingee Hills, Tamil Nadu, India. *Journal of Threatened Taxa* 6(4): 5671-5674.



King Cobra, *Ophiophagus hannah* at Malabar WLS



Common Onyx, *Horaga onyx*



Flower mantis *Creobroter* sp. (Insecta : Mantodea)



Flesh-footed Shearwater, *Puffinus carneipes* off the coast of Kozhikode



Bridled Tern *Onychoprion anaethetus* off the coast of Kozhikode



Great Crested Tern, *Thalasseus bergii* off the coast of Kozhikode district

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA

During the month, 56 examples of molluscs belonging to five species under 03 genera and 01 family have been identified from the collections made from Himachal Pradesh. A total of 41 specimen of aquatic Coleoptera belonging to 6 genera and 5 species and 7 specimen of aquatic Hemiptera belonging to 3 family, 3 genera, and 2 species have been identified from the collections of Subadhra

Estuary and Rishikulya Estuary surveys. Fourteen specimens of aquatic Hemiptera have been identified as 9 species, 3 genera and 2 family from the collections of Bharuch, Gujarat's 4th Narmada and Tapi Estuary surveys. A total of 2 Crab species under 2 genera and 2 families have been identified from 3 examples collected from Narayanpur and Haripur stations from 5th Subhadra Estuarine

survey. Ten museum specimens have been digitized. During the month, about 20 visitors visited the National Zoological Collections of the Centre. Dr Swetapadma Dash, Scientist-C of the Centre has attended the RFD meeting



Anisops bauveiri (Kirkaldy) *Anisops braddeni* Kirkaldy

held on 8 April, 2014 at ZSI Headquarter office, Kolkata.



Canthydrus laetabilis
(Walker)



Laccophilus anticatus
(Sharp)

SUNDERBANS REGIONAL CENTRE, CANNING

During the month, 17 specimens of insects have been identified and registered by the scientists of the Centre and which include 11 specimens of Orthoptera belonging to 5 species under 2 Families, and 6 specimens of Odonata belonging to 2 species under 1 Family. One local tour has been conducted by Mrs. Supriya Nandy and her team in different fish-landing centres of Koikhalli, Sunderban and collected 58 specimens of fish, 4 specimens of Crabs and 12 specimens of Prawns.

Scientists of the Centre have attended a meeting at ZSI, HQ office, Kolkata on 8 April, 2014 for regarding new RFD format and centenary celebrations of ZSI. On 17 April, 2014 the members of the Review Committee under the Chairmanship of Dr. Kailash

Chandra, Scientist-F from ZSI, HQ, Kolkata, held a meeting with the staff of the Centre on the functioning of Sunderban Regional Centre.



Review Committee Members

NORTHERN REGIONAL CENTRE, DEHRADUN

During the month, scientists of the Centre have identified the following fauna: 17 species of Lepidoptera, 9 species of Acridoidea and 11 species of soil Nematodes from Punjab; 4 species of Acridoidea and 32 species of soil Nematodes from Sultanpur BS & NP; 6 species of soil Nematodes from Govind WLS (Uttarakhand) and 7 species soil Nematodes from Dehradun. DNA has been extracted from 3 species of Family Hespertiidae (Lepidoptera) namely *Telicota ancilla* Herrich-Schaffer), *Polytremis eltola* (Hewitson), *Potanthus dara* (Kollar) and also from nine samples of Lesser Cats namely *Pardofelis bengalensis*, *Felis silvestris* Schreber, *Caracal caracal* (Schreber) and *Octocolobus manul nigripictus*.

700bp amplicon of COI gene using Universal primers has been obtained from 4 samples of 2 species namely, *Sarangesa dasahara* (Moore), *Polytremis eltola* (Hewitson), while amplification of cyt b gene of 8 species of Sciuridae, *Ratufa indica* (Erxleben), *Ratufa bicolor* (Sparrman), *Petinomys fuscicapillus* (Jerdon), *Funambulus palmarum* (Linn), *Funambulis pennantii* (Wroughton), *Petaurista petaurista* (Pallas), *Petaurista philippensis* and amplification of COI gene of 2 species (6 samples) of Sciuridae, *Ratufa macroura* (Pennant), *Funambulis pennantii* (Wroughton), 6 sequences of COI gene received belonging to 4 species of Lepidoptera and two sequences of 12SrRNA gene of *Ratufa bicolor* (Sparrman) submitted to NCBI. Cross section slides have been prepared for trichotaxonomy studies for *Caracal caracal* (Schreber), *Felis silvestris* Schreber (one sample) and *Octocolobus manul nigripictus* (Hodgson), Pallas cat. Around 350 permanent slides of nematodes collected from Punjab, Sultanpur

NP and Dehradun surveys have been prepared besides 10 examples of permanent slides prepared for vertebrate helminths collected from Punjab for morphological studies. During the month, we have registered 114 examples of soil nematodes and 6 examples of Lepidoptera. Ten database entries of nematodes have been made in invertebrate datasheet. Digitization of amphibia with 60 images have been made and their metadata entered. Dr P. C. Tak, Scientist-D & Dr. A. N. Rizvi, Scientist-C have attended RFD meeting held at ZSI, Kolkata on 8 April, 2014.

Publications

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- Bahuguna, A., and Bhutia, P. T. (2014) Amphibia. In: *Fauna of Jhilmil Jheel Conservation Reserve (Uttarakhand) Conservation Area Series no 50: 85-91* (Edited & Published by the Director Zool. Surv. of India Kolkata).
- Kumar, P., and Husain, A. (2014) Pisces. In: *Fauna of Jhilmil Jheel Conservation Reserve (Uttarakhand) Conservation Area Series no 50: 93-125* (Edited & Published by the Director Zool. Surv. of India Kolkata).
- Kumar, P. (2014) Lepidoptera: Rhopalocera. In: *Fauna of Jhilmil Jheel Conservation Reserve (Uttarakhand) Conservation Area Series no 50: 127-148* (Edited & Published by the Director Zool. Surv. of India Kolkata).
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 - Tak, P. C., Sati, J.P. and Bhutia, P. T. (2014) Overview. In: *Fauna of Jhilmil Jheel Conservation Reserve (Uttarakhand) Conservation Area Series no 50*: 1-11 (Edited & Published by the Director Zool. Surv. of India Kolkata).

MARINE AQUARIUM & REGIONAL CENTRE, DIGHA

During the month, our aquarium has received in an average 460 tourists per day. In total, 28 live specimens have been released in to the aquariums during the month. In total, 103 specimens have been identified which include 69 (33 species) mollusk specimens and 34 (7 species) fish specimens. Dr. Anil Mohapatra,

Scientist-C & Officer-in-Charge, of the Centre has participated in the "Integrated Training Module ICZMP West Bengal" organized by Department of Ocean Engineering and Naval Architecture, Indian Institute of Technology, Kharagpur from 21-26 April, 2014.

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

The scientists of the Centre have examined 297 examples of freshwater faunal samples collected from various wetlands of Andhra Pradesh and identified as 9 species of mollusks viz. *Indoplanorbis exustus*, *Pila virens*,

Bellamya dissimilis, *Lymnaea accuminata*, *f.gracilior*, *Pila theobaldi*, *Pila scutata compacta*, *Pila globosa*, *Bellamya bengalensis r. doliaris*; one species of bivalve *Perreysia favidens* and 6 species of ostracods viz. *Chrissia* sp.,

Stenocypris derupta, *Cypris subglobosa*, *Cyprinotous cingalensis*, *Sclerocypris sp.*, and *Cyclestheria hislopi*.

As a part of the digitisation of the freshwater fauna, 36 specimens have been digitized

pertaining to 09 species of Molluscs. Dr. D.V. Rao, Scientist-C & Officer-in-Charge and Dr. Prasanna Yennawar, Scientist C have attended a meeting on RFD matters at HQ office, Kolkata on 8 April, 2014.



Lymnaea accuminata f. gracilior



Indoplanorbis exustus



Pila virens



Bellamyia bengalensis r. doliaris

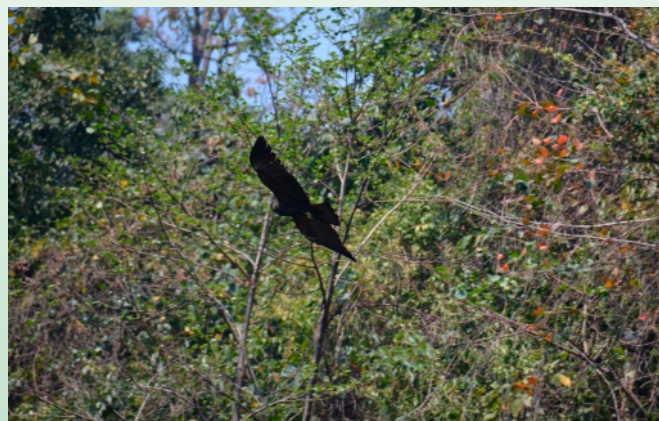
ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

During the month, 56 examples of recently collected fishes have been studied and identified. They all belong to 2 orders, 3 families, 10 genera and 11 species. The identified specimens have been registered under 16 registration numbers and their metadata have been computerized and digitized. Some of the representative faunal examples collected and or recorded during

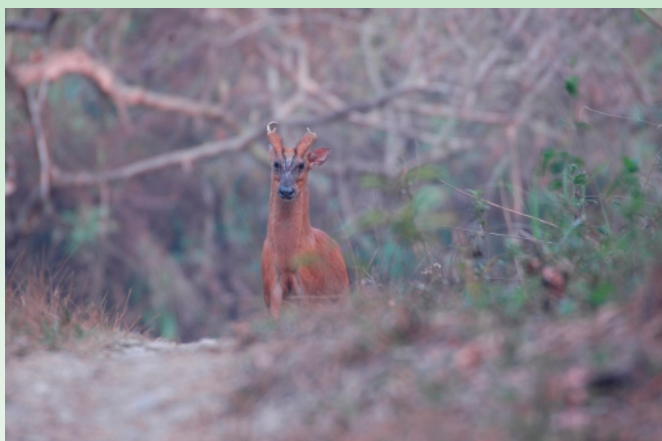
the last field tour have been studied and identified. Dr. S. D. Gurumayum, Scientist-C has identified 10 species of mollusca collected from the Subadra Estuary, Orissa. Dr. Bikramjit Sinha, Scientist-C & Officer-in-Charge and Dr. S. D. Gurumayum of the Centre have attended the RFD meeting at ZSI HQ on 8 April, 2014.



Indian Garden Lizard (*Calotes versicolor*)



Black Eagle (*Ictinaetus malayensis*)



Barking deer at Pakke Tiger Reserve



Orange-bellied Himalayan Squirrel



Pug mark of tiger taken at Pakke Tiger Reserve

*Rhacophorus maximus*

DESERT REGIONAL CENTRE, JODHPUR

During the month scientific staff of the Centre have identified and registered 4 species of ants and 6 species of fish from the jurisdiction area. Also digitized 22 specimens from NZC for RFD. Dr. Sanjeev Kumar, Scientist-C & Officer-in-charge has attended a one-day meeting on RFD held at Headquarter Office, ZSI, Kolkata on 08 April, 2014 whereas Dr. H. S. Banyal, Scientist-C also attended aforementioned meeting as Nodal Officer of DRC, ZSI, Jodhpur. Dr. Sanjeev Kumar, Scientist-C has presented an action plan on preparedness of the DRC, ZSI, Jodhpur

related to centenary celebrations during 2014-15 on 08 April, 2014 at HQ, Kolkata. Dr. Sanjeev Kumar, has submitted an approved proposal from Director, ZSI to Barmer Lignite Mining Company Ltd. to carry out faunistic study in respect of EIA/EMP of Kapurdi Lignite Mine of Barmer District, Rajasthan. Dr. H. S. Banyal, Scientist-C has provided scientific information and literature to two JRFs of University School of Environment Management, GGSIU, New Delhi on 24-26 April, 2014 at the Centre.



Mahi Dam near Banswara, Rajasthan

*Garra gotyla gotyla* (Gray, 1830)

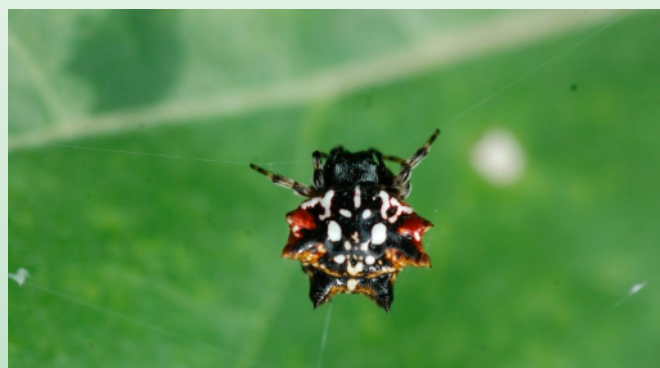
CENTRAL ZONE REGIONAL CENTRE, JABALPUR

During the month, scientists of this regional centre have identified and registered 09 species of moths (Lepidoptera), 10 species of Hemiptera, 3 species of small mammals (bats) and 04 species of Mantodea (mantids) from Betul, Burhanpur, Narsingpur and Sehore districts of Madhya Pradesh. Dr. S. Sambath, Scientist-C & Officer-in-Charge of the Centre has attended a meetings on RFD at HQ office, ZSI, Kolkata on 8 April, 2014 and Departmental Promotion Committee (DPC) meeting for Group-C posts of Tropical Forest Research Institute, Jabalpur on 30 April, 2014. Dr. S. S. Talmale, Assistant Zoologist has attended the half yearly *Nagar Rajbhasha Karyanvain Samiti* meeting held at Gun Carriage Factory, Jabalpur on 15 April 2014. He as Nodal Officer has also attended the

Research Framework Document (RFD) meeting held at the HQ office of Zoological Survey of India on 08 April, 2014 along with Officer-in-charge of CZRC.

Publications

- Patki, V., Zade, V., Talmale, S. and Wadatkar, J. (2014) Diet composition of the Barn owl *Tyto alba* (Aves: Tytonidae) and spotted Owlet *Athene brama* (Aves: Strigidae) coexisting in an urban environment. *International Journal of Plant, Animal and Environmental Sciences* 4 (2): 188-192.
- Chandra, K and Kushwaha, S. (2013) On the collection of Hemiptera (Insecta) from Ladakh, Jammu & Kashmir. *National Journal of Life Science*, 10(2): 193-194.

*Argiope aemula* (Walckenaer)*Gasteracantha cancriformis* (Linnaeus)

*Hippasa pisaurina* Pocock*Lycosa mackenziei* Gravely*Nephila pilipes* (Fabricius)*Stegodyphus sarasinorum* Karsch

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

Extensive field survey has been conducted in sea grass ecosystem in Palk bay and Coral reef ecosystems in Gulf of Mannar and representative samples have been collected by the Senior Research Fellows of this Centre. Scientists of this Centre have identified 1 species of Cnidaria, 6 species of Sponges, 9 species of Arthropoda, 13 species of Mollusca, 2 species of echinoderms and 15 species of Pisces out of the materials collected from Palkbay and Gulf of Mannar Biosphere Reserve. Fourty-six species have been digitized and their metadata compiled.

Dr. C. Venkatraman Scientist-C & Officer-in-

Charge and Dr. Rajkumar Rajan, Scientist-C have attended the 'Integrated training module under ICZMP, West Bengal' conducted by IIT, Kharagpur. Dr. C. Venkatraman also served as an external examiner for conducting Ph.D., viva-voce examination at Tamil University, Thanjavur and served as member, Doctoral Committee for the departmental candidate. Two advisory services have been rendered to National Institute of Oceanography, Goa, and Shri. S.R.V. Murthy, IFS, Regional Deputy Director, Wildlife Crime Control Bureau, Southern Region, Chennai regarding identification of Marine Sponges and

confiscated Sea Horse and Sea Cucumbers, respectively. Drs. C. Venkatraman and Rajkumar Rajan, have supervised the research projects of SRF's of the Centre. One of the research scholars of the Centre has submitted a Ph.D., thesis on "Spatio-temporal variation of waterbirds in Kachchh, Gujarat, Western

India" to the University of Madras, Chennai. During the month, around 1437 tourists have visited the marine aquarium and museum.

Publication

- Venkataraman, K. and Rajan, R. (2013) Status of coral reefs in Palk Bay. *Rec. zool. surv. India* 113(2): 01-11.



Confiscated marine animals: Sea Cucumber and Sea Horse



Jelly Fish - *Chrysaora* sp.



Canthigaster solandri

GANGETIC PLAINS REGIONAL CENTRE, PATNA

During the month, scientific staff of the Centre have identified 08 species of Mollusca such as *Lymnaea acuminata*, *Radix ovalis*, *Indoplanorbis exustus*, *Gyraulus euphraticus*, *Segmentina trochoidea*, *Hippeutis umbilicalis*,

Pisidium nevillianum, *Lamellidens marginalis*. They also identified 09 species of Noctuidae such as *Asota caricae* Fabricius, *Spodoptera litura* Fabricius, *Thyas coromata* (Fabricius), *Thysanoplusia orichalcea* (Fabricius), *Earias*

chromataria Walker, *Earias fabia* Stoll, *Ophiusa cuprea* Moore, *Achaea janata* Linnaeus, *Artina submira* Walker. Dr. Gopal Sharma, Scientist-C & Officer-in-Charge has presented a paper on the 'Diversity with identification key to the



Oriental Magpie-Robin

Leech species (Annelida: Clitellata: Hirudinea) of Gangetic Plains of Bihar (India)' in an international Symposium on 'River Biodiversity: Ganges-Brahmaputra-Meghna (GBM) River System' on 5 April, 2014.



Coppersmith Barbet

WESTERN REGIONAL CENTRE, PUNE

During the month, Scientists of the Centre have identified 16 species of Hymenoptera, 10 species of Odonata, 07 species of Orthoptera, 31 species of Pisces and 06 species of Araneae. Identification and advisory services have been rendered to The Principal, Ahmednagar College, Ahmednagar, Maharashtra for Freshwater Mollusca, and Dr. V. T. Tantarapale, Associate Professor, Dept. of Zoology, Vidya Bharati Mahavidyalaya, Amravati, Maharashtra; Officer-in-Charge, Central Zone Regional Centre, Zoological Survey of India, Jabalpur and Dr. D. S. Dabhade, Dept. of Zoology, R .A. Arts, Shri. M.K. Commerce and Shri. S. R. Rathi Science College, Washim, Maharashtra for fishes. Dr. P.S. Bhatnagar, Scientist-C & Officer-in-Charge along with Dr. Aparna Kalawate, has attended a one-day training on 'New format for RFD' on 08 April, 2014 at Headquarter, Kolkata.

Publication

- Bhatnagar, P.S. (In Press) A comparison of some aspects of two extinct Mammals, *Mammuthus* Brookes, 1828 (Proboscidea : Elephantidae) and *Mammot* Blumenbach, 1799 (Proboscidea : Mammutidae). *Mong. J. Biol. Sci.*,

*Polistes (Gyrostoma) olivaceus* (De Geer)

NORTH EASTERN REGIONAL CENTRE, SHILLONG

During the month, 52 specimens of fishes collected from Nongkhylllem Wildlife Sanctuary have been indentified into 7 species as *Esomus danricus* (Ham), *Danio rerio* (Ham), *Devario aequipinnatus* (McCl), *Puntius chola* (Ham), *Puntius sophore* (Ham), *Garra annandalei* Hora, and *Garra lamta* (Ham). Five specimens of Decapoda (Crabs) have been identified into a single species as *Barytelphusa lugubris* (Wood-Mason, 1871). Around, 52 specimens of identified fishes and 7 specimens of identified amphibian have been

photographed and their metadata digitized. Also, 417 specimens of Crustacea and 995 specimens of reptiles have been physically verified. Our Centre has received many fish specimens for identification from Gauhati University, Assam. Twenty-six students from B.P.C. College, Assam visited the Centre on 04 April, 2014 as part of their educational tour. Mrs. J. Lyngdoh, Scientist-C & Officer-in-Charge has attended the RFD meeting at HQ ZSI, Kolkata from 7- 9 April, 2014.



Students and teachers from B.P.C College, Assam during their visit to NERC/ZSI, Shillong as part of their educational tour on 04 April, 2014.

HIGH ALTITUDE REGIONAL CENTRE, SOLAN

Faunistic identification from the Centre includes 03 species of butterflies (out of 4 examples), 01 species of earthworms (out of 50 examples), 01 species of Pisces (out of 02 examples) from the Cold Desert of Spiti Valley

and Chandertal Lake, District Lahaul and Spiti, (HP); 03 species of butterflies (out of 20 examples), 05 species of Orthoptera (out of 11 examples), 01 species of Pisces (out of 04 examples) from Chail WLS, Solan; 03 species

of Pisces (out of 07 examples) from Haryana and 02 species of Pisces (out of 02 examples) from Sukhna lake Chandigarh. Chapters on Lepidoptera and Annelida have been submitted by Scientists of the Centre as assigned by DZSI for proposed book on Animal Resources of India.

Two Scientists of the Centre have attended meeting at HQ, Kolkata on 08 & 9 April, 2014 for information on new RFD database format and regarding proposed centenary celebrations. The Scientist of the Centre has supervised the research work of two Ph.D.

scholars. One scholar has undergone training on sampling methods of butterflies in field at WII, Dehradun. A Scientist of the Centre has identified 27 field photographs of the birds received from Dr. Neelesh Vashisth, Principal, SRPK Inter College, Budhana, Muzaffarnagar. A consultation meeting held on 11 April, 2014 under the FAO funded Global Pollination Project at G.B. Pant Institute of Himalayan Environment & Development, Himachal Unit, Kullu has been attended by the Scientist of the Centre.



Mastacembelus armatus (Lacepede)



Oxyrrhypes sp.



Parnassius jacquimontii



Wide Span of Pin river in Pin valley National Park,
Spiti

SOUTHERN REGIONAL CENTRE, CHENNAI

During the month, faunal survey to Andhra Pradesh (Nalgonda, Khammam, West Godavari and East Godavari Districts) led by Dr. R. Aengals, Scientist- C has been carried out from 31 March, 2014 to 17 April, 2014. A total of 3724 specimens belonging to 25 different faunal groups including hemipterans, dipterans and coleopterens & 6 lots of zooplankton samples have been collected. Thirty-five species of birds have been observed of which a few species have been photographed. A troop of Hanuman Langur *Presbytis entellus* was sighted in the Papikonda National Park at Koraturu near the river Godavari. Many troops of Rhesus monkey were also sighted in the Kinnersani Dam Site. In the Nagarjuna Sagar range Nellikal beat, a Nilgai was sighted.

Dr. R. Babu, Scientist-C has identified 33 specimens of Odonata belonging to 14 species, 8 genera under 2 families from the recent collections made from the Western Ghats of

Tamil Nadu and Pallikaranai Marsh, Chennai. Dr. Jayasree Thilak, Scientist-C has identified 3 specimens of Rotifera belonging to 3 species, 3 genera, 1 order, 1 family and 44 specimens of Cladocera belonging to 6 species, 6 genera, 1 order, 4 families from the zooplankton samples collected from the different localities of Nilgiri district of Tamil Nadu. Dr. S. Prabakaran, Scientist-C has identified 2 species from 22 specimens of *Trichoptera*. Shri. D. Prabhakar, Assistant Zoologist has identified 46 specimens of Acridomorpha (grasshoppers) as 17 different species under 17 genera, 8 sub-families and 2 families from southern Eastern Ghats of Tamil Nadu. Dr K. Ilango Scientist-D & Officer-in-Charge has presented the 'Fauna of Pallikaranai Wetland Ecosystem' at a review meeting convened by the conservation authority of Pallikarnai Marshland, Chennai & Tamil Nadu Forest Department on 22 April, 2014.

Some photographs of birds from Western Ghats of Tamil Nadu



Asian Paradise-Flycatcher *Terpsiphone paradisi*
(Linnaeus, 1758)



Malabar Grey Hornbill *Ocyrceros griseus* (Latham, 1790)

ANIMAL OF THE MONTH**Red-crested Pochard *Netta rufina* (Pallas, 1773)**

A large and conspicuous diving duck often gregarious with mixed species flock of ducks in inland wetlands, lagoons, lakes and reservoirs especially during winter in northern India and goes upto Pennisular India and also in the eastern India. Males have orange-rufous head with bright coral bill whereas the females have dark head and pale cheek. One can often see them diving inside the water in search of food that often consists of predominantly roots, seeds and vegetative parts of aquatic plants. According to BirdLife International, the current global population of this species is not known, but the population



Text and photograph by Kaushik Deuti,
ZSI, HQ office, Kolkata

is not believed to be decreasing sufficiently to approach the thresholds under the population trend criterion. However, in India, conversion of many freshwater wetlands and pollution in many of the natural wetlands offer limited

refuge to many wild ducks in general and Red-crested pochards in particulars. In States such as Uttar Pradesh and Bihar reports of poaching of many species of duck including diving ducks are often come in the media. Breeds in neighbouring Afghanistan and winters in India and other counties and often stay till April each year.

OUT OF THE BOX**Scientists vexed in probe of North American starfish deaths**

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/Scientists-vexed-in-probe-of-North-American-starfish-deaths/articleshow/34509064.cms>

African bird steals food by imitating warning calls: Study

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/African-bird-steals-food-by-imitating-warning-calls-Study/articleshow/34525288.cms>

New frog species shatter gender stereotypes

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/New-frog-species-shatter-gender-stereotypes/articleshow/35316983.cms>

Increase genetic diversity to save tigers: Study

<http://timesofindia.indiatimes.com/home/environment/flora-fauna/Increase-genetic-diversity-to-save-tigers-Study/articleshow/35333802.cms>