



# ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India

## VIDEO



1. Parental care in  
Beddome's Caecilian
2. Indian Porcupine



## ZSI IN NEWS



## OUT OF THE BOX

## ANIMAL CALLS



1. Bicoloured Frog
2. Bronze Frog



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- ▶ WGRC, Kozhikode

## ANIMAL OF THE MONTH



**Nilgiri Marten**

## Check-list of fauna of India:

1. Valid Indian Rodent Taxa
2. Native freshwater Fishes of India
3. Membracidae (Homoptera: Insecta)

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## From the Director's Desk

When half of the period of Annual Plan of work is already over, and as I look back, I have the confidence that our institution will be in a position to achieve the targets for the year with ease. Commendable progress in the scientific programmes, building up of the infrastructure, concerted efforts towards manpower development and sharing of knowledge have now given ZSI the capability and functional momentum that the current biodiversity exploration action and nature conservation scenario demand. The Headquarters and the sixteen Regional Centres have gradually been building up their credibility and resources through coordinated as well as collaborative efforts. In October 2009, the scientists of the Headquarters and Regional Centres have carried out field surveys in the States of Jharkhand, Bihar, Uttar Pradesh, Haryana and West Bengal; high altitude areas of Arunachal Pradesh; mangrove zones of Sundarbans; southern part of Eastern Ghats; Ramsar sites in Assam and Andhra Pradesh and the marine habitats in Andaman & Nicobar Islands. Faunal identification work showed steady progress with as many as 700 species identified, besides the several observations on birds and mammals made in the various ecosystems and protected areas of the Country. Noteworthy among these, are the new records of fauna reported from the Country. The comprehensive checklists prepared on various groups of Indian fauna also deserve mention. The ZSI has extended identification and advisory services on fauna to the students and scholars in India and abroad. The institution has given its well thought opinion on the inclusion of a molluscan group in the CITES List of animals. In connection with the Wildlife Week Celebrations, a number of programmes were organized by the Headquarters and different Regional Centres in a befitting manner. I am indeed thankful to those scientists in India and abroad who donated valuable specimens to the National Zoological Collection. I look forward to many more initiatives with commitment to the need of the country, during the forthcoming period, that can bring forth further meaningful results.

Dr. Ramakrishna

## Headquarters, Kolkata

Extensive field surveys were undertaken in the States of Jharkhand, Uttar Pradesh and West Bengal for exploration of the faunal resources, apart from the local surveys carried out in and around Kolkata Wetlands. During the month, the scientists of Headquarters (ZSI, Kolkata) identified 6 species of free living Protozoa, 2 species of Platyhelminthes, 2 species of crabs, 6 species of Coleoptera, 3 species of Collembola, 4 species of Dermaptera, 7 species of Diptera, 25 species of Hemiptera, 24 species of Hymenoptera, 5 species of Isoptera, 2 species of Lepidoptera, 8 species of Odonata, 6 species of Orthoptera, 10 species of spiders, 32 species of molluscs, 12 species of Amphibia and samples of quills and spines of *Hystrix indica* and *Hemiechinus collaris*, from the States of Andhra Pradesh, Himachal Pradesh, Jharkhand, Maharashtra, Orissa, Uttar Pradesh and West Bengal. Call of a bush frog from Araku Valley, Andhra Pradesh has been recorded and analysed.

Holotype and 2 Paratypes of the frog, *Occidozyga khasiorum*, collected from Cherrapunji, Khasi Hills, Meghalaya, India, were donated to the National Zoological Collection by Dr. Indraneil Das, Institute of Biodiversity and Environmental Conservation, University of Malaysia, Sarawak, Malaysia. Paratypes of 5 species of freshwater fishes and 20 species of Hemiptera were deposited in the National Zoological Collection by Prof. W. Viswanath, Department of Life Sciences, Manipur University, Imphal, Manipur and Dr. R. Sundararajan, Scientist-F, Institute of Wood Science and Technology, Bangalore, respectively. Holotype and 2 Paratypes of the trematode, *Paraphostomum ghoshi* Chakrabarti & Ghosh, have been added to the National Zoological Collection. Identification services were rendered on 11 lots of specimens, received from different organizations for identification. A skull of the Green Turtle, *Chelonia mydas* received as seized material from the Deputy Field

Director, Wildlife Crime Control Bureau, Kolkata, has been identified and the required information communicated.

5 research papers were published, 12 accepted for publication and 3 communicated.

Undergraduate students from the Zoology Department, Balaji College, Pathsala, Assam visited different sections of Headquarters.

A senior scientist participated in the National Conference, "Climate Changes during the Quaternary: Special reference to Polar Regions and Southern Ocean", held at Headland Sada, Goa, from 22<sup>nd</sup> - 23<sup>rd</sup> October, and presented a paper.

The Training and Extension Division celebrated the 'Wildlife Week 2009' at the Marine Aquarium cum Regional Centre, Zoological Survey of India, Digha, West Bengal on 5<sup>th</sup> & 6<sup>th</sup> October, 2009.

An eminent scientist Prof. G. A. C. Andrew Beattie, Professor of Agricultural Entomology, University of Western Sydney, Australia delivered a lecture on 'Citrus Greening', on 29<sup>th</sup> October, at ZSI, Kolkata.

During the month, 24 employees of ZSI, Kolkata were deputed to participate in the Training on IT Awareness and E-Governance, under the Information Technology Programme of the Administrative Ministry.

### **Publications:**

1. Hegde, V.D. 2009. Checklist of Birds of Kadatoka Village, Karnataka State. *News letter for Bird Watchers*, 49(3): 33-34.
2. Paliwal, R. 2009. Annelida. In: *Fauna of Pachmarhi Biosphere Reserve, Conservation Area Series*, 39: 363-374, Zool. Surv. India.
3. Pattanayak, J. G. 2009. Catalogue of Extant Marine Porifera type specimens in the Zoological Survey of India. *Rec. zool. Surv. India Occ. Paper* No. 307: 1-80.
4. Sanyal, A. K., Mitra, B. and De, J. K. 2009. Impact of climate changes on the Diversity and Distribution of moss-inhabiting

invertebrate fauna of Schirmacher Oasis, East Antarctica. Abstract In: *National Conference on "Climate Changes during the Quaternary: Special reference to Polar Regions and Southern Ocean"* Headland Sada, Goa, p. 69-70.

5. Turner, J. R., Vousden, D., Klaus, R., Satyanarayana, Ch., Fenner, D., Venkataraman,

K., Rajan, P.T., Subba Rao, N.V., Alfred, J. R. B., Ramakrishna and Raghunathan, C. 2009. Coral Reef Ecosystem of Andaman Islands: Remote sensing and Rapid site Assessment Survey. *Rec. zool. Surv. India Occ. Paper No.* 301:1-132.

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## Andaman and Nicobar Regional Centre, Port Blair

Undersea surveys were conducted at Rutland, Jolly Buoy and Grub Islands in the Mahatma Gandhi Marine National Park and the Little Andaman Island of South Andaman during 9<sup>th</sup>-16<sup>th</sup>, 21<sup>st</sup>-22<sup>nd</sup>, 24<sup>th</sup> and 29<sup>th</sup> of October. As a result of the field studies, 116 species of scleractinian corals, 7 species of alcyonacian corals, 18 species of echinoderms, 10 species of sponges, 20 species of nudibranchs, 26 species of gastropods, 35 species of fishes, 28 species of phytoplankton and 38 species of zooplankton were identified. Besides, 6 species of spiders, 12 species of butterflies, 5 species of lizards and 28 species of birds were also identified from Rutland Island. It is worth mentioning that 20 species of nudibranchs and 12 species of scleractinian corals reported from the aforesaid islands during the month turned out to be new records to Indian waters. Database on corals, nudibranchs and fishes of Andaman and Nicobar Islands has been updated with the inclusion of new records. Manuscripts on new records of 70 species of Ichthyofauna and 46

species of Nudibranchs of Andaman and Nicobar Islands are under preparation. 15 species of butterflies and 4 species of fishes were also registered in the National Zoological Collection.

In response to the proposal of Wildlife Trust of India, the recommendations for the inclusion of all species of the Family Nautilidae under the Appendix-II of CITES have been submitted. As per the requirement of the Indian Institute of Science, Bangalore and upon their proposal 'Tectonics of Andaman-Nicobar Arc: Constraints from Coral Proxies', suitable areas to undertake collaborative studies with ZSI have been suggested. Identification services on 51 species of corals, molluscs, reef fishes and butterflies of the islands as well as information about the coral reef ecosystem, have been rendered to the Naval Marine Museum, Port Blair, on request. The seized specimens of the top shell, *Trochus niloticus*, have been identified and the report submitted to Wildlife Division of Dept. of Environment and Forests, Port Blair. As per the request of Wildlife Crime Control Bureau,



Coral, *Acropora hyacinthus*



Coral, *Plerogyra sinuosa*



Southern Region, Chennai, photographs on various corals, sea shells and other marine protected fauna of Andaman and Nicobar Islands have been provided for the preparation of publicity material/manual on Marine Wildlife.

A Scientist of the centre served as a member in the Research Advisory Committee of the Department of Environment and Forests, A & N Administration on 12<sup>th</sup> October and scrutinised 7 research proposals.




Mollusc, *Nautilus pompilius*



Reef fish, *Acanthurus leucosternon*



New record of Nudibranch,  
*Chromodoris elisabethina*, from Indian waters

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## Marine Aquarium cum Regional Centre, Digha

'Wildlife Week 2009' was celebrated at the Centre from 5<sup>th</sup>-6<sup>th</sup> October, with support from the Training and Extension Division, ZSI Headquarters, Kolkata. 45 high-school students of nearby 4 schools attended the lecture sessions on Wildlife Conservation and participated in a variety of programmes such as Nature Trail at Digha Beach, Quiz contest, Sit & Draw Competition on Environment & Wildlife etc. organized at the Centre during the occasion. The occasion was graced by Prof. Tanmay Bhattacharya, Vidyasagar University and he delivered a lecture. A film on recent wildlife conservation issues was also screened in the evening for the local tourists and students. Tree saplings were also planted in the campus during the occasion. The program was well covered by the news media.

An average of 350 visitors per day paid their visits to the Marine Aquarium during the month. Special efforts were made to prepare micro-habitats in the aquarium tanks to improve the survival of animals. Two tanks were prepared with natural vegetation in sand and mud for displaying the fiddler crabs (*Uca* sp.), red crabs (*Uca moriones*) and horseshoe crabs (*Carcinoscorpius rotundicauda*). 148 live examples of marine fishes and invertebrates were exhibited. Different types of puffer fishes, triple spines, sand eels, various crabs and snakes were the main attractions. Apart from the live marine fauna, 165 examples of marine invertebrates viz. bivalves, gastropods, star fishes, sea anemones, crabs, etc. were also collected for taxonomic studies.

A scientist of the Centre delivered a plenary lecture in the National Conference on 'Biodiversity and Physiology of Aquatic Resources in Sustainable Development for Rural Livelihood', organized by the Department of Zoology, Dr. B. A. Marathwada University, at Aurangabad from 24<sup>th</sup>-25th October.

A ministerial staff attended the computer training on IT at Kolkata from 5<sup>th</sup>-9<sup>th</sup> of the month.

A research paper on the reproduction & development strategies of marine bivalves along the West coast of India was published. Advisory services were rendered to schools, colleges and institutions.

### Wildlife Week Celebrations-2009, at MARC



Quiz competition




Sit & draw competition



Nature trail at Digha beach



Participants

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### Central Zone Regional Centre, Jabalpur

A senior scientist of the Centre participated in the Tawang Expedition (Arunachal Pradesh) from 27<sup>th</sup> September-15<sup>th</sup> October. During the month, 4 species of Protozoa, 2 species of Rotifera and 4 species of Cladocera were identified. Scientists of the Centre reviewed 4 scientific papers and 1 Occasional Paper and offered comments. A Ph.D thesis received from Sant Gadge Baba Amrawati University, Amrawati was also evaluated and

the report submitted. Advisory services were rendered to scientists of other institutions and visitors to the museum. Four officials of the Regional Centre attended the M1, IT Training Programme at TFRI, Jabalpur, during the month. The scientists of the Centre contributed 15 chapters, as detailed below, to the volume published on the Fauna of Bandhavgarh Tiger Reserve.



**Publications:**

1. Chandra, K. 2009. An Overview. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 1-24.
2. Mishra, S. K. 2009. Insecta: Odonata. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 25-38.
3. Gupta, S. K. 2009. Insecta: Orthoptera. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 39-57.
4. Chandra, K. 2009. Insecta: Mantodea. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 59-61.
5. Thirumalai, G. & Sharma, R.M. 2009. Insecta: Hemiptera (Aquatic and Semiaquatic). *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 63-70.
6. Chandra, K. & Thilak, J. 2009. Insecta: Neuroptera. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 71-73.
7. Sharma, R. M. 2009. Insecta: Diptera: Cecidomyiidae (Gall Midges). *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40:75-79.
8. Chandra, K. 2009. Insecta: Coleoptera: Scarabaeidae. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 81-88.
9. Chandra, K., Sharma, R.M. & Koshta, M.L. 2009. Insecta: Lepidoptera: Rhopalocera : Grypocera. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 89-129.
10. Chandra, K. 2009. Insecta: Lepidoptera: Heterocera. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 131-140.
11. Gupta, Y.N. 2009. Acari: Tetranychidae (Mites). *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 141-146.
12. Thilak, J. 2009. Pisces. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 147-160.
13. Chandra, K. and Gupta, R.P. 2009. Reptilia. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 163-177.
14. Chandra, K. and Gupta, R.P. 2009. Aves. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 179-270.
15. Harshey, D.K. 2009. Mammalia. *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 271-291.

**Some Moths of Tawang District (Arunachal Pradesh)***Bradina diagonalis* (Family: Pyralidae)*Maruca testualis* (Family: Pyralidae)*Creatonotus transiens* (Family: Arctiidae)*Botyodes principalis* (Family: Pyralidae)*Vitessa suradeva* (Family: Pyralidae)*Arcte polygrapha* (Family: Noctuidae)

## Northern Regional Center, Dehra Dun


Two field survey tours, one to Kalesar National Park (KNP) and the other to Dehra Dun and adjacent environs were undertaken for the collection of Helminth Parasites of Vertebrates. 4 species of nematodes and 3 species of butterflies were identified and 16 species of birds were observed at KNP. 5 species of butterflies from the Haryana State were also identified. A research paper on the status of birds of Ladakh was published.

As a part of the 10 weeks' Professional skill upgradation Course (PSUC) conducted by Indira Gandhi National Forest Academy (IGNFA), Dehradun, 34 Indian Forest Service Officers (IFS), who have been inducted in Services, visited the Regional Centre on 7<sup>th</sup> October. 3 scientists of the Center delivered 5 lectures. The topics dealt with were, Mandate of

ZSI, Biodiversity Profile of India, Global Warming and climate change-Impact on fauna, Insect pests of forests and Trichotaxonomy - a science dealing with wildlife forensics. The officers also visited the Library and Museum of the Regional Centre. Apart from the visit of the IFS officers, 12 students of the XIIth M.Sc (Wildlife Science) Course, from Wildlife Institute of India, Dehra Dun also visited the Centre and a lecture was delivered by a scientist of the Centre on the methods of collection, preservation, mounting and pinning of Insects. The methodologies involved were also practically demonstrated.

### Publication:

Tak, P., Sharma, D. K., Thakur, M. K. L. and Saikia, U. 2009. Birds of Ladakh and analysis of their status. *Rec. Zool. Surv. India*, 109(2): 27-53.

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## Gangetic Plains Regional Centre, Patna

Two local surveys in Vaishali district of Bihar were undertaken and representative faunal samples collected. 8 species of moths (Lepidoptera: Insecta) from Dalma Wildlife Sanctuary, 5 species of fishes from river Subernarekha, Jharkhand, 1 species of mantid (Mantodea: Insecta) and 5 species of chalcids (Hymenoptera: Insecta) from Bihar were identified. One rare genus *Ischyroptyx* Delucchi (Pteromalidae: Hymenoptera) has been

recorded for the first time from the Oriental Region, subsequent to its original description in 1956 from Europe. A research paper on the first record of *Deiphobe incisa* Werner, 1933 (Mantodea: Insecta) from Jharkhand has been communicated to the *Records of ZSI*, Kolkata. A scientist of the Centre delivered a lecture on the current status of Gangetic dolphin, *Platanista gangetica gangetica*, in the Indian subcontinent, on a river cruise conducted by the Pandava cruise of



Butterfly, *Papilio polymnestor*, from Dalma Wildlife Sanctuary



Butterfly, *Spindasis vulcanus*, from Dalma Wildlife Sanctuary






*Uniclypea kumarani* Sureshan &  
Narendran Insecta: Hymenoptera:  
Pteromalidae (First record from Bihar)

UK in collaboration with the Bihar State Tourism Development Corporation, in the Dolphin Sanctuary at Bhagalpur, on 5<sup>th</sup> October. A scientist of the Centre participated in the Expedition to Tawang district of Arunachal Pradesh from 27<sup>th</sup> September-15<sup>th</sup> October and an administrative staff attended the training on IT and office suite at CMC, Kolkata.

#### Publication:


Sambath, S., Joshi, K.C. and Krishnamurthy. 2009. Effectiveness of three varietal toxins of *Bacillus thuringiensis* against the larvae of Albizia foliage feeder, *Spirama retorta* Cram. (Lepidoptera: Noctuidae). *Indian J. Forestry*, 32(1): 99-102.

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### Sunderban Regional Centre, Canning

A field survey was undertaken in the Sagar Islands and adjacent areas of Sunderbans for the period from 12<sup>th</sup>-21<sup>st</sup> October. 1 species of frog, 1 species of snake, 6 species of fishes and 6 species of molluscs were collected as representative samples from the area for detailed taxonomic

studies. In addition, 12 species of fishes, 3 species of amphibians, 9 species of reptiles, 32 species of birds and 2 species of mammals were observed during the survey. First proof of one research manuscript was checked and submitted for publication in the *Records of ZSI*.

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### High Altitude Regional Centre, Solan

Out of the faunal samples studied from Pangri valley and Churdhar Wildlife Sanctuary, 7 species of butterflies, 20 species of moths, 6 species of Orthoptera and 1 species of Amphibia were identified. Besides, one species of fish from Beas River has also been identified. The work on pictorial hand book on butterflies of Himachal Pradesh progressed further. A scientist of the Centre reviewed a paper on Lepidoptera for a national journal. 2 research papers, one on Lepidoptera and other on Birds, were published as detailed below.



Verditer flycatcher at Churdhar WLS



*Chaetoprocta odata* a walnut pest butterfly in Pangri valley




A long horned Grasshopper from Udaipur (Lahul)



### Publications

1. Tak, P. C., Sharma, D. K., Thakur, M. L. and Saikia Uttam (2009). Birds of Ladakh and analysis of their status. *Rec. zool. Surv. India*, 109(Part-2): 27-53.
2. Sidhu, Avtar Kaur (2009). Taxonomic Notes on the *Satyrium sassanides* (Kollar) (Lycaenidae: Theclinae: Eumaenini) from North-West India. *Rec. zool. Surv. India*, 109(Part-2): 55-59.

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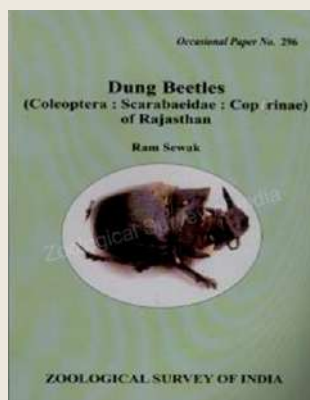
### Desert Regional Centre, Jodhpur

Scientists of the Centre identified 13 species of Nematoda, 10 species of Odonata, 7 species of Lepidoptera and 9 species of Coleoptera from various environs of Rajasthan. Besides, 7 species of Nematoda were also identified out of the earlier collections from the forest areas of Gujarat. 3 research papers were communicated and abstract of a paper submitted for presentation in CAZRI International Conference. Scientist of the Centre delivered lectures in UGC Refresher's Course in Zoology at the Department of Zoology, Jai Narain Vyas University, Jodhpur on 5<sup>th</sup> October. 67 entries of identified fauna were made in the faunal Database of the Centre. 86 entries pertaining to

the books in the Centre's library were made employing the software, *e-granthalaya*. Wildlife Week was celebrated at the Centre on 7<sup>th</sup> October and the scientists of Centre delivered lectures to school children on issues of Wildlife Awareness and Conservation. A scientist of Centre participated in a Workshop on Right to Information Act, 2005 at the Institute of Secretariat Training and Management, New Delhi held from 22<sup>nd</sup>-23<sup>rd</sup> October. 138 visitors paid their visits to the museum.

### Publication:

Ram Sevak. 2009. Dung beetles (Coleoptera: Scarabaeidae: Coprinae) of Rajasthan. *Rec. zool. Surv. India, Occ. Paper No.*, 296: 1-106.



Book published on Dung Beetles of Rajasthan




Trevor point waterbody, Mount Abu Wildlife Sanctuary, Rajasthan



Hoopoe at Mount Abu Wildlife Sanctuary



A poster released during the Wildlife Week Celebrations

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## North Eastern Regional Centre, Shillong

Deepor beel (a Ramsar site), Kamrup district, Assam was surveyed for 2 days and qualitative and quantitative plankton samples were collected from 6 sampling sites. 8 species of Rotifera and 12 species of Cladocera from Deepor beel were identified and registered. Besides, 6 species of Rotifera, 6 species of Cladocera and 5 species of fishes were identified and registered from Nokrek Biosphere Reserve, Garo Hills, Meghalaya. 2 research papers on freshwater fishes, one on a new species and the other on a new record from North East India, were published. 2 staff members of the Centre participated in the Tawang (Arunachal Pradesh) expedition from 27<sup>th</sup> September-15<sup>th</sup> October. An administrative staff member attended the workshop on 'Behavioral skills' at New Delhi

from 12<sup>th</sup>-16<sup>th</sup> October. 8 staff members of the Centre attended the Computer training at BDPS, Shillong, in two batches, during the month. The Centre participated in the Science exhibition at Jail Road Boys Higher Secondary School, Shillong from 12<sup>th</sup>-14<sup>th</sup> of the month.

### Publications:


1. Sen, Nibedita, 2009. Description of a new species of *Aborichthys*, Chaudhuri from North-East India (Pisces: Cypriniformes: Balitoridae) *Rec. zool. Surv. India*, 109 (part 2): 13-20.
2. Sen, Nibedita, 2009. New record of *Horalabiosa joshuai* Silas (Pisces: Cypriniformes: Cyprinidae) from North East India. *Rec. zool. Surv. India*, 109 (Part-2): 21-22.



*Aborichthys rosammai* Sen,  
a recently described new species of fish



*Horalabiosa joshuai* Silas, new record for N E India

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## Arunachal Pradesh Regional Centre, Itanagar

The first phase of the faunistic expedition programmed in Arunachal Pradesh was conducted in the Tawang district from 27<sup>th</sup>

September-15<sup>th</sup> October 2009. A team comprising of scientists from the APRC and other Regional Centres participated in the expedition.



Chestnut-tailed Minla



Spotted laughing Thrush






Plumbeous Water Redstart



Orange-bellied Himalayan Squirrel

Representative invertebrate and vertebrate specimens were collected for taxonomic studies. In almost all the localities, night collections were also made using light traps to study the entomofauna. The herpetofauna comprised of 10 species. 80 species of birds and 12 species of

mammals were recorded during the survey. A research paper on the fish fauna of D'Ering Wildlife Sanctuary and adjacent areas of Arunachal Pradesh, dealing with 17 species has been communicated.

 In this Issue

## Western Regional Centre, Pune


A checklist on Indian rodents was submitted and hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in). 1400 records were georeferenced for the preparation of the Odonata Atlas on Western Ghats. 15 species of fishes were identified for Manmad College, Manmad, Maharashtra. 5 species of rodents and shrews were identified from pellets of Mottled Wood Owl, collected from Satara, Maharashtra by a scientist of the ELA foundation, Pune.

### Publications:

1. Keshava Mysore, K.A. Subramanian, R.C. Sarasij, Arvind Suresh, Baragur V. Shyamala, K. VijayRaghavan, Veronica Rodrigues (2009). Caste and sex specific olfactory glomerular

organization and brain architecture in two sympatric ant species, *Camponotus sericeus* and *Camponotus compressus* (Fabricius, 1798). Arthropod Structure and Function doi:10.1016/j.asd.2009.06.001.

2. Kulkarni, P.P and Talmale, S.S (2008). An account of Odonata: Insecta from five conservation areas and two wetlands of Maharashtra, India. *Fraseria*, Vol.7 (SS1/2).51-54.
3. Subramanian, K.A., Samir Ali and Ramachandra, T.V (2008). Odonates as indicators of riparian ecosystem function-A case study from south western Karnataka. *Fraseria*, Vol.7 (SS1/2).83-95.

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

The aquatic insect collections of Brahmani-Baitarani Estuary, Bhadrak Dist., Orissa have been studied and identified into 2 species under 2 genera. Mosquito collections of Ganjam Dist., Orissa have been identified into 4 species. Unidentified fish collections of Nuanai Estuary, Puri Dist, Orissa have been identified into 9 species. 30 students from a local High School

visited the Centre's Museum and information on fauna of Orissa was provided to them.


### Publication:

Dash. S and R. K. Hazra. 2009. A preliminary note on the Mosquito fauna (Diptera: Culicidae) of Southern coastal Districts of Orissa. *Rec. zool. Surv. India*, 109 (Part-2):87-98.

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## Marine Biology Regional Centre, Chennai

Weekly sea water samples from Adayar River mouth and adjoining areas were collected during the month and the samples analysed. From the collection tour to Gulf of Mannar Biosphere Reserve, the 408 representative faunal samples collected were sorted out and were found to belong to 10 groups. 6 species of echinoderms, 11 species of molluscs (including a new record of a *Pugilina* sp.) and 9 species of marine fishes were identified out of the material collected from the earlier surveys conducted at the Gulf of Mannar Biosphere Reserve. This also includes a new record of a spadefish to the East Coast, a report on which has been submitted for publication. 7 research papers were communicated. A Check list on the native freshwater fishes of India dealing with 667 species,


prepared by a senior scientist of the Centre along with a scientist of the SRC/ZSI, as co-author, is hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in). Two identification services were rendered on 3 freshwater fish species and 1 sponge species to two outside parties. 212 students and 186 tourists visited the marine aquarium during the month. Library data entry employing the software *E-granthalaya* was continued and so far 260 online entries were made. A scientist of the Centre served as the Quiz Master for the programme organized by WWF-India State Office at Chennai on 6<sup>th</sup> October and distributed the prizes. Five staff members of MBRC attended the IT training course 'Concepts of IT and MS Office Suite 2007', conducted by CMC, Chennai, from 19<sup>th</sup>-23<sup>rd</sup> October.  In this Issue

## Southern Regional Centre, Chennai

A team has proceeded for a faunal survey of the Southern Eastern Ghats scheduled from 21<sup>st</sup> October to 10<sup>th</sup> November, 2009. A checklist of Membracidae (Homoptera: Insecta) of India dealing with 235 species, prepared by the scientists of the Centre, is hyperlinked with the departmental website [www.zsi.gov.in](http://www.zsi.gov.in). 376 examples of freshwater/land molluscs have been registered during the month. 5 species of blattids were identified from Kanniyakumari Wildlife Sanctuary. A batch of 150 students from the Rosary Matriculation School, Chennai, visited the Centre and they were briefed by the scientists about the faunal diversity of the

Region, and the techniques involved in collection and preservation and identification of the fauna. Students and special educators of Bala Vidyalaya, the School for young deaf children, Chennai were taken around the faunal depository of the Centre on their visit to familiarise them with the regional faunal diversity. An Inter School Science Quiz programme was conducted by a scientist of the Centre on 8<sup>th</sup> October at the Raja Muthiah School, Chennai in which 16 schools participated. 21 display boards depicting the faunal diversity of Tamilnadu were set up to facilitate the visitors. The software '*e granthalaya*' has been installed in the library for digitizing the library records. Two batches of staff attended the 'Concepts of IT and Ms Office Suite 2007' at CMC, Chennai. A scientist attended the quarterly meeting of the Trustees of Chennai Snake Park Trust.

### Publication:

Thirumalai, G. & Sharma, R. M. 2009. Insecta: Hemiptera (Aquatic and Semiaquatic). *Zool. Surv. India, Fauna of Bandhavgarh Tiger Reserve, Conservation Area Series*, 40: 63-70.  In this Issue



*Euphlyctis hexadactylus* (Lesson, 1834)



## Freshwater Biology Regional Center, Hyderabad

Rotifera belonging to 10 species were identified out of the Zooplankton samples collected from Palair Lake. 10 species each of rotifers and cladocerans were identified out of the samples procured from Kolleru Lake (a Ramsar Site). 14 species of aquatic Hemipterans collected from polluted and non-polluted environs in and around Hyderabad Metropolitan Area, were identified and their abundance correlated with physico-chemical factors. Follow up field/laboratory observations on small wild populations of the south Indian fairy shrimp were continued using indigenous cultures in laboratory. Occurrence/abundance of fairy shrimp populations to important abiotic factors in the pond water is being analysed. Aquatic ecological studies, on yet another, shallow wetland (ca. 5 acres) located in the Agri-biodiversity park, being developed by Acharya Ranga Agricultural University (formerly APAU), Rajendernagar, Hyderabad, were taken up for preliminary limnological evaluation, on request from the concerned authorities.


All administrative and scientific staff of the Centre underwent the IT Training, Module-I, conducted by CMC. Ltd., Bangalore, in various batches during the month.



*Haliplus (Liaphlus) pulchellus indicus*,  
an aquatic coleopteran



*Chamaeleo zeylanicus*

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## Western Ghat Regional Centre, Kozhikode (Calicut)

The amphibian collection from the Bhadra Wildlife Sanctuary, Karnataka was identified into 14 species. 20 species of Hymenoptera (Insecta) were also identified from the Wildlife Sanctuary. 600 distribution data entries pertaining to 132 species were screened for the preparation of a Distribution Atlas on the endemic amphibian species of Western Ghats. 3 research papers were published, 3 were accepted and 2 communicated. 3 research papers were reviewed for the departmental journal and comments offered.

Two field surveys were conducted in the ghat areas of the Wynad district in Kerala.

Identification and advisory service was rendered to the Kerala State Forest Department officials of the Tamarassery Forest Range, Calicut on the confiscated body parts of snake specimens.

Specimens of 17 species of Amphibia, endemic to Western Ghats, were donated by Dr. Anil Zachariah, Veterinary Surgeon, Kalpetta, Wyanad, Kerala, and they were registered and added to the National Zoological Collection of the Centre.

Two videos ('Parental care in Beddome's caecilian' and 'Indian Porcupine') documented by the scientists of the Centre as well as the calls of two species of frogs (Bicoloured Frog and



Students participating in the 'Wildlife Week- 2009' Celebrations

Bronze Frog) recorded by the same team are hyperlinked with the ZSI website (<http://www.zsi.gov.in...>, <http://www.zsi.gov.in...>).

Wildlife Week was celebrated on 6<sup>th</sup> October by the Western Ghat Regional Centre/ZSI, Calicut, in collaboration with the Zoo Outreach organization, Coimbatore, by organizing a High School level quiz programme on the topic 'Fauna of Western Ghats' and a debate on the topic 'Conservation Vs development'.

4 lectures were delivered by the scientists of the Centre on the topics 'Biodiversity and Climate Change', 'Invasive Alien Species of Animals', 'Endangered animals of Malabar' and 'Butterflies of Kerala' to the students of Farook College, Calicut, Al-Ameen English Medium School, Calicut and the students of Govt. Veterinary College, Kerala Agricultural University, Pookote, Wynad, on 14<sup>th</sup>, 28<sup>th</sup> and 29<sup>th</sup> of the month, respectively.



Two workshops (of one day each duration), on the theme 'Biodiversity richness of Western Ghats', were organised by the scientists of the Centre, for 70 trainees of Calicut Orphanage Teacher's Training Institute, Kolathara, Calicut, on 9<sup>th</sup>, and for 40 Higher Secondary School teachers of the Calicut Corporation's Educational Project, on 27<sup>th</sup> of October. 4 scientists of the Centre delivered lectures during the sessions. The topics included, zoogeography of India with special reference to Western Ghats, origin and salient features of Western Ghats including forest types, river systems and rain shadow regions, animal diversity, major threats to the ecosystem and Conservation measures.

The Regional Centre hosted two programmes [*Hindi Bhashan Pratiyogita* (Hindi Elocution) and *Hindi Kavitha Paad* (Hindi Poem Recitation)] of the *Nagar Raajbhaasha Karyanvayan Samithi - Kozhikode* (Town Official Language Implementation Committee - TOLIC



Scientists of the Centre delivering lectures during the two Workshops conducted for school teachers



Kozhikode), on 30<sup>th</sup> of the month, in connection with the *Samyukt Hindi Samroh-2009* (Joint Hindi celebrations-2009) of the TOLIC. 2 staff members of the Centre participated in the competitions.

During the month 1746 visitors paid their visits to the museum.

### **Publications:**


1. R. A. Khan, N. C. Nandi, M. K. Dev Roy and C. Radhakrishnan. 2009. Faunal diversity of Vembanad Lake-an overview. In: Faunal Diversity of Vembanad Lake a Ramsar Site in Kerala, India; *Wetland Ecosystem Series*, 10:1-24 (Edited & Published by the Director, Zoological Survey of India).
2. C. Radhakrishnan, K. C. Gopi and Muhamed Jafer Palot. 2009. Vertebrate Diversity of Vembanad and its environs. In: Faunal Diversity of Vembanad Lake a Ramsar Site in Kerala, India; *Wetland Ecosystem Series*, 10:39-67 (Edited & Published by the Director, Zoological Survey of India).
3. R. A. Khan, C. Radhakrishnan, N. C. Nandi and M. K. Dev Roy. 2009. Conservation and management aspects. In: Faunal Diversity of Vembanad Lake a Ramsar Site in Kerala, India; *Wetland Ecosystem Series*, 10:181-192 (Edited & Published by the Director, Zoological Survey of India).



A scientist of the Centre delivering lecture to the students of Al-Ameen English Medium School



A staff member of the Centre participating in the Elocution Competition ('Samyukt Hindi Samroh-2009') of the Nagar Rajbhasha Karyanvayan Samithi-Kozhikode

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## ANIMAL OF THE MONTH

**Nilgiri Marten, *Martes gwatkinsii*  
(Horsfield, 1851)****(Class: Mammalia, Order: Carnivora, Family: Mustelidae)**

[Text: C. Radhakrishnan, WGRC/ZSI, Calicut. Photo: Satyam Meppayur, Calicut]

The Nilgiri Marten (*Martes gwatkinsii*) is endemic to southern Western Ghats. The species is known as *Maranai* in Tamil and *Karumvernku*, *Thenkolan* and *Koduvalli* in Malayalam. It has a black body (entire dorsum) with a stout tail, typical weasel-like legs and a flat, pointed head. Its yellowish-orange throat is a characteristic identification mark. The head to body length varies from 55 to 65 cm and the tail, 40-45 cm. The animal weighs around 2.1 kg (Pocock, 1941).

Very little is known about the Nilgiri Marten. It is active during the day. Though arboreal in habit, it descends to the ground occasionally. It is reported to feed on birds, small mammals and insects. It is partly frugivorous too. There is a report of the Nilgiri Marten preying on crows (Gouldsbury, 1949), Malabar giant squirrel (Hutton, 1944) and on cicadas (Insecta) (Pocock, 1941).

Recent reports indicate that the species survives in forest patches on mountain summits and is occasionally seen in coffee and cardamom plantations (Schreiber *et al.* 1989). In a survey conducted on the lesser carnivores in the Nilgiri

Biosphere Reserve, scats of Nilgiri Marten could be located only from the montane-evergreen forests and wattle plantations of Mukkurthi.

Nilgiri Marten has been reported in Kerala from Rajamalai in Eravikulam National Park (Madhusudan, 1995), Peppara Wildlife Sanctuary and Silent Valley National Park (Christopher & Jayson, 1996), Sholayar, (Vijayan, 1979), Periyar Tiger Reserve (Kurup & Joseph, 2001), Muthikkulam Reserve Forest, Attappadi Reserve Forest, Nilambur south Reserve Forest, a shola forest contiguous to the Eravikulam National Park in Chinnar Wildlife Sanctuary (Balakrishnan, 2005), and from Nelliampathy Reserve Forest and Pambadum shola National Park (Naseer, 2009). In Tamil Nadu, it is reported from Mukkurthi National Park (Yoganand & Kumar, 1995, 1999), Upper Bhavani (Gokula & Ramachandran, 1996), Kalakkadu-Mundanthurai Tiger Reserve (Mudappa, 1998), Srivilliputhur Wildlife Sanctuary (Mudappa, 2001) and in Karnataka, from the Brahmagiri Wildlife Sanctuary (Schreiber *et al.* 1989).



Based on the studies conducted in the Reserve Forests of Muthikkulam, Attappadi and Nilambur south, Balakrishnan (2005) states that legal protection of the Reserve Forests contiguous to the Silent Valley National Park is most essential for the effective conservation of the Nilgiri Marten.

Nilgiri Marten is listed in Schedule II part II of the Indian Wildlife (Protection) Act (1972), Appendix III of CITES and as Vulnerable (VU B1+2c) on the IUCN Red list (2003).

The photograph of the Nilgiri Marten presented here is shot at Valparai, Anamalai Hills, Tamil Nadu.


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## ZSI IN NEWS




1. Nearly fifty per cent of the rare butterflies are not found anymore in Ladakh  
<http://www.hindustantimes.com/rssfeed/lifeanduniverse/Rare-butterflies-closer-to-extinction/Article1-455503.aspx>
2. Wildlife week celebrations 2009 at WGRC/ZSI, Kozhikode (6<sup>th</sup> October '09)  
<http://www.keralaflashnews.com/wild-life-week-celebration-2009-calicut>
3. Workshop on the Biological wealth of Western Ghats conducted for Teacher Trainees by WGRC/ZSI, Kozhikode (9<sup>th</sup> October '09)  
<http://www.keralaflashnews.com/zoologicall-survey-of-india-calicut>

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## OUT OF THE BOX



1. Hundreds of fossilized Dinosaur eggs found in Tamil Nadu  
<http://www.indiatvnews.com/main/newsdetails.php?id=97&mod=1&smod=main>
2. Rare tree snake spotted in Goa Wildlife Sanctuary  
<http://www.deccanherald.com/content/24748/rare-tree-snake-spotted-go.html>

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