

# ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India

## POSTER SERIES



## VIDEO



1. Tibetan Wild Ass
2. ZSI at the 'Pride of India Expo'

## ZSI IN NEWS



## OUT OF THE BOX



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## ANIMAL OF THE MONTH



**Tokay Gecko**

## Check-list of fauna of India:

### Pterophoridae

(Lepidoptera: Insecta)

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## From the Director's Desk

It is very gladdening to state that the *ZSI e-News* is ushering into the second year of its publication. It had received inspiring responses during 2009. We endeavour to improve it further with the opinions and comments from its readers.

The current issue of the *ZSI e-News* summarises the activities of the Department during January 2010. The Headquarters and Regional Centres have carried out 12 field surveys in the States of Madhya Pradesh, Orissa, West Bengal, Assam, Uttarakhand and the UT of Andaman & Nicobar Islands. The scientists have identified 700 species belonging to different invertebrate and vertebrate groups, including 3 species new to science and several new records, from various ecosystems and protected areas of the country. Important observations were made on the natural history of a may fly, live coral covers in areas of Andaman & Nicobar Islands *etc*, besides rediscovering viable population of an extremely rare freshwater mussel. The scientists of the survey have published six new books and several research papers, and attended a large number of queries on fauna from students and researchers of various institutions and government agencies. Students from a number of schools, colleges and universities of the country visited different Centres of the Survey. A number of scientists have attended important meetings on wildlife conservation, biodiversity information and animal ethics. The ZSI made its mark in the 'Pride of India' Exhibition 2010 by setting up a pavilion during the 97<sup>th</sup> Indian Science Congress at Thiruvananthapuram. Hon'ble Minister of Environment & Forests Shri Jairam Ramesh along with the Addl. Secretary and the Joint Secretary of the Ministry visited the Headquarters office of the Survey on the 13<sup>th</sup> January 2010. Director General of Forests and Special Secretary, Ministry of Environment and Forests also visited the Headquarters office and was appraised of the activities during their visits.

Dr. Ramakrishna

## Headquarters, Kolkata

Extensive field surveys were undertaken in the States of Madhya Pradesh, Orissa and West Bengal and local surveys in and around the wetland areas of North 24 Parganas, West Bengal.

During the month, *Trechnites silvestris* (Hymenoptera: Encyrtidae) has been described as new to science. Besides, scientists of the Headquarters identified 5 species of free living Protozoa, 5 species of Coleoptera, 7 species of Collembola, 12 species of Hemiptera, 4 species of Hymenoptera, 7 species of Isoptera, 7 species of Lepidoptera, 6 species of Odonata, 7 species of Orthoptera, 11 species of Oribatid mites and Ticks, 24 species of spiders, 2 species of Crustacea, 12 species of Mollusca and 4 species of anuran Amphibia from the States of Andhra Pradesh, Arunachal Pradesh, Assam, Gujarat, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Maharashtra, Nagaland, Orissa, Tripura, Uttarakhand, Uttar Pradesh, West Bengal, Namdapha Biosphere Reserve (Arunachal Pradesh), Bhimbhuti Bhusan Wildlife Sanctuary, West Bengal and Eastern Ghats of Peninsular India.

Holotypes and Paratypes of 8 species of Copepoda were deposited in the National Zoological Collection by Dr. Y. Ranga Reddy, Nagarjuna University, Nagarjunasagar, Andhra Pradesh.



The Khasi Hills Rock Toad, *Bufo megalayanus*, rediscovered from Mawblang, Cherrapunjee, Meghalaya

Identification services were rendered on 11 lots of specimens, received from different organizations for identification.

Five research papers were published, 9 accepted for publication and 16 submitted.

A senior scientist delivered lecture on "Antarctic Birds" in the XII Training Course on Ornithology.

Thirty Post-Graduate students and a research scholar from the Department of Zoology, North Eastern Hill University, Shillong, Meghalaya; a research scholar from the University of North Bengal and 2 research scholars from the Calcutta University visited different sections of the Headquarters. A research scholar from the University of Delhi visited the Amphibia Section to examine type specimens of Amphibians. Dr. Varsha Zade, Head, Department of Zoology, Institute of Science and Humanities, Amravati, Maharashtra visited the Reptilia Section to study the lizard collection.

A senior scientist of the Headquarters attended the First meeting of the Committee on Endangered species in West Bengal.

The Training and Extension Division organized the 12<sup>th</sup> Training Course on Ornithology during 12<sup>th</sup> to 15<sup>th</sup> January at the Headquarters.

During the month, 18 staff members of Headquarters were deputed to participate in the Training on IT Awareness and E-Governance under the Information Technology Programme of the Administrative Ministry.

The Honorable Union Minister for Environment and Forests Shri. Jairam Ramesh visited ZSI Headquarters on 13<sup>th</sup> January and interacted with the staff of ZSI. On this occasion, the visiting dignitary released the following books.

1. *Fauna of Nal Sarovar, Gujarat*
2. *Annotated Checklist of Indian Land Molluscs*



Dr. Ramakrishna, Director, ZSI, delivering an invited lecture on the role of ZSI in Biodiversity Conservation, at the 97<sup>th</sup> Indian Science Congress, held at Thiruvananthapuram

3. *Faunal diversity of Pong Dam and its Catchment Area*

4. *List of Valid Rodent Taxa from Indian Subcontinent including Myanmar*

Dr. P. J. Dilipkumar, Director General of Forests and Special Secretary, Ministry of Environment and Forests, New Delhi visited different sections of the Headquarters office on 25<sup>th</sup> January and during his visit, the following publications of ZSI were released.

1. *Records of Zoological Survey of India, Vol. 109 Part 3 & 4*

2. *A pictorial guide to Amphibians of North East India*

**Publications:**

1) Babu, R., Mehta, H. S. and Kamal, S. 2009. Insecta: Odonata. In: *Faunal Diversity of Pong Dam, Wetland Ecosystem Series* No. 12: 13-19, Zoological Survey of India.

2) Babu, R. and Mehta, H. S. 2009. Insecta: Odonata. In: *Faunal Diversity of Simbalbara Wildlife Sancturay, Conservation Area Series* No. 41: 21-28, Zoological Survey of India.

3) Dev Roy, M. K. and Nandi, N. C. 2009. Freshwater crustaceans of lentic and lotic ecosystems in West Bengal. *J. Environ & Sociobiol.*, 6 (2): 175-194.

4) Kazmi, S. I. and Hayat, M. 2009. Description of a new species and new record including some known species of Encyrtidae (Hymenoptera: Chalcidoidea) from India. *Rec. zool. Surv. India*, 109 (3): 109-114.

5) Gantait, V. V., Chatterjee, A., Sanyal, A. K. and Bhattacharya, T. 2009. Studies on soil and Plant Parasitic Nematodes Associated with Banana in West Midnapur, West Bengal, India. *Proc. Zool. Soc.*, 62 (2): 143-146.

 In this Issue

## Marine Aquarium cum Regional Centre, Digha

The aquarium received a large number of visitors, in continuation to the various events viz. New-Year Celebration, Beach Festival and 'Makar Sakranti mela' in the area. The major attractions among the aquarium exhibits during the month were Zebra Eel (*Gymnomuraena zebra*), Red finger star (*Linkia laevigata*), Knobbed Star (*Pentaceraster mamillatus*), Spiny Lobster (*Panulirus* sp.), varieties of cichlids and various crabs.

Symbiotic sea anemone attached on crabs, displayed in a newly prepared invertebrate tank, was also one of the major attractions for the visitors. The symbiotic anemones attached to crab carapace and hermit crab shell were collected for the first time from Digha. 201 live examples of marine fishes and invertebrates were displayed in the aquarium during the month. 55 examples of marine invertebrates (bivalves, gastropods, star fishes, sea anemones



and crabs) were collected during the month through local surveys. Two crabs, *Platylambrus prensar* and *Doclia* sp. were also recorded for the first time from Digha.

Among the institutional visitors, a group of final year M.F.Sc. students from CIFE, Kolkata visited the Centre in connection with their final

year dissertation work. Advisory services were rendered to various schools, colleges and institutions. A scientist of the Centre attended a meeting with the World Bank Officials at the Institute of Environmental Studies & Wetland Management, Kolkata for finalising requirements in a project plan.

### Some live aquarium exhibits at MARC, Digha



*Charybdis feriata*



crab with anemone



Hermit crab, *Clibanarius* sp.



*Doclia ovis*



*Doclia canalifera*



*Lambrus prensar*



*Metaplex cranulata*



*Portunus pelagicus*



*Squilla* sp.



Spiny Lobster, *Panulirus* sp.



Tiger Prawn *Paeneus* sp.



*Pentaceraster mammillatus*



RedFinger, *Linkia laevigata**Carcinoscorpius rotundicauda*Spotted Butterfly, *Scatophagus argus*Giant Morey Eel, *Gymnothorax sp.*Zebra eel, *Gymnomuraena zebra*Guitar fish, *Rhynchobatos djiddensis*

In this Issue

## Arunachal Pradesh Regional Centre, Itanagar

The herpetofaunal collection sampled during Tawang expedition were identified and a report submitted by the expert concerned. Part of the hymenopteran insects collected from the Namdapha Tiger Reserve was identified as *Nemotha metallica*, *Creobroter urbanus*, *Phyllotheys westwoodi*, *Vespa mandarinia* and *Vespa basalis* by the specialist concerned. Identification process of the parasitic and other micro hymenopteran insects in the collection has also been underway.

On 5<sup>th</sup> January, a scientist of the Centre attended the 20<sup>th</sup> meeting of the Arunachal Pradesh State Board for Wildlife. A scientist of the Centre also attended a State level committee meeting of the Dihang-Dibang Biosphere Reserve (DDBR) on 12<sup>th</sup> January. Two scientists of the Centre participated in the Eclipse Watch organized by the Citizen Science Programme of the National Centre for Biological Sciences (NCBS), Bangalore on 15<sup>th</sup> January and the findings were uploaded in the forum's website. Captive birds and mammals were observed to study the influence of solar eclipse on the behaviour of

animals before, during and after the eclipse. A scientist of the Centre participated in a two-day training programme, 'Compact CDDO 2 PAO', conducted by the Regional Training Centre of Institute of Government Accounts & Finance, Kolkata from 27<sup>th</sup> to 28<sup>th</sup> January. Research scholars from G.B. Pant Institute of Himalayan Education & Development, Itanagar, visited the Centre for library reference work. Besides, many school children also visited the museum of the Centre.



The partial Solar eclipse  
witnessed at Itanagar on 15<sup>th</sup> January



Asian house gecko, *Hemidactylus frenatus*



Jerdon's Forest Lizard, *Calotes jerdoni*



Indian Garden Lizard, *Calotes versicolor*



Eurasian Tree Sparrow, *Passer montanus*



Daurian Redstart, *Phoenicurus aureus*



Olive-backed Pipit, *Anthus hodgsoni*



Little Spiderhunter, *Arachnothera longirosta*



Common Myna



Spotted Doves



Hoolock Gibbon




## North Eastern Regional Centre, Shillong

Under the ongoing programme on the faunal documentation of Nokrek Biosphere Reserve, Garo Hills, Meghalaya, 8 species of aquatic Hemiptera and 11 species of fishes were examined and identified. Unidentified Ephemeroptera (Insecta) present in the holdings of the Centre were studied and identified up to family level. A field survey of 2 days duration was conducted to Deepor beel (a Ramsar site) in the Kamrup district of Assam. Water samples and qualitative and quantitative

plankton samples were collected from 6 sampling sites. 8 species of Rotifera and 9 species of Cladocera were identified and registered.

Identification and advisory service was rendered to the Herpetological laboratory, Department of Zoology, Arya Vidyapeeth College, Guwahati. Library facilities were provided to 2 Research scholars from the North Eastern Hill University.

 In this Issue

## Andaman and Nicobar Regional Centre, Port Blair

Field surveys were conducted in the Neill and Little Neill Islands in Ritchie's Archipelago and Rutland Island in Mahatma Gandhi Marine National Park from 9<sup>th</sup> to 10<sup>th</sup> and 20<sup>th</sup> to 25<sup>th</sup> January respectively, to study the corals and their inhabitants. 73 species of corals, 18 species of gastropods, 12 species of bivalves, 41 species of echinoderms, 61 species of fishes, 12 species of soft corals, 4 species of crabs, 34 species of zooplankton and 38 species of phytoplankton were identified out of these surveys. Besides, 7 species of butterflies and 37 species of birds were encountered at the terrestrial counterpart of Rutland Island. The live coral cover in the study area -Neill, Little Neill and Rutland - has also been estimated as 50.6%, 52.5% and 57.0% these three islands respectively. Manuscripts on new distributional records of corals from Mayabunder, Great Nicobar Island and North

Andaman have been submitted for publication in different journals. Database on corals, soft corals, crustaceans, echinoderms, insects, avifauna, reptiles and mammals has been updated. 24 species of corals, 2 species of gastropods and 2 species of echinoderms were registered in the National Zoological Collection.

Gut content analysis of male and female Spear Lobster *Linuparus somniosus* has been undertaken for the Fishery Survey of India, Port Blair on request. As required by the Ministry, a scholarly article on the 'Great Nicobar Biosphere Reserve Andaman and Nicobar Islands' has been submitted for the publication in the 'Indian Biosphere Reserves: Progression during two decades of conservation' being compiled by the Ministry. Based on a request received from the Dept. of Environment of



Echinoderm, *Coenometra emendatrix* (Bell)



Coral, *Platygyra pinni* Chevalier

Forests, Port Blair, a research proposal on Taxonomic revision of Indian Arctiidae (Lepidoptera) has been reviewed and comments offered. Scientists of the Centre delivered lectures on 'Faunal diversity of A&N Islands' and 'Crocodile census techniques' at the Forest Training School, Port Blair. Scientists




Coral, *Pocillopora edyouxi* M. Edwards & Haime

of the Centre participated in the 'Animal Ethics Committee Meeting' organized at ICMR, Port Blair, on 13<sup>th</sup> January and the 'Marine Mammal Stranding Workshop' held at CMFRI, Kochi during 21<sup>st</sup> to 23<sup>rd</sup> January. 76 research papers of 'National Symposium on Recent Advances in Biodiversity of India' have been edited.



Coral, *Acropora robusta* (Dana)

 In this Issue

## Central Zone Regional Centre, Jabalpur

Fortysix species of fishes collected from various localities in Madhya Pradesh and Chhattisgarh were identified. In addition, 5 species of Protozoa, 8 species of Rotifera and 9 species of Cladocera were also identified. Insects collected during the Tawang (Arunachal Pradesh) expedition were set and pinned for identification. A manuscript on Neuroptera (Insecta) dealing with 61 species was contributed to the 'Fauna of Maharashtra' document. A Checklist dealing with 337 species of 'Indian Neuropterids (Megaloptera;

Raphidioptera; Neuroptera)' was prepared. The first proof of an Occasional Paper entitled 'A Compendium on Faunal Resources of Narmada River Basin in Madhya Pradesh' was checked and submitted.

A research paper was reviewed and comments offered. A thesis received from RSTM, Nagpur University, Nagpur was evaluated and comments communicated. Three advisory services were rendered to outside parties. One research paper was published and two submitted.

## Some birds of Veerangana Durgavati Wildlife Sanctuary



*Alcedo atthis* -Common Kingfisher



*Copsychus saularis* - Oriental Magpie-Robin





*Cinnyris asiatica* - Purple Sunbird



*Coracias benghalensis* - Indian Roller

### Publication:

Chandra, K., Gupta, S. K. and Dubey, K. K. 2009. Study on the species composition and diversity

of Orthoptera in Pench Tiger Reserve, Madhya Pradesh. *National Journal of Life Sciences*, 6(1): 81-86.

In this Issue

## Northern Regional Center, Dehra Dun

A field survey was undertaken in and around Dehradun for the collection of nematode parasites of vertebrate hosts. Another survey was undertaken in and around Haridwar for ecological & molecular study of freshwater turtles. 590 entries of nematodes, centipedes and Amphibia were made in identified registers. 12 species of butterflies and 3 species of nematodes were identified. Registration and identification of the unidentified collection of the Rolled bird's skins and flat skins of mammals available at the Centre were continued. 20 data entries have been made in the data base. Three research papers were published.

A scientist of the Centre delivered a series of lectures on collection of wildlife samples for forensic studies to the forest staff, (DFOs, Range officers & Guards) of Kanha National Park & Pench Tiger Reserve, Madhya Pradesh from 26<sup>th</sup> December 2009 to 5<sup>th</sup> January 2010, during a programme organized by WWF.

### Publications:

1. A. N. Rizvi & H. S. Mehta. 2009. Significance of trophic diversity of soil nematodes. *Annals of Forestry*, 17(2): 311-318.
2. Khanna, V. 2009. Effect of climate change on the soil Fauna - Predictions and analysis. *Annals of Forestry*, 17(2): 321-325.
3. Khanna, V. 2009. Medical and Economic importance of Scolopendrid centipedes. *Annals of Forestry*, 17(2): 327-338.



Common Hoopoe observed at Hisar district, Haryana

In this Issue

## Gangetic Plains Regional Centre, Patna

Description of a new species of *Anisopteromalus* Ruschka (Hymenoptera: Pteromalidae) from Sri Lanka has been completed, based on a collection received from Bohart Museum of Entomology, University of California, Davis,

USA. Three paratypes of two Afro-tropical species of *Anisopteromalus* were borrowed on loan from the Natural History Museum, London for comparative studies and confirming the identity of the new species. 5

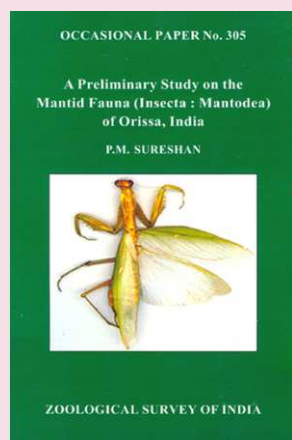
species of moths and 3 species of mantids (Insecta: Mantodea) were identified from Tawang District, Arunachal Pradesh which included 2 species of mantids (*Odontomantis micans* and *Creobroter apicalis*) collected for the first time from the State. Besides, 2 species of Chalcids (Hymenoptera: Pteromalidae) and 2 species of mantids were identified from Namdapha Tiger Reserve, Arunachal Pradesh. Description of a new species (*Ecdamua lehensis* sp. nov.) of Torymidae (Hymenoptera) from Ladakh has been accepted for publication in the *Records of Zoological Survey of India*. 2 research papers were published and 1 accepted for publication. Identification services on benthic macroinvertebrates and zooplankton were rendered to the M.Sc. students of Patna University. A scientist and an administrative staff of the Centre attended the training for DDO's at the Regional Training Centre (MOEF), Kolkata.

### Publications:

- 1) Sureshan, P. M. 2009. A preliminary study on the Mantid fauna (Insecta: Mantodea) of Orissa, India. *Rec. Zool. Surv. India, Occ. Paper* No.305:1-56.
- 2) Gopal Sharma, Hasko Nesemann and S. Sharma, 2009. Discovery of a population of *Parreysia rajahensis* (Lea, 1841) (Unionoidea: Amblemidae) a virtually unknown large freshwater bivalve of India. *Journal of Environment and Sociobiology* 12(36):75-79.



*Ecdamua lehensis* sp. nov. from Ladakh



Book Published



*Odontomantis micans* from Arunachal



*Creobroter apicalis* from Arunachal


In this Issue

## Sunderban Regional Centre, Canning

Three species of brachyuran crabs (*Charybdis rostrata*, *Metapograpsus messor*, *Matuta planipes*), 3 species of fishes (*Polynemus longipectoralis*, *Thryssa hamiltonii* and *Anodontostoma thailandiae*), 2 species of reptiles (*Varanus bengalensis* and *Ptyas mucosa*) and 2 species of

Amphibians (*Duttaphrynus melanostictus* and *Fejervarya limnocharis*) were identified and registered. The total holdings of the Centre were updated to 1,525 named specimens. A staff member of the Center participated in the computer training programme held at Kolkata.




*Matuta planipes**Metapograpsus messor*
 In this Issue

## High Altitude Regional Centre, Solan

A research document on Herpetofauna of Tawang, Arunachal Pradesh was prepared and submitted. A part of the entomofaunal collection from Pangri Valley and Churdhar Wildlife Sanctuary was identified. A research paper on the Chiropteran fauna of Himachal Pradesh was finalised. Compilation of the document on avifauna of Churdhar Wildlife Sanctuary has been initiated. A research paper

on Lepidoptera has been accepted for publication in a national journal.

A scientist of the Centre presented a paper in the Second National Conference, 'Recent advances on chemical and environmental sciences', at Modi PG College, Patiala. A checklist of the Microlepidoptera of India, finalised at the Centre is hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in).

*Mustela altaica* in Ladakh*Caligula lindia* (Moore) in Pangri Valley
 In this Issue

## Desert Regional Centre, Jodhpur

Part of the material collected during the field surveys conducted in various environs of Rajasthan was identified. The collection identified comprised of 8 species of Nematoda, 4 species of Odonata, 6 species of Lepidoptera and 4 species of Coleoptera. Besides, 2 species of Nematoda were also identified from the forest areas of Gujarat. 2 research papers were

submitted. The faunal Database of the Centre was updated with 56 additional entries. 92 entries pertaining to the books in the Centre's library were made employing the software, *e-granthalaya*. 64 visitors paid their visits to the museum. 10 senior Press Reporters from the Press Information Bureau (Ministry of Information & Broadcasting), Varanasi (Uttar



Indian Roller at Sita Mata Wildlife Sanctuary



Yellow Pansy at Sita Mata Wildlife Sanctuary



Senior Press Reporters from Press Information Bureau visiting the Centre

Pradesh) visited the Centre and covered the research work and activities of the Centre, on 6<sup>th</sup> January. A senior Scientist of the Centre attended the inaugural function of the 42<sup>nd</sup> Annual Convention of IWWA at M.B.M. Engineering College, Jodhpur on 29<sup>th</sup> of the month.

In this Issue

## Estuarine Biology Regional Centre, Gopalpur-on-Sea

A field survey was carried out in Sorada and Bhanjnagar Blocks of Ganjam District, Orissa from 18<sup>th</sup> to 26<sup>th</sup> January and collected representative faunal components comprising insects and freshwater molluscs. 4 species of prawns, 2 species of crabs and 8 species of fishes were identified from the collections of Brahmani-Baitarani Estuary. 5 species of fishes collected from the Cauveri Estuary, Tamil

Nadu, were identified.

An administrative staff attended the two day training programme on CDDO-2PAO, organized by the Regional Training Centre, Institute of Govt. Accounts & Finance, Ministry of Finance, Kolkata from 27<sup>th</sup> to 28<sup>th</sup> January.

48 students and tourists paid their visits to the Centre's museum.



John's Snapper, *Lutjanus johnii* (Bloch)



Teachers of Presidency Public School, Goplapur, observing museum specimens

In this Issue



## Southern Regional Centre, Chennai

The reptilian collection from the Southern Eastern Ghats part of Tamilnadu and Kolar district of Karnataka were identified in to 4 species. 3 genera of Blattodea were identified from the Kanniyakumari Wildlife Sanctuary and the representative samples of 6 other orders of insects from the Sanctuary were sent to experts for identification.

22 manuscripts dealing with the fauna of Karnataka State were received for compilation. 2 research papers were published.

A senior scientist of the Centre acted as the Chief Guest and inaugurated the exhibition 'Netaji Tomorrow 2010', on 8<sup>th</sup> January, in the Velammal Higher Secondary School, Chennai. He delivered a lecture on 'Biodiversity of India' and screened video clippings and presented a slide show to the gathering. 31 Display boards on fauna of Tamilnadu were exhibited during the programme, to create biodiversity awareness.



Golden-fronted Leafbird, *Chloropsis aurifrons* Temminck




Orange-headed thrush, *Zoothera citrina* (Latham)

Dr. S. D. Biju, Associate Professor, Department of Environmental Studies, University of Delhi and 2 of his PhD Students studied the type specimens of amphibians in the holdings of the Centre.

A videograph on the Tibetan Wild Ass (Kiang), documented is hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in).

### Publications:

- 1) G. Thirumalai, Kailash Chandra and Avtar Kaur Sidhu 2010. Ecological diversity and insect biodiversity in Cold Deserts in India. Chapter: 11(199-210pp), in: *Insect Biodiversity: Functional Dynamics and Ecological Perspectives*, edited by Prof. T.N. Ananthakrishnan, Scientific Publishers (India), Jodhpur.
- 2) Ilango. K. 2010. A Taxonomic Reassessment of the *Phlebotomus argentipes* Species Complex (Diptera: Psychodidae: Phlebotominae). *Journal of Medical Entomology*, 47 (1): 1-15.

 In this Issue

## Marine Biology Regional Centre, Chennai

Nine species of marine sponges, 6 species of molluscs and 33 species of marine fishes were identified and 142 examples of echinoderm specimens were registered, out of the material collected from the Gulf of Mannar Biosphere Reserve. 7 species of fresh water fishes were identified for scientists outside ZSI. 2 species of marine snakes were also identified. 4 species of

marine fishes and 2 species of marine snakes were introduced for display in the marine aquarium tanks which were collected from Chennai coast. 873 students and tourists visited the marine aquarium during the month. 2 advisory services were rendered. Seizure materials were identified as Organ pipe coral and a sea shell and identification report was

submitted to the Directorate of Revenue Intelligence, Ludhiana Regional Unit, Government of India. A research paper was communicated for publication.

A senior scientist of The Centre delivered an invited talk on Climate change on Marine Biodiversity, in a National Conference organized by Loyola College, Chennai and attended a meeting on Global Biodiversity Information Facility at MoEF, New Delhi. A scientist of the Centre attended the Institutional animal ethics committee meeting at SRM College of pharmacy, Kattankulathur, and a

preliminary meeting at Anna University in connection with Science Festival 2010. A scientist of the Centre underwent a training course on CDDDO 2 PAO, conducted by the Institute of Government Accounts & Finance, Kolkata.


The Marine Biology Regional Centre, ZSI, Chennai has prepared and published a number of posters for awareness to public on Marine Biodiversity conservation in the country. The first poster in the series is presented in this newsletter (Please view the Poster Series section below).



African Spadefish, *Tripteron orbis* Playfair  
(A new record to East-Coast of India)



Seven armed Star fish  
(A rare collection from Chennai Coast)

 In this Issue

## Western Regional Centre, Pune

A new species of Ephemeroptera, *Symbiocloeon madhayasthai* Subramanian and Sivaramakrishnan, 2009 was described. This species was discovered between gill folds of an endangered cemented freshwater bivalve



*Symbiocloeon madhayasthai*  
Subramanian and Sivaramakrishnan, 2009

*Pseudomullaria dalyi* Smith, 1898 in Tunga River, Karnataka. Hitherto only two such associations between a freshwater mollusc and Ephemeroptera are known, one each from Africa and Thailand.

A scientist of the Centre participated in the IUCN Western Ghats Freshwater Biodiversity Assessment workshop at Coimbatore. Scientists of the Centre identified 17 species of freshwater fishes for Drongo Foundation, Satara. A lecture on 'Spatial Patterns in Freshwater Biodiversity-Insights from Stream Insect Communities of the Western Ghats' was delivered during the Dr. Ravi Sankaran memorial symposium at SACON, Coimbatore. Mapping of distribution of 68 species of




endemic Odonata of the Western Ghats was completed. A lecture on "Insect-Bird Interactions" was delivered by a scientist of the Centre to the participants of Ornithology course at Garware College, Pune.

#### **Publications:**

- 1) Subramanian, K. A. and Sivaramakrishnan K. G. (2009). A new record of mayfly mussel

association from Tunga River in Karnataka state, India, with a description of new species of *Symbiocloeon* (Ephemeroptera: Baetidae). *Oriental Insects*. 43: 71-76.

- 2) K. G. Sivaramakrishnan, K. A. Subramanian and V. V. Ramamoorthy (2009). A Revised and Annotated Checklist of Ephemeroptera of Indian subregion. *Oriental Insects*. 43:315-339.

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### **Freshwater Biology Regional Center, Hyderabad**

Periodic field studies on different *trophic* grades of a few small to medium sized man-made/natural fresh water shallow lakes were continued for ecological evaluation of the aquatic faunae *vis-à-vis* their water quality. A field study was conducted from 16-20<sup>th</sup> January to study the limnological/ faunistic profile of Palair Lake, a raw water reservoir in Khammam, Andhra Pradesh. Representative fauna comprising of major *nekton* groups (fishes, amphibians, decapod crustaceans and aquatic insects, molluscs *etc.*) were collected besides obtaining 8 composite zooplankton samples and equal number of littoral surficial water samples for evaluation of raw water quality. The Taxonomic studies on the aquatic faunal diversity in Palair reservoir so far revealed 6 species of commonly occurring aquatic coleopterans. Laboratory identification studies of the fauna of Kolleru Lake (Andhra Pradesh) are in progress for documenting the different wetland faunal groups (*neuston*, on air-water interface, fish *nekton*, littoral faunae

*etc.*) from different ecological habitats. Results of chemical analysis of various basic and conservative ions (forms of phosphorous and nitrogen) revealed increasing *eutrophication* trends. Identification service was rendered to the Central Leather Research Institute (CLRI/CSIR), Chennai on Amphibia and M/S. Greengold Vermicompost, Raipur (Chattisgarh) on a commercial species of earthworm (*Eudrilus eugeniae*).



The freshwater decapod Crustacea, widely cultured in shallow waters of Kolleru Lake

 In this Issue

### **Western Ghat Regional Centre, Kozhikode (Calicut)**

An electronic transcript of specimen data pertaining to 100 species (Holotypes) of Indian Proctotrupoidea and Platygastroidea, belonging to Prof. M.S. Mani's PL 480 Collection was prepared, in collaboration with Dr. Lubomir Masner, Canada. 1000 data entries pertaining to 132 endemic species of amphibians from Western Ghats (based on the collection data housed in WGRC, Calicut and

SRC, Chennai and also based on the recent new species reports from literature) and 600 data entries on 22 species of Odonata of Western Ghats were made for the preparation of faunal atlases. Besides, 4 species of anuran amphibians from Bhadra Wildlife Sanctuary, Karnataka, were identified.

A research paper dealing with 88 species of Amphibia known so far from Karnataka State,

India, was submitted to the Co-ordinator of the State Fauna series of ZSI.

Identification and advisory services were rendered to the Aquatic Biology Division, Zoology Department, Kerala University; B.Sc. (Zoology) students, Providence College, Kozhikode; Kerala State Forest Department and the First Class Magistrate, Manjeri, Malappuram District, Kerala, on 6 species of fishes; 5 species of butterflies; a confiscated specimen of Small Indian Civet; and confiscated birds respectively.

A scientist of the Centre participated in the 'Butterfly Migration Study Camp' at Aralam Wildlife Sanctuary, Kannur, Kerala, from 8-10<sup>th</sup> January, organized by the Kerala Forest Department and the Malabar Natural History Society, Calicut.

Dr. Allan Kellehear, Professor of Sociology at the University of Bath, UK, an internationally known researcher and author in the social issues related to death, dying and palliative care, delivered a lecture on the topic of his specialization at WGRC on 22<sup>nd</sup> January. Dr. Allan Kellehear is also an active entomologist

and had been the President of Australian Entomology Society for seven years.

During the month, 3101 visitors paid their visits to the museum at the Centre.

WGRC, Calicut participated in the 'Pride of India Expo' of the 97<sup>th</sup> Indian Science Congress held at Thiruvananthapuram from 3<sup>rd</sup> to 7<sup>th</sup> January 2010. A video clipping of the event is hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in).



Dr. Allan Kellehear, Professor of Sociology, University of Bath, UK, delivering a speech at WGRC, Calicut

## WGRC, Calicut at the Pride of India Expo of the 97<sup>th</sup> Indian Science Congress





## ANIMAL OF THE MONTH

## TOKAY GECKO



*Gekko gecko* (Linnaeus, 1758)

(Text and photo by: Kaushik Deuti, ZSI, Kolkata)

The Tokay or Tucktoo gecko, *Gekko gecko* (Linnaeus, 1758), is the largest gecko in India measuring up to 34 cm in total length. It is commonly found throughout mainland and insular south-east Asia from Philippines to southern China, Myanmar, Bangladesh, Bhutan, Nepal and eastern India. In India this species is found only in the North-east Indian States, West Bengal and Bihar. Its presence is often revealed by its characteristic loud call 'tok-ko.....tok-ko' or 'geck-ko.....geck-ko' which in quiet surroundings is easily heard from over 400 meters. This loud call which is mostly heard at dusk and night during March-May gives the species, as well as the genus, their names. Calls may be uttered under distress but more commonly heard are territorial calls produced with the aid of well-developed vocal cords.

The upper side of the body is slaty grey in colour with red or orange spots. There are also transverse bands formed by white spots. The tail is with grey and white cross-bands. The belly is cream-coloured, unpatterned or variegated with grey. The head is large with yellow eyes. The body is thick-set with granular scales. Males have 13-24 pre-anal pores. The species is nocturnal, inhabiting large trees,

mainly the *Ficus* tree, in undisturbed forests and can also be found in old buildings and forest lodges. They often bask close to their hiding places and actively hunt for insects during the night. Females lay a clutch of two spherical eggs having an average diameter of 25 mm inside tree-holes during June-July. The eggs hatch out in approximately 64 days. Hatchlings are 40-42 mm in length and are brightly coloured, being reddish-brown above with white spots. The tail is banded with black and white. Many people assume that the Tokay Gecko is venomous and hence fear and dislike it. Although it is harmless, it can inflict a painful bite.

### Further Reading

Ahmed, M.F., Das, A & Dutta, S.K. 2009. Amphibians and Reptiles of northeast India a photographic guide. Aaranyak, Guwahati, India. 170 p.

Daniel, J. C. 2002. The book of Indian Reptiles and Amphibians. Bombay Natural History Society and Oxford University Press. 238 pages.

Whitaker, R & Whitaker, Z. 1979. Breeding of Tokay Gecko. *J. Bombay nat. Hist. Soc.*, 75: 499.

<http://www.jcvi.org/reptiles/species.php?genus=Gekko&species=gecko>

## ZSI IN NEWS



Zoological Survey of India stall in the Pride of India Exhibition of the 97<sup>th</sup> Indian Science Congress at Thiruvananthapuram, Kerala

<http://www.hinduonnet.com/2010/01/05/stories/2010010550530200.htm>

<http://www.expressbuzz.com/edition/story.aspx?Title=The+ultimate+showstoppers&artid=MKZDyprR2NU=&SectionID=IMx/b5mt1kU=&MainSectionID=IMx/b5mt1kU=&SEO=&SectionName=tm2kh5uDhixGIQvAG42A/07OVZOOEmts>

Biodiversity to benefit mankind

<http://www.timeschennai.com/index.php?mod=article&cat=News:%20%20South%20India&article=43599>

Zoological Survey of India report to solve deer musk seizure case in Malda

<http://nirajana.blogspot.com/2009/12/zsi-report-to-solve-deer-musk-seizure.html>

Dark Blue Tiger butterflies flap their wings in Wayanad, Kerala

<http://in.news.yahoo.com/20/20100109/1416/tnl-congregation-of-butterflies-sighted.html>

Animals not duped by annular eclipse

<http://www.hindustantimes.com/News-Feed/newdelhi/Animals-not-duped-by-annular-eclipse/Article1-497891.aspx>

### Role of ZSI under sea faunal exploration in the Archipelago

The prime objective of Zoological Survey of India (ZSI) is exploration, inventurization and monitoring of faunal diversity of various ecosystems and protected areas in the A&N Islands. Though, since its inception, ZSI is constantly undertaking surveys on terrestrial and marine faunal communities of these islands, special attention has been focused on undersea surveys to study the corals and its associated faunal communities in the year 2009. A total of 30 major surveys have been conducted during this year covering the length and breadth of these islands. Scientists and scientific staff of the centre have spent altogether 180 days to survey these islands, out of which 630 hours have been exclusively spent under sea with an aid of SCUBA. As a result of intensive surveys conducted to investigate underwater organisms of these islands, 364 species of corals, 1432 species of fishes, 432 species of echinoderms, 857 species of crustaceans, 112 species of sponges, 219 species of soft corals, 1077 species of molluscs, 29 species of sipunculids, 110 species of polychaetes, 324 species of meiofauna, 92 species of nudibranchs, 6 species of reptiles, 2 species of mammals, 87 species of zooplankton were identified from coral reef ecosystem. Besides, 264 species of avifauna, 98 species of reptiles, 1076 species of insects, 105 species of spiders, have also been reported from terrestrial environment.

It is pertinent to mention that, out of this faunal composition, 74 species of scleractinian corals, 89 species of nudibranchs, 78 species of reef fishes, 4 species of polychaetes and one species of echinoderm observed through these surveys reported as new distributional record not only to Andaman and Nicobar Islands but also to Indian subcontinent as a whole. In order to monitor the coral reef's health and its recruitments, with the collaboration of Dept. of Environment and Forests, A&N Administration, 10 permanent monitoring plots have been identified, out of which 3 plots in Mahatma Gandhi Marine National Park, 3 plots in Rani Jhansi Marine National Park, one plot each in North Bay, North Reef Island, Little Andaman Island and Great Nicobar Island are demarcated. The parameters such as percentage of live coral cover, diversity and density of corals, growth rate, primary and secondary productivities and water quality parameters are being monitored periodically in the monitoring plots. It is also estimated that the live cover of coral in North, Middle, South Andaman Islands and Nicobar Islands as 28-40%, 44-58%, 51-63% and 32-47% respectively. Apart from that recovery of corals in the post-tsunami scenario has also been assessed as 20-30% in North, 22-35% in Middle, 37-40% in South Andaman reefs and 20-28% in Nicobar reefs. Status survey on corals of Katchall and Teressa has also been conducted as a part of EIA study for the construction of jetties in these islands as required by the A&N Administration while standing stock on commercially important scheduled gastropods *Trochus* and *Tubo* being surveyed at A&N Islands as required by both Ministry of Environment and Forests and A&N Administration.

Based on the findings of undersea surveys in the year 2009, as required by the United States Fish and Wildlife Service, Arlington, USA the pertinent information on soft coral family Coralliidae in India, and in response to the proposal of Wildlife Trust of India, the recommendations for the inclusion of all species of Cephalopod molluscan family Nautilidae under the Appendix-2 of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) in order to conserve their dwindling population. Having the capacity of Lead Institution for Great Nicobar Biosphere Reserve (GNBR), ZSI has submitted the nomination form to include GNBR under UNESCO - Man and Biosphere Programme's world network through the Ministry of Human Resources Development, Govt. of India to conserve its biodiversity including 2050 species of fauna and 650 species of flora along with the population of semi nomadic aboriginal tribes Shompens. This reserve aimed at conserving the biological diversity and genetic integrity of plants, animals and microorganisms in their totality as part of the natural ecosystems, so as to ensure that self-perpetuation and unhindered evolution of the living resources. As a measure for the effective conservation of biodiversity of this 'biological paradise' and its sustainable utility, the national level symposium has been organised by ZSI in March 2009, in which 125 scientist across the country shared and disseminated their scientific knowledge and views for the benefit of the researchers, academicians, conservators, managers, policy makers and general public. State-of-the-art publication on the 'Recent Trends in Biodiversity of Andaman and Nicobar Islands' has also been compiled and edited by ZSI which is expected to be released in February 2010 to throw a light on the multiple issues pertaining to biodiversity of these islands.

The health of ecosystems cannot be monitored without recognizing the presence of the individual organisms that are crucial for the indication of ecological processes. As a matter of fact, there is an increasing interest on the part of the public pertaining to animal life of these islands, and hence a constant stream of enquiries continues to pour in, reflecting responsibility of ZSI. The credibility of Zoological Survey of India lays the stand for all other advanced scientific studies of this Archipelago; keeping this point in consideration, the institute maintains its pace of biodiversity studies for the wellbeing of future generation. \*\*\*\*\*



ZSI Scientists conducting undersea studies in North Reef Island

8 The Daily  
Telegrams

The Largest Circulated Daily of A & N Islands

Tuesday,  
January 26, 2010



**पत्रिका**  
जबलपुर, शनिवार 16 जनवरी 2010

## दुर्गावती सेंचुरी में गिद्धों का कुनबा

■ विलुप्तप्राय तीन प्रजातियां मिली ■ संरक्षण के लिए केंद्र को जाएगी रिपोर्ट

**प्रमोद शर्मा**  
जबलपुर, 15 जनवरी। पर्यावरण और जंतु वैज्ञानियों के लिए यह खबर काफी राहत देने वाली हो सकती है। प्रदेश की वीरगंगा दुर्गावती वाइल्ड लाइफ सेंचुरी में विलुप्तप्राय प्रजाति के गिद्धों की कॉलोनी देखी गई। यह बात जूलोजीकल सर्वे आफ इंडिया (जेडएसआई) द्वारा किए गए अध्ययन के दौरान सामने आई। अध्ययन दल को सेंचुरी में एक मरे हुए नववर्षी के शव पर मड़राते हुए गिद्धों का बड़ा झुंड मिला। इस परिवार में तीन प्रजातियों के 30 गिद्ध देखे गए। जेडएसआई इनके संरक्षण के लिए सांकेतिक हो गया है। इस संकेत में एक योजना जल्द ही भारत सरकार को भेजी जाएगी। प्रदेश के दमोह जिले के 24 वर्ग किलोमीटर में फैली वीरगंगा दुर्गावती सेंचुरी में अध्ययन का काम अक्टूबर-09 से चल रहा है। जेडएसआई की वैज्ञानिक डॉ. जयश्री शिल्लक के नेतृत्व में वैज्ञानिक यहां जीव-जंतुओं की खोज में लगे हुए थे। इसी दौरान सेंचुरी के गार्गीताल क्षेत्र में एक मरे हुए नववर्षी पर उन्हें गिद्ध मंडराते हुए देखे। इस झुंड में सबसे ज्यादा संख्या में सफेद गले वाले गिद्ध दिखे, जबकि भारतीय गिद्ध और इण्डोचिन गिद्ध भी इस परिवार में थे। भेजी जाएगी योजना- वैज्ञानिकों के अनुसार इस क्षेत्र में गिद्धों के प्राकृतिक निवास और प्रजनन केंद्र भी है। इस आधार पर कहा जा सकता है कि यह

**प्रदेश में कुल 6 प्रजातियां**


प्रदेश में गिद्धों की कुल छह प्रजातियों की पाई जाती है। इनमें सफेद गर्दन वाले गिद्ध, भारतीय गिद्ध, इण्डोचिन गिद्ध, यूरेशियन गिद्ध, सिनेरिक्स गिद्ध और लांग बिल्ड गिद्ध शामिल है। इनमें से एक साथ तीन प्रजातियों के मिलने से वैज्ञानिक काफी उत्साहित हैं।

क्षेत्र उन्हें काफी रस आ रहा है। गिद्धों के मिलने से वैज्ञानिक बेहद उत्साहित हैं। डॉ. शिल्लक का कहना है कि अब इनके संरक्षण पर ध्यान देने की जरूरत है। जेडएसआई इनके संरक्षण के लिए अध्ययन की रिपोर्ट के साथ एक योजना तैयार कर भारत सरकार को भेज रहा है।

**संरक्षण के लिए बनाएंगे योजना**

वीरगंगा दुर्गावती सेंचुरी में अध्ययन दल को विलुप्तप्राय तीन प्रजातियों के गिद्ध मिले हैं। सेंचुरी में गिद्धों के आवास और प्रजनन केंद्र होने की भी जानकारी है। यह स्थान इनके लिए अनुकूल लगता है। अध्ययन दल की रिपोर्ट के साथ इनके संरक्षण की योजना तैयार कर भारत सरकार को भेजी जा रही है।

-डॉ. कैलाश चंद्र, अधिका निदेशक, जेडएसआई जबलपुर

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## OUT OF THE BOX

Welcome to the International Year of Biodiversity

<http://www.cbd.int/2010/about/>



Indian Corals may see the severe decline starting in next 30 years

<http://beta.thehindu.com/sci-tech/energy-and-environment/article63216.ece>

No significant decrease in glaciers in Sikkim due to global warming and climate change:

Climate expert

<http://www.deccanherald.com/content/40961/no-significant-decrease-glaciers-sikkim.html>

Has climate change affected Sunderbans?

<http://in.news.yahoo.com/20/20091213/1416/tnl-has-climate-change-affected-sunderba.html>

'Miss Kerala' added to the IUCN Red List of Threatened Species

<http://www.ias.ac.in/currensci/25jan2010/132.pdf>

The Biological Diversity Act 2002 governing conservation and development in India


<http://www.ias.ac.in/currensci/25jan2010/147.pdf>

Fossil Footprints Give Land Vertebrates a Much Longer History

<http://www.sciencedaily.com/releases/2010/01/100107114420.htm>

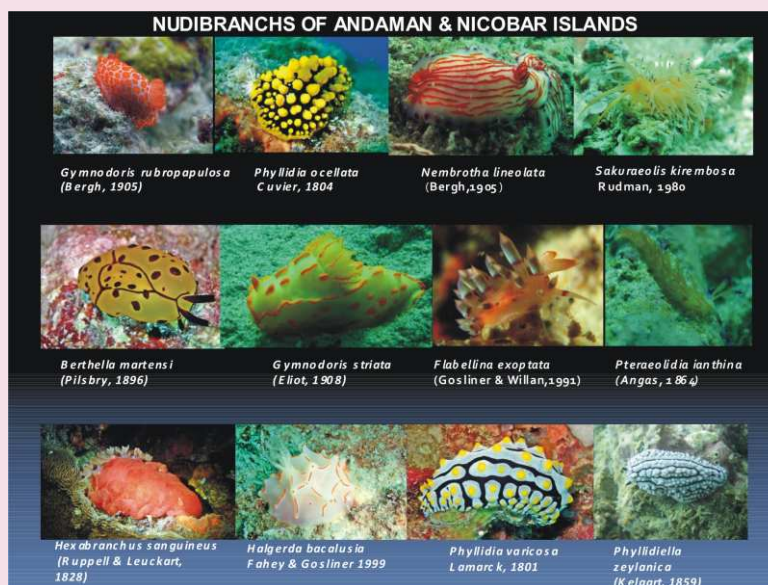
Our oceans, atmosphere came from outer space

[http://www.eurekalert.org/pub\\_releases/2009-12/uom-eac120809.php](http://www.eurekalert.org/pub_releases/2009-12/uom-eac120809.php)

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## PICTURE GALLERY

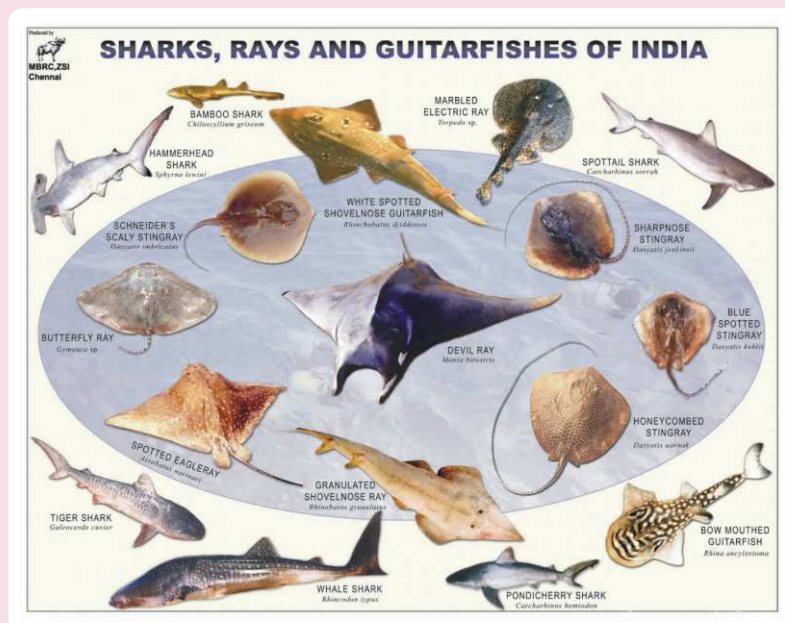


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## POSTER SERIES

### Poster: 1

The Marine Biology Regional Centre, ZSI, Chennai has prepared and published a number of posters for awareness to public on Marine Biodiversity conservation in the country. The first poster in the series is presented below.



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