

# ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India



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# ANIMAL OF THE MONTH



Check-list of fauna of India:
 Indian Gall midges
(Cecidomyiidae: Diptera: Insecta)
 Indian Stoneflies
 (Plecoptera: Insecta)
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- 1. Stars and Stripes Puffer
- 2. Ostracoda
- 3. Yellow-bellied Sea Snake
- 4. International Day for Biological Diversity 2009, observed at ZSI, Calicut.

#### From the Director's Desk

The monthly *e-NEWS*, which was started just in the beginning of this year, has progressed pretty well with incorporation of many additional inputs of information on the fauna of the country in the form of checklists and videos in quite appealing ways. It is our hope and endeavour to keep it so in the forthcoming issues of the *e-NEWS* too. We therefore invite suggestions from the readers for its further improvement.

In connection with the International Day for Biological Diversity on 22<sup>nd</sup>, ZSI, Kolkata and its Regional Stations observed the Day by arranging exhibitions and lectures on the focal theme, '*Invasive Alien Species*'. Besides, a Training Programme for non-matriculate Group-D Employees of the Zoological Survey of India was organized at ZSI, Kolkata, Dehradun and Chennai from 18<sup>th</sup>-22<sup>nd</sup>, in compliance with the directives of Govt. of India.



Dr. Ramakrishna

# Headquarters, Kolkata

The dipteran (Insecta) specimens collected during Ladakh Survey were segregated into 15 families under 2 suborders. Of these, 2 species of Syrphidae, 1 species each of Sarcophagidae, Ephydridae, Therividae and Dolichopodidae are recorded for the first time from India; 6 families are recorded for the first time from the state of Jammu & Kashmir and 13 families from the Cold desert of Ladakh. During the month, a new species of the genus *Trechnites* Thomson (Insecta: Hymenoptera: Encyrtidae) has been described. Five research papers were submitted for publication and six research papers were reviewed. Holotypes of two species of Hymenoptera and Paratypes of 35 species of Hemiptera were deposited by Dr. M. K. Mukerjee, Reader,



Skin of Black buck received for identification From S.I., D.R.B.T., Bhawani Bhaban, Kolkata

Department of Zoology, K. N. Government College, Gyanpur, Uttar Pradesh and Dr. R. Sundararajan, Scientist-F, Institute of Wood Science and Technology, Bangalore, respectively. 18 lots of specimens received from various organizations were identified and reports sent. Two samples of limb bones of tiger and a skin of Black Buck were received as seized material for identification from S.I., D.R.B.T., Bhawani Bhaban, Kolkata and the Regional Deputy Director, W.C.C.B. (E.R), Kolkata, respectively. The International Day for Biological Diversity was celebrated on 22<sup>nd</sup>. The occasion was graced by Dr. K. K. Vass, Director, Central Inland Fisheries Research Institute, Barrackpore, West Bengal and he delivered a lecture on Invasive Alien Species. One of the scientists participated in the training programme on Right to Information Act 2005, at the Institute of Secretariat Training and Management, New Delhi. The Training and Extension Division of ZSI, Kolkata, organized a training programme for non-matriculate Group-D Employees, from 18<sup>th</sup> to 22<sup>nd</sup>. 58 employees from



Inaugural function of the International Day for Biological Diversity observed at ZSI, Kolkata

Headquarters, as well as from 5 Regional stations, participated in the training programme. Besides, 18 Non-Matriculate Group-D Employees participated in the Administrative training programme at the Institute of Government Accounts and Finance. Regional Training Center, Kolkata from 4th to 6th.

In this Issue

#### Eastern Regional Station, Shillong

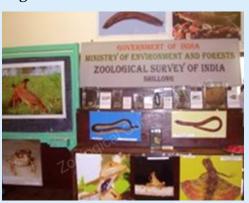
A field survey was conducted at Deepor beel (a Ramsar site), Assam on 15th-16th and plankton and water samples were collected from 6 sampling sites. Out of the material collected, 7 species each of Rotifera and Cladocera were identified. 4 species of Rotifera and 5 species of Cladocera from Nokrek Biosphere Reserve, Garo Hills, Meghalaya were also identified. Fish specimens from Nokrek Biosphere Reserve and those submitted for identification by the Department of Zoology, North Eastern Hill University were subjected to taxonomic study. The station participated, on invitation, in a 3-day Science exhibition at the Loreto Convent, Shillong, during

the Centenary Celebration of the Convent. Two staff members of the station attended the Regional Seminar on "Intellectual Property & Innovation Management in Knowledge Era" held on 14th-15th at Aizwal (Mizoram), organized by the National Research Development Corporation, New Delhi. The Station observed the International Day for Biological Diversity on 22<sup>nd</sup>. Shri. Ranjan Chatterjee, IAS, Chief Secretary, Government of Meghalaya was the Chief Guest on the occasion. The function was attended by students and teachers of schools and colleges in Shillong.

## Glimpses of the programmes organized at ERS



Shri. Ranjan Chatterjee, Chief Secretary, Govt. of Meghalaya addressing the gathering on the International Day for Biological Diversity



A view of the exhibition stall set up during the centenary celebrations of the Loreto Convent, Shillong



# Central Regional Station, Jabalpur

Six papers pertaining to the fauna of Kangerghati National Park (Chhattisgarh), four papers on Cladocera, Ostracoda, Neuroptera and Orthoptera of Madhya Pradesh (for the State fauna series: Madhya Pradesh) and 2 papers on Orthoptera and Diptera (Tabanidae) of Maharashtra (for the State fauna series: Maharashtra) were submitted to the publication division of ZSI. Besides, a paper on a collection of Orthoptera fauna from Veerangana Durgavati Wildlife Sanctuary of Madhya Pradesh was submitted to the Biological Forum, an International Journal. Checklists on Plecoptera and Diptera (Cecidomyiidae) of India were prepared by the Scientists of the station for uploading in the ZSI website. During the month, 17 species of Rotifera, 10 species of Cladocera and 3 species of Ostracoda were identified. Identification services were provided to Entomology Section, J.N.K.V. Jabalpur. 2 students of the Govt. Science College, Jabalpur were guided for their M.Sc. Dissertation work. A scientist of the station acted as examiner for the practical examination of M.Sc. Zoology (II Semester) students of the Govt. J.S.T.P.S. College, Balaghat. The International Day for Biological Diversity was celebrated in the station on May 22<sup>nd</sup> and talks on the theme 'Invasive Alien Species' were delivered by the scientists. A senior scientist of the station acted as Chief Guest on the 'International Day for Biological Diversity', celebrated by the Rani Durgavati Vishvavidyalaya, Jabalpur, and delivered a lecture on Biodiversity.

#### Neuroptera (Insecta) of Madhya Pradesh



Palpares pardus Rambur



Ogcogaster tesselata (Westwood)

In this Issue

# Southern Regional Station, Chennai

The International Day for Biodiversity was observed on 22<sup>nd</sup> by arranging a one-day exhibition, displaying informative posters and specimens on the focal theme, 'Invasive Alien Species'. During the day, two experts delivered lectures on different aspects of the impact generated by Invasive Alien Species on biodiversity and on local ecosystems. The concluding ceremony was presided by Prof. S. Swaminathan, Principal, Vivekananda College, Mylapore, Chennai, who also spoke on the occasion. General public and N.G.Os participated in the function and interacted with the scientists of the station. A training programme for non-matriculate Group-D employees of five Regional stations was conducted from 18th to 22nd in which 19 members were trained. The participants who have undergone

#### A glimpse of the International Day for Biological Diversity observed at SRS



Address by Prof. S. Swaminathan, Chief Guest

the training were issued with certificates. A videograph prepared at the station on Ostracoda is hyperlinked with the departmental website www.zsi.gov.in.

#### Glimpses of the Training programme for non-matriculate Group- D Employees



Administrative Training in progress



**Training on Computer operations** 



Training on Office procedures



Training on Insect setting



#### Marine Biological Station, Chennai

A survey party from the station proceeded to the Gulf of Mannar Biosphere Reserve, for an extensive field survey of the Reserve. 3 species of sponges were identified and registered from the material collected from the Gulf of Mannar Biosphere Reserve and photographs of 45 species were taken. Further, 8 species of freshwater fishes from southern Eastern Ghats were identified. Two identification services were rendered. Two manuscripts were corrected for scientists from other institutions. 470 tourists visited the marine aquarium maintained at the station during the month. The station celebrated the International Day for Biological Diversity on 22<sup>nd</sup>. Several exhibits on Invasive Alien Species and Charts pertaining to them were exhibited. A senior scientist of the station served as a Panelist for the Round Table Discussion on Biodiversity and Invasive Alien Species and also delivered a talk on 'Invasive Alien



Charts and exhibits displayed on the *International Day for Biological Diversity* 

Freshwater Fishes of India', on the International Day for Biological Diversity, at the C.P.R. Environmental Education Centre, Chennai.

# Andaman and Nicobar Regional Station, Port Blair

Three local surveys were conducted at Chidyatapu, Bumanalla and Pongibalu regions of South Andaman to assess the littoral faunal diversity of the area. Besides, a field survey was conducted at Katchal and Teressa Islands of Nicobar group to assess the status of coral reefs and its associated fauna in the vicinity of the proposed construction site for a habour and jetty, as required by Port Management Board, Andaman and Nicobar Administration. 15 species of corals from Katchal Island and 25 species of corals from Teressa Island were recorded. In addition, 12 species of echinoderms, 12 species of molluscs, 2 species of octocorals, 2 species of sponges, 2 species of polychaetes and 1 species of ascidian were found as coral associated fauna from these islands. Further, 61 species of zooplankton under 14 groups and 143 species of fishes belonging to 27 families were also recorded in the overlying water column of coral reef environment in these islands. 37 species of seaweedepiphytic fauna, including echinoderms, sponges, crustaceans, soft corals, nudibranchs, polychaetes, gastropods, ascidians and fishes were identified for the scientists of Central Salt and Marine Chemicals Research Institute (CSIR), and the Marine Algal Research Station, Mandapam, Tamil Nadu. The station signed a M.O.U with the Department of Environment and Forests, Andaman and Nicobar Administration, to monitor the coral reefs of Andaman & Nicobar Islands for a period of 3 years. As per the requirement of Department of Industries, Andaman and Nicobar Administration, a research proposal was submitted to assess the present status of gastropods, *Trochus niloticus* and *Turbo marmoratus*. Six research personnel of the office were trained for SCUBA diving to carryout underwater survey.

#### **Publications**:

- 1. C. Stella and C. Raghunathan, 2009. New record of *Muricanthus kuesterianus* (Tapparone-Camefri, 1875), Family: Muricidae from Palk Strait, Southeast coast of India. *Nature Environment and Pollution Technology*, 8(1): 63-68.
- 2. ZSI/ANRS, 2009. Status of coral reefs on the construction site of harbour and other infrastructure facilities at Katchal and Teressa Islands, EIA Report, May 2009, 52p.

#### In this Issue

#### Northern Regional Station, Dehra Dun

Soil nematodes, collected during the Ladakh survey, belonging to 3 species, were identified. Three research papers referred by an outside journal for review were offered suitable comments. A paper entitled 'Centipede (Chilopoda: Scolopendromorpha)' was accepted for publication in the Fauna of Conservation Area series: Fauna of Ranthambore National Park, Rajasthan (Z.S.I publication). In compliance with the directives of the Ministry of Environment and Forests, New Delhi, a five-days Training Programme for non-



Chinkara fawn at Chinkara breedingCentre, Bhiwani



Black Ibis at Shekhapura R.F, Karnal

matriculate Group-D Employees of the Zoological Survey of India was arranged at the station from 18<sup>th</sup>-22<sup>nd</sup>. 18 participants from 5 Regional Stations attended the training programme. Two lectures were organized every day, the morning session for the scientific and technical matters and the afternoon session for administrative matters, with a time slot for the discussion after each lecture and a feed back session every day in the evening.



# Desert Regional Station, Jodhpur

Scientists of the station identified 10 species of Odonata of Ranthambore National Park, Rajasthan and 5 species of Coleoptera of Rajasthan, besides 2 species of Nematodes from Gujarat. A manuscript entitled, 'Odonata of Ranthambore National Park, Rajasthan', was submitted and proof of the paper, 'Description of a New Species *Rostrulium* Siddiqi, 1995 from Rajasthan', was corrected and submitted for publication.



Yellow-footed green Pigeon (*Treron phoenicoptera*) at Puskar forest



Sambar (Cervus unicolor) at Sariska Tiger Reserve, Alwar

47 entries pertaining to the books in the station's library were made employing the software, *e-granthalaya*. 32 entries of identified fauna were made in the Faunal Database maintained at the station. The station's museum was visited by 18 visitors during the month. Identification and advisory services were rendered on Odonata, Lepidoptera and Coleoptera for M.Phil work, on request, from the Department of Zoology, Govt. College, Ajmer. The Station observed the International Day for Biological Diversity on 22<sup>nd</sup>.

#### Glimpses of the International Day for Biological Diversity observed at DRS



Children studying the Posters Displayed



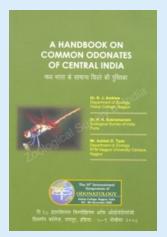
Poster release on the Biodiversity Day

In this Issue

# Western Regional Station, Pune

Twelve chapters on fauna of Bhimashankar Wildlife Sanctuary were revised based on the referee's comments. Two papers were accepted for publication and a book dealing with 45 common odonates of central India (with colour photographs and brief natural history notes) was published. A scientist of the station delivered a lecture on

freshwater biodiversity of India to the students of the Institute for Environmental Education and Research (IIER), Bharati Vidhypeeth, Pune, besides delivering a lecture on the activities and functions of ZSI to students of the IIER, who visited the station's museum. Scientists of the station reviewed two manuscripts on Aves and a project proposal on



**Book Published** 

aquatic insects, submitted to Critical Ecosystem Partnership Fund (CEPF)-Western Ghats by ATREE. Publication:

#### Book:

Andrew, R.J., Subramanian, K.A. and Ashish Tiple (2009). *A Handbook on Common Odonates of Central India*. Published by South Asian Council for Odonatology; 65pp.

#### Gangetic Plains Regional Station, Patna

Moths (Insecta: Lepidoptera) from Dalma Wild life Sanctuary, Jharkhand, belonging to 14 species, fishes of 23 species from the river Subernarekha, Jharkhand and chalcids (Insecta: Hymenoptera) of 4 species from Bihar were identified, which included 1 species of chalcid collected for the first time from Bihar. Two species of Hymenoptera (Chalcidoidea: Torymidae) of the genus Megastigmus Dalman, associated with wild rose Rosa webbiana (Rosaceae), were reported for the first time from the Indian cold desert (Ladakh), out of which, one species (Megastigmus kashmiricus) was described as new to science. A research manuscript on Hymenoptera was reviewed for the Records of Zoological Survey of India, Kolkata and advisory service rendered.

#### **Publication:**

P. M. Sureshan. 2009. Two species of *Megastigmus* Dalman associated with wild rose, *Rosa webbiana* (Rosaceae) from Ladakh, India with a key to the Oriental species (Hymenoptera: Chalcidoidea: Torymidae). *Journal of Threatened Taxa*, 1(5):305-308.

# Freshwater Biological Station, Hyderabad

A study conducted at Mondikodu drain and adjacent areas, revealed the occurrence of the wetland associated birds, Moorhen (*Porphyrio porphyrio* Linn.), Bronze-winged Jacana (*Metopidus indicus*) and water cock (*Gallicrex cinerea*), besides the wood sand piper (*Tringa glareola*). Further studies are in progress. Scientists of the station participated in a day-long state level work shop on 'Alien species: threats and opportunities', held at Acharya N.G. Ranga Agricultural University, Rajendranagar and A.P. Biodiversity Board on 19<sup>th</sup>.





Megastigmus kashmiricus Sureshan, 2009 (Insecta: Hymenoptera: Torymidae) new species described from Ladakh



Halticoptera smaragdina (Curtis, 1832) (Insecta: Hymenoptera: Pteromalidae), recorded for the first time from India



#### Arunachal Pradesh Field Station, Itanagar

Tawang Chu valley of Tawang district, western Arunachal Pradesh was surveyed from 9<sup>th</sup> to 26<sup>th</sup> and representative faunal collections made. In addition, over 110 species of birds were sighted and identified, songs & calls of over 42 species recorded and occurrence of 24 species of mammals noted, during the survey. A scientist of the station participated in the Regional Seminar on 'Intellectual Property and



Fire-tailed Sunbird (Aethopyga ignicauda)



Himalayan Griffon (Gyps himalayensis)

Innovation Management in Knowledge Era' held at Aizawl, Mizoram, from 14<sup>th</sup>-15<sup>th</sup> and also delivered a lecture on 'Biodiversity of Birds' at the Eastern Regional Station (ERS), ZSI, Shillong on 22<sup>nd</sup> in connection with the celebrations of the Golden Jubilee Year of ERS and the International Day for Biological Diversity.



# Estuarine Biological Station, Gopalpur-on-Sea

A local survey was conducted at the Subhadra Estuary, Ganjam District, Orissa for studying the ecology and diversity of estuarine animals. During the survey, representative faunal samples were collected comprising of aquatic insects, fishes, Crustacea, Mollusca and Coelenterata. Fish samples collected from the Brahmani-Baitarani Estuary,

Orissa were studied and identified as 46 species belonging to 21 families. A senior scientist of the station attended the training programme on Right to Information Act, 2005 at Bhubaneswar, which was organized by the Institute of Public Administration, Bangalore, on 29<sup>th</sup> and 30<sup>th</sup>. During the month, 10 visitors paid their visits to the museum of the station.



A view of Subhadra Estuary, Orissa



Spotted butterfish, Scatophagus argus



# Marine Aquarium & Research Centre, Digha

The field surveys conducted in and around Digha during the month resulted in the collection of 90 specimens comprising of faunal groups such as Mollusca, Crustacea and Cnidaria. Sorting and identification works of the old collections of the Centre were also undertaken. Besides carrying out the routine maintenance work of the aquarium, two videographs on the aquarium animals were prepared and the one on the Stars and stripes puffer (Arothron hispidus) is hyperlinked with the departmental website www.zsi.gov.in. Advisory services were rendered to various groups of visitors. A scientist of the station supervised the Project & Dissertation work of a Post Graduate student from Vidyasagar University and also participated in a meeting on Integrated Coastal Zone Management, held at West Bengal Pollution Control Board at Salt Lake, Kolkata.



Horseshoe crab (Carcinoscorpius rotundicauda)

♠ In this Issue

#### Sunderban Field Research Station, Canning



The flower crab, Portunus pelagicus

11 species of gastropods, 6 species of bivalves, 2 species of brachyuran crabs and 10 species of fishes were identified during the month. A study to investigate the impact of the cyclone 'Aila' (that had



The Seven-spot Archerfish, Toxotes chatareus

hit the Sunderban area on 25<sup>th</sup> May) on the faunal communities of the mangrove habitats in Sunderban has been initiated.



# High Altitude Zoology Field Station, Solan

A document on the *Fauna of Ladakh* comprising of to 392 species of various groups is under finalisation. Under the ongoing programmes i.e., Fauna of Pangi Valley (Chamba) and Fauna of Churdhar, 9 species of Rhopalocera (Butterflies) and 5 species of birds were identified besides identifying three species of fishes from the Beas River. Three species of bats were studied, their measurements taken and dentition

examined for further taxonomic analysis. One intensive survey to Sadhu Pul district was conducted, 82 examples referable to 9 groups were collected and 5 species of Rhopalocera and 1 species of fish identified. Field observations on behavioural aspects such as mudpuddling, selection of nectar food plants, larval host plants etc. of butterflies have been made besides assessing the abundance of various butterfly



species. One paper on herpetofauna has been accepted in the journal, *Hamadryad* and one paper on butterflies of Pangi valley has been submitted to *Annals of Entomology*. A Scientist of the Station attended the seminar on Right to Information Act, 2005 at Jawaharlal Nehru University, New Delhi. Two staff members of the station participated in the Training Programme for non-metric Group-D employees organized at the Northern Regional Station, ZSI, Dehradun.

♠ In this Issue

Oriental Turtle Dove at Pangi Valley

#### Western Ghats Field Research Station, Kozhikode (Calicut)

Seven species of parasitic Hymenoptera were identified, of which 4 species under the genus Trissoclus Ashmead turned out to be new to science. 292 Odonata (Insecta) specimens received from the Northern Regional Station, Dehradun for identification were segregated into 12 genera and the species level identification is in progress. A research paper on the distribution of Rhacophorus lateralis (Amphibia) in Western Ghats has been submitted for publication in the Journal of Threatened Taxa. Scientists of the station delivered lectures on the biodiversity richness of Western Ghats to a group of primary school teachers from Sarva Shiksha Abhiyan, Kozhikode, who visited the station and its museum on the 8th. A manuscript on a pictorial guide to the fishes of the family: Nemipteridae was reviewed and advisory service rendered. During the month, 1120 visitors paid their visits to the museum maintained at the station. A videograph of Yellow-bellied Sea Snake, Pelamis platurus, collected recently from the coastal waters of Kozhikode (Calicut), Kerala, is hyperlinked with the departmental website www.zsi.gov.in and a write up on it provided under the section, ANIMAL OF THE MONTH, below. Two staff members of the station participated in the Training Programme for non-metric Group-D employees, organized at the Southern Regional Station, ZSI, Chennai. On 22<sup>nd</sup>, scientists of the station arranged an exhibition on Invasive Alien Species (IAS) of plants and animals in India (please visit www.zsi.gov.in), to observe the International Day for Biological Diversity. 35 species (19 of plants and 16 of animals, including live ones) were exhibited with explanatory charts, besides displaying pictorial charts of 100 of the World's Worst Invasive Alien Species. An educative brochure on IAS prepared for

the occasion was also distributed to the visitors. On popular demand, the exhibition was extended for one more day (23<sup>rd</sup>). The exhibition attracted 701 visitors and was also well covered by both the print and visual media.



School teachers from Sarva Shiksha Abhiyan, Kozhikode, at the museum.



Scientists of WGFRS in discussion with school teachers from Sarva Shiksha Abhiyan, Kozhikode, on the topic, "Biodiversity richness of Western Ghats"

#### ANIMAL OF THE MONTH



Yellow bellied Sea Snake *Pelamis platurus* (Linnaeus)

The Yellow bellied Sea Snake, *Pelamis platurus* (Linnaeus), is a widely distributed species seen throughout the tropical regions of the Indian and Pacific Oceans, upto the west coast of Central America. It is also recorded from the east African coast. It is usually found within a few kilometers of the coast and prefer shallow inshore waters. Normally this snake lives in waters with temperatures between 11.7 and 36 degrees Celsius.

Instead of the usual banded pattern found in sea snakes, this snake has dorsal the half of its body black and the lower half yellow. The tail is with distinct black spots. The body is flattened and the tail even more so, to facilitate swimming. It swims and dives by side-to-side undulations of its body and the flattened tail. It can swim backwards and forwards, but is unable to move efficiently when washed ashore. It is diurnal and primarily aquatic, living out its entire life cycle at sea. This snake is capable of spending up to

three hours underwater without surfacing. It is estimated that it spends up to 87 percent of its life underwater, surfacing mainly when the seas are calm. Sometimes it forms large aggregations on surface waters. Being very alert, it may dive when approached, but often shows no concern when confronted while it is floating at the surface.

The venom is neurotoxic and is used against its fish preys. Though this snake is 10 times more venomous than cobra, it is known to deliver only a much smaller quantity of venom. No human fatalities are known. This snake feeds on small surface-dwelling fish and eels, waiting quietly for the fishes to swim by.

The maximum length recorded for this sea snake is 113cm. It breeds in warm waters and is ovoviviparous, with a gestation period of about 6 months. One to ten young ones are born per litter, each 22-26cm long at birth.

