

ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India

POSTER SERIES



VIDEO



**Common
Bronzeback
Tree Snake**

ZSI IN NEWS



OUT OF THE BOX



PICTURE GALLERY



Back issues of ZSI e-NEWS
[Visit [www.zsi.gov.in/...](http://www.zsi.gov.in/)]



IN THIS ISSUE

- ▶ Headquarters, Kolkata
- ▶ CZRC, Jabalpur
- ▶ GPRC, Patna
- ▶ MARC, Digha
- ▶ APRC, Itanagar
- ▶ NERC, Shillong
- ▶ ANRC, Port Blair
- ▶ NRC, Dehradun
- ▶ SRC, Canning
- ▶ HARC, Solan
- ▶ DRC, Jodhpur
- ▶ SRC, Chennai
- ▶ MBRC, Chennai
- ▶ WRC, Pune
- ▶ FBRC, Hyderabad
- ▶ EBRC, Gopalpur-on-Sea
- ▶ WGRC, Kozhikode

ANIMAL OF THE MONTH



Indian Gazelle



**PAINTINGS
FROM ZSI
HERITAGE
ALBUM**

Check-list of fauna of India:

Tabanidae

(Diptera: Insecta)

[Visit www.zsi.gov.in/...]

From the Director's Desk

The scientific personnel of ZSI were very productive during the month in their research work with impressive output of scientific information on fauna through many a number of research publications of Taxonomic importance. They were, as well, engaged in guiding taxonomic research and faunal identification cum advisory services to student-teacher-researcher community and other needy institutions. Considerable extent of ecosystem areas, especially the conservation areas like Tiger Reserves, Wildlife Sanctuaries, Ramsar sites, etc., falling in various States/Union Territories in the country, were covered in the surveys for monitoring, inventorying and assessing their faunal wealth. The discoveries of a few species new to science and new records of taxa from the country as well as extension of distributions of some taxa to other States that resulted in the taxonomic/systematic studies on fauna are, no doubt, remarkable findings. Some of the scientists were active participants in various seminars, symposia and workshops held in the country during the month. Eminent scientific scholars and taxonomic researchers, who were many, including some from abroad, paid their visits to ZSI and its Regional Centres, and expressed their appreciation over the scientific activities and services rendered by this organization. In the sphere of extension of services to the public towards dissemination of knowledge on fauna and importance of their conservation, the faunal galleries and museums of ZSI and its Regional Centres proved to be centers of attraction with impressive turn out of visitors to them.

Dr. Ramakrishna

Headquarters, Kolkata

Extensive field surveys were undertaken to study the fauna of the States of Karnataka, Madhya Pradesh, Orissa, West Bengal, Bhibhuti Bhusan Wildlife Sanctuary, east coast of Andhra Pradesh and Orissa. Besides, local surveys were undertaken in and around the Wetland areas of North 24 Parganas, West Bengal.

During the month, a eurytomid hymenopteran insect, *Philolema nadia* Narendran and Girish Kumar has been described as new to science.

During the month, the scientists of Headquarters identified 4 species of free living Protozoa, 3 species of Collembola, 3 species of Hymenoptera, 6 species of Isoptera, 11 species of Lepidoptera, 8 species of Odonata, 7 species of Orthoptera, 25 species of spiders and 12 species of Mollusca, from the States of Himachal Pradesh, Jharkhand, Karnataka, Tamil Nadu, Uttar Pradesh, West Bengal, and from the Protected Areas of Namdapha Biosphere Reserve, Arunachal Pradesh and Bhibhuti Bhusan Wildlife Sanctuary, West Bengal. Among the collection identified, the Threadfin fish *Filimanus perplexa* Feltes and the wasp (Insecta: Hymenoptera), *Vespa soror* du Buysson, turned out to be new records from India. *Eustenogaster scitula* (Bingham), *Parischnogaster mellyi* (de Saussure) (Hymenoptera: Vespidae) were new records from Arunachal Pradesh and *Rhinocypha trifasciata* Selys (Insecta: Odonata) was a new record from Maharashtra.

Holotype and Paratypes of *Patagifer sanyali* sp. nov. (Trematoda: Digenea: Echinostomatidae) have been added to the National Zoological Collection.

Identification services were rendered on ten lots of specimens, received from different organizations. Two Deer skulls with Antlers received from the Forest Dept., Govt. of West Bengal, 2 seized wildlife materials received from Maharashtra Police, and a flat skin along with skull received from the Crime Branch, Maharashtra for identification, were identified and the concerned reports submitted.

Fifteen research papers were published, seven accepted for publication and six sent for publication.

Dr. C. S. Viraktamath, Emeritus Scientist, Department of Entomology, University of Agricultural Sciences, G.K.V.K, Bangalore; Dr. (Mrs.) Sucharita Saha, Reader, Victoria Institute, Kolkata, and a research scholar from the North Eastern Hill University, Shillong, Meghalaya, visited different sections of the Headquarters.

Dr. A. U. Choudhury, Honorary Chief Executive of the Rhino Foundation for Nature in Northeast India visited the Mammal & Osteology section for study of Buffalo Horns on 5th & 6th February, 2010.

A scientist of the Headquarters attended the seminar on "Biological Thoughts: Micro to the Macro", Organized by Department of Zoology,



Philolema nadia Narendran and Girish Kumar new species



Seized feather ear rings

University of Calcutta in collaboration with Zoological Society, Kolkata, on 9th February, 2010.

Scientists of Headquarters attended the International seminar on “*Darwin and Human Evolution*” organised by the Asiatic Society, Kolkata, during 10th to 12th February, and during this occasion, Dr. Ramakrishna, Director, Zoological Survey of India acted as the Chairperson of the fifth academic session, on 11th February.

An exhibition was set up by the Museum and Taxidermy Section of Headquarters at the International seminar on “*Darwin and Human Evolution*” on the occasion of 200 years of the birth of Charles Darwin and 150 years of the publication of the book “*Origin of Species*”, organised by the Asiatic Society, Kolkata, during 10th to 17th February.

An eminent scientist Dr. J. H. Cooper, Bird Group, Department of Zoology, Natural History Museum, London, delivered a lecture on “*Pigeon post: Contributions from India to Charles Darwin's domestic bird research*” on 11th February, at ZSI Headquarters.

A scientific staff of the Headquarters participated and presented a paper at “*National Congress on Innovations in Nematological Research - Challenges and a Road Map Ahead*” held on 23rd to 25th February, at the Tamil Nadu Agricultural University, Coimbatore.

A scientist of Headquarters delivered lecture on Conservation of Avian Fauna at the XIIth Training Course on Field Ornithology on 15th February. A senior scientist attended the meeting on “*Expert Group on Zoological Survey of India Faunal Diversity Information System*” at MBRC, Chennai on 7th February.

During the month, 40 employees of Headquarters were deputed to participate in Training on 'IT Awareness and E-Governance' under the Information Technology Programme of the Administrative Ministry.

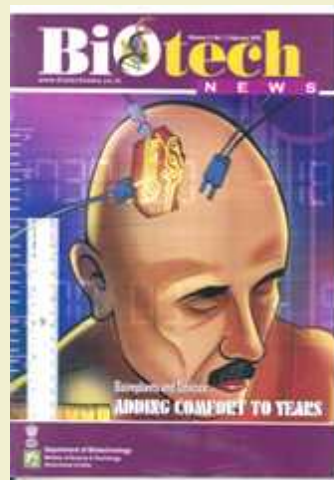
Publications:

1. Babu, R. and Nandy, S. 2009. A Comparative review of three closely related *Calicnemis* species- *C. pulverulans* Selys, *C. imitans* Lieftinck and *C. sudhaae* Mitra (Odonata : Zygoptera : Platycnemididae). *Rec. zool. Surv. India*, 109 (3): 79-84.
2. Babu, R. and Mondal, S.B. 2009. First record of *Rhinocypha trifasciata* Selys from Maharashtra, India (Odonata: Zygoptera: Chlorocyphidae). *Rec. zool. Surv. India*, 109 (3): 115-116.
3. Girish Kumar, P. and Srinivasan, G. 2009. New record of *Vespa soror* du Buysson (Hymenoptera: Vespidae) from India. *Rec. zool. Surv. India*, 109 (4): 111-112.
4. Kamal, S., Mehta, H.S. and Mondal, S.K. 2009. Insecta: Orthoptera. In: *Faunal Diversity of Pong Dam, Wetland Ecosystem Series* No. 12: 43-63, Zoological Survey of India.
5. Mishra, S.S. and Barman, R.P. 2009. On a new record of a threadfin fish *Filimanus perplexa* Feltes from India. *Rec. zool. Surv. India*, 109 (4): 53-55.
6. Nandy, S. and Babu, R. 2009. On a collection of dragonflies (Odonata: Anisoptera) from Andaman and Nicobar Islands. *Rec. zool. Surv. India*, 109 (4): 35-51.
7. Narender Sharma, 2009. Acridoidea diversity of Patna Bird Sanctuary, Uttar Pradesh, India. *Rec. zool. Surv. India*, 109 (4): 67-76.
8. Narendran, T.C., Girish Kumar, P. and Talukdar, S. 2009. A new species of *Philolema* Cameron (Hymenoptera: Eurytomidae) parasitic on spider eggs (Arachnida: Araneae) from India. *Rec. zool. Surv. India*, 109 (4): 11-14.
9. Srinivasan, G. and Girish Kumar, P. 2009. Taxonomic studies of the hover wasps (Hymenoptera: Vespidae: Stenogastrinae) of Arunachal Pradesh, India. *Rec. zool. Surv. India*, 109 (3): 37-40.

10. Srinivasan, G. and Girish Kumar, P. 2009. Observations on some behavioural aspects of the potter wasp *Xenorhynchium nitidulum* (Fabricius) (Hymenoptera: Vespidae: Eumeninae). *Rec. zool. Surv. India*, 109 (4): 77-78.
11. Sanyal, A. K. 2009. A new subgenus and two new species of the family Oppiidae (Acarina: Oribatida) from India. *Rec. zool. Surv. India*, 109(Part-3):5-9.
12. Sanyal, A. K. 2009. Oribatid mites (Acari: Oribatei). *Zool. Surv. India, State Fauna Series 14; Fauna of Mizoram*: 1-17.
13. Gantait, V. V., Chatterjee, A., Sanyal, A. K. and Bhattacharya, T. 2009. Studies on soil and plant parasitic nematodes associated with banana in west Midnapore, West Bengal, India. *Proc. Zool. Soc.*, 62 (2): 143-146.
14. Gantait, Viswa Venkat, Chatterjee, A., Sanyal, A. K. and Bhattacharya, T. 2009. Faunal diversity of Nematodes associated with banana plantations in Paschim Medinipur district of West Bengal. Abstract, *National Conference on Innovations in Nematological Research for Agricultural Sustainability Challenges and a Roadmap Ahead* held at Coimbatore during 23-25 February, 2010.
15. Banerjee, Soumya, Sanyal, A. K. and Bhaduri, A. K. 2009. Studies on soil microarthropod population in three different garden plots of 24-Parganas, West Bengal- A preliminary Report. *Rec. Zool. Surv. India*, 109(Part-4):1-9.



Dr (Ms) Joanne H Cooper delivering lecture at Headquarters office



Ramakrishna, Director, Zoological Survey of India, Kolkata

Biodiversity underlies our existence and contributes to our physical and mental health, and ensures that we remain in touch with the natural world. Biodiversity assessment through faunistic and floristic surveys; based on qualitative and quantitative species composition, threatened species and the ecosystems that sustain them, along with, identifying landscapes and biologically rich and valuable areas; generate information to address both biodiversity conservation and ecological function values of the country. It also helps understand the intrinsic value of the species, not only based on the rarity and vulnerability in terms of geographical distribution, but also on the basis of the key functions performed by organisms that can be categorised as "Keystone species", "Indicator species" and "Flagship species".

The data generated provides the basis, or rather the benchmark for action plans aimed at conserving the species, their habitats and in turn the sustenance of biodiversity. This is also key to keep vigil over the undesired introduction of Invasive Alien species that can alter ecosystem balance and loss of habitat which impair economic stability and threat to indigenous species.

"Biodiversity in my opinion is not of genes, species, populations, communities, ecosystems only, it refers to productivity, breeding strategy, nutritional status, ex-situ-in-situ measures, biocontrol, bioenergy, biofertilisers, livelihood, lifestyles, indigenous knowledge, and above all people participation in understanding the natural resource base".

Excerpt from Biotech NEWS, 5 (1) 2010

In this Issue

Central Zone Regional Centre, Jabalpur

A general faunistic survey of Singhori Wildlife Sanctuary in Madhya Pradesh was conducted from 11th to 26th February and representative fauna collected. During the month, 25 species of fishes collected from various localities of Madhya Pradesh and Chhattisgarh were

identified. A research manuscript on 66 species of aquatic beetles under 28 genera and 5 families was contributed to the document under finalisation on the 'Fauna of Karnataka'. 3 research papers were published and one communicated.

A senior scientist of the Centre attended the meeting on “Expert Group on Zoological Survey of India Faunal Diversity Information System” at MBRC, Chennai on 7th February. An interview was telecast (live) on *Sahara Samay* TV channel (M.P. & C.G.) regarding the faunal diversity and status of threatened species of Narmada River Basin in Madhya Pradesh on 14th February.

Publications:

1. Sharma, R.M. & Chandra, K., 2009. First report of the occurrence of some rare butterflies (Lepidoptera: Rhopalocera) from

Chhattisgarh, Central India. *Rec. zool. Surv. India* 109 (Part-3): 33-36.

2. Sharma, R.M. 2009. Insecta: Lepidoptera: Rhopalocera & Grypocera *Zool. Surv. India, Fauna of Bhimashankar Wildlife Sanctuary (Maharashtra), Conservation Area Series*, 42: 257-262.

3. Najam, Ahmad K.A., Siddique, M.S. Deshpande, V.D. and Sharma, R.M. 2009. A new species of genus *Camptomyia* Kieffer (Diptera: Cecidomyiidae: Porricondyliinae) from Maharashtra, India. *Rec. zool. Surv. India* 109 (Part-3): 85-89.

Some Fishes of Barna reservoir, Singhori Wildlife Sanctuary, M. P



Nandus nandus (Family: Nandidae)




Gudusia chapra (Family: Clupeidae)



Cirrhinus reba (Family: Cyprinidae)



Notopterus notopterus (Family: Notopteridae)

 In this Issue

Gangetic Plains Regional Centre, Patna

Description of a new species of *Netomocera* Boucek (Hymenoptera: Pteromalidae) from Namdapha Tiger Reserve, Arunachal Pradesh has been completed. One extensive survey in the entire stretch of River Gandak in Bihar was

conducted for studying the status of Gangetic dolphin. 15 species of moths from Tawang District and five species of mantids (Insecta: Mantodea) from Namdapha Tiger reserve, Arunachal Pradesh were identified which

included two species of mantids collected for the first time from the State. A manuscript dealing with 5 species of mantids from Tawang district of Arunachal Pradesh has been submitted which included four species collected for the first time from the State. One research paper has been published and two submitted for publication. Two scientists of the Centre participated in the national workshop on conservation of Ganges dolphin organized

by the Department of Zoology, Patna University on 22nd and 23rd February 2010.

Publication:

R. K. Sinha, K. M. Khan, Gopal Sharma, D. K. Kedia and Samir Kr. Sinha 2009. A preliminary Survey of the Bird diversity along the lower middle reaches of the River Ganga, Bihar, India. *Newsletter for Birdwatchers* 49 (5), 65 - 70.

Some Praying mantids from Namdapha Tiger Reserve, Arunachal Pradesh



Hierodula assamensis Mukherjee




Theopomba servillei (De Haan)
First record from Arunachal Pradesh



Anaxarcha intermedia Mukherjee
Collected from the type locality after 25 years



Acromantis montana Giglio-Tos
Collected from the same locality after 25 years

 In this Issue

Marine Aquarium cum Regional Centre, Digha

The aquarium tanks of the Centre were replenished with 87 new examples of marine fauna. The major attraction among the aquarium exhibits during the month were, Indian Volute (*Melo melo*), Octopus (*Octopus vulgaris*), three spotted damsel (*Dascyllus trimaculatus*), King Soldier Bream (*Argyrops*

bleekeri) and Dispar Anthias (*Pseudoanthias dispar*). Apart from the live exhibits, 57 examples of marine invertebrates viz. bivalves, gastropods, barnacles, etc. were also collected under Annual Plan of Research Work from local surveys, which included a new record of fish (*Argyrops bleekeri*) from the area. Among the

institutional visitors, a group of final year M.Sc. students from the Vidyasagar University, Midnapore visited the Centre on their study tour. Advisory services were rendered to various schools, colleges and institutions. One research paper has been published.

Publication:

Prasanna Yennawar, 2009. Recent stranding incidences of marine mammals in West Bengal, India. *J Bombay Nat Hist Soc*, 106(1): 95-97.

Some live aquarium exhibits at MARC, Digha

Spotted Damsel, *Dascyllus trimaculatus*



Dispar Anthias, *Pseudoanthias dispar*



King soldierbream, *Argyrops bleekeri*



Common Octopus, *Octopus vulgaris*



Indian Volute, *Melo melo*

Arunachal Pradesh Regional Centre, Itanagar

Pakke Tiger Reserve was surveyed twice during the month and 4 species of small mammals, including squirrels and one species of lagomorph, were recorded. Among insects, 12 species of Orthoptera, 40 species of Lepidoptera, 5 species of Odonata and 1 species of Hymenoptera were also recorded from the area. Besides, a few examples of amphibians and fishes were also collected for taxonomic study. A scientist of the Centre participated in




An Unidentified Mouse at Pakke TR

the waterfowl census at Rashibeel Wetland Complex at Cooch Behar, West Bengal on 21st & 22nd February. Dr. Nakul Chettri, Biodiversity Specialist from the International Centre for Integrated Mountain Development (ICIMOD) Nepal and Dr. Prasana Samal, Scientist-in-Charge, GBPANT, Itanagar visited the Centre and interacted with scientist on 4th February. More than 30 children and students from various colleges visited the museum during the month.



A Rodent collected for study, using Sherman trap

 In this Issue

North Eastern Regional Centre, Shillong

A field survey was conducted at Deepor beel (a Ramsar site), Kamrup district, Assam. Water samples and qualitative and quantitative plankton samples were collected from six sampling sites. 9 species of Rotifera and 12 species of Cladocera were identified and registered. 7 species of freshwater fishes from Nokrek Biosphere Reserve, Meghalaya were also identified and registered.


Identification service was rendered to the Department of Environmental Studies, North Eastern Hill University, Shillong, on *Channa gachua*.

104 data entries on Pisces, 1697 entries of Coleoptera, 822 entries of Cladocera and 634 entries of Rotifera were made in the faunal database.

A Pictorial guide to amphibians of N.E. India, has been published.

Publication:

Mathew, R & N. Sen. 2010. *Pictorial guide to amphibians of N.E. India*. Plate xii, 144pp, map & 242 Coloured plates (Published by the Director, Zoological Survey of India, Kolkata).

 In this Issue

Andaman and Nicobar Regional Centre, Port Blair

Surveys on corals and its reef dwelling organisms were conducted in Kamorta, Champin, Trinket, Munak, Kardip, Kakkana in Nancowry group of Islands and Great Nicobar Island from 22nd February onwards. A total of 93 species of corals, 22 species of molluscs, 30 species of echinoderms, 12 species of fishes, 6 species of soft corals, 6 species of brachyuran crabs, 30 species of zooplankton and 27 species of phytoplankton were identified. Apart from that, 63 species of birds, 18 species of spiders and 29 species of butterflies were recorded in Great Nicobar Island. The extent of live coral cover in these islands has also been estimated as 38.2 to 58.7%. A research document on the diversity and distribution of corals, echinoderms, fishes, crustaceans, and phyto and zooplankton communities of Ritchie's Archipelago has been finalised for publication. Database on corals, soft corals, crustaceans, echinoderms, insects, avifauna, reptiles and mammals has been updated. Letter of approval

has been received from the Pondicherry University, recognizing ZSI/ANRC, Port Blair as a Centre under the University to conduct Ph.D. programmes on Taxonomy, Ecology and Zoogeography. A research proposal on corals, avifauna and butterflies of Mount Harriet National Park, South Andaman has been submitted to the Dept. of Environment and Forests, A&N Administration, seeking financial support. Information pertaining to the biodiversity of Andaman and Nicobar Islands to the village biodiversity conservator at Pollachi, Tamil Nadu; Stranding records of sea cow *Dugong dugon* in A&N Islands to the Freelance Wildlife Conservator, Bengaluru and species diversity of Gastrotricha in India to a Lecturer of Cochin University of Science and Technology has been provided on request. Scientists of the Centre participated in the National Seminar on Applied Chemistry in Marine Science, organized by the Pondicherry University at Port Blair during 24th -25th February.



Coral- *Diplostrea heliopora* Lamarck



Coral- *Favia maxima* Veron and Pichon



Coral- *Leptastrea purpurea* Dana



Coral- *Galaxea fascicularis* Linnaeus

Publications:

1. C. Raghunathan, B. Mehmuna, C. Sivaperuman and R. Kirubakaran, 2009. Diversity of Oceanic Zooplankton in Andaman Sea. *Nature Environment and Pollution Technology*, 8(4): 635-644.
2. V. Madhan Chakkaravarthy, S. Kumaralingam, Koushik Saudhukhan, C. Raghunathan and Ramakrishna, 2010. New records of scleractinian corals from Indian waters. *Bulletin of Environment Science*, XXVIII: 23-36.

Coral-*Favia matthaii* VaughanCoral-*Goniastrea edwardsi* ChevalierCoral- *Platygyra sinensis* Milne Edwards and Haim

In this Issue

Northern Regional Center, Dehra Dun

Three intensive surveys in Kalesar Wildlife Sanctuary, Haryana were undertaken and representative faunal elements collected, besides making observations on 31 species of birds. 6 species of butterflies and an amphibian were also identified occurring in the Sanctuary. Another survey in Haridwar and vicinity (Saloni River) was undertaken for the molecular study of turtles. A third intensive survey in and around Dehra Dun was undertaken for collecting Helminth Parasites of Vertebrates and collected 25 parasites from

15 frogs. 5 species of butterflies collected during Haryana survey have also been identified.

A draft overview for the document on the fauna of Uttarakhand and a manuscript on Amphibia of Uttarakhand were submitted. One research paper has been published. Cross sections of the hair samples of Malabar civet and Angora rabbit were done for trichotaxonomy studies.

Publication:

Rizvi, A.N. and Bhutia, P.T. 2009. Some Bacterivorous nematodes from Uttarakhand, India. *Rec. zool.surv.India*, 109(4): 79-86.

In this Issue

Sunderban Regional Centre, Canning

A faunistic survey was undertaken in and around Canning, shores of Matla and the Mangrove areas at Dabu on 23rd February in connection with the programme, "Preliminary studies on the faunal diversity in the landing centers of Sundarbans". Representative faunal

samples comprising fishes, molluscs and crustaceans were procured. Two research papers were published.

Selling of very small mud crabs, *Scylla serrata* (CW1.5 cm), in Canning markets along with prawn fingerlings needs to be viewed seriously

since commercial exploitation of pre-mature mud crabs and prawn fingerlings paves the way to extinction of the fauna of Matla Estuary.

Publications:

1. Varadaraju. 2009. An account of the Amphibian and Reptilian fauna of



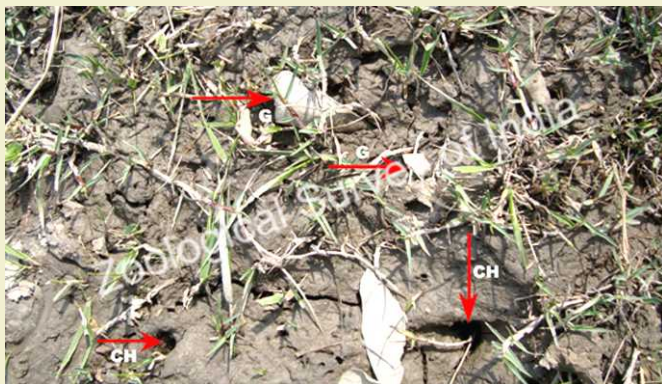
Scylla serrata

Sunderban, west Bengal. *Rec. zool. Surv. India.*, 109 (Part-4): 57-66.

2. Varadaraju. 2009. Ecology, Faunal Diversity and Habitat management strategies of Amphibians and reptiles of Sunderban. *Rec. zool. Surv. India.*, 109 (Part-3): 61-78.



Exploitation of young mud crabs



Crab holes (CH) and Gastropods (G)



Mangroves at Dabu

 In this Issue

High Altitude Regional Centre, Solan

One research paper was published in a national journal. A research paper on the distribution and ecology of Chiropteran fauna of Himachal Pradesh has been submitted to a National



Black-winged Stilt in Tso-Gul-Tso wetland, Ladakh

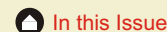
Journal and another paper on Fish fauna of Beas River system has been submitted to the departmental journal. Two species of Orthoptera and three species of Lepidoptera from the collections of Pangri Valley were identified. Compilation of various chapters for the document on faunal diversity of Pangri Valley is in progress. The work on 35 species of Rhopalocera from Churdhar Wildlife Sanctuary is under compilation.

Scientists of the Centre participated in the 13th Punjab Science Congress held at Punjab University, Chandigarh from 7th -9th, February and presented papers.

Publication:

Sidhu, A. K., M. Kaur and H. S. Rose. 2010. Observations on the life history and behaviour

of the common pierrot, *Castalius rosimon* (Fabricius) (Lepidoptera: Papilionoidea: Lycaenidae) *J. ent. Res.* 33(4): 373-375.



Desert Regional Centre, Jodhpur

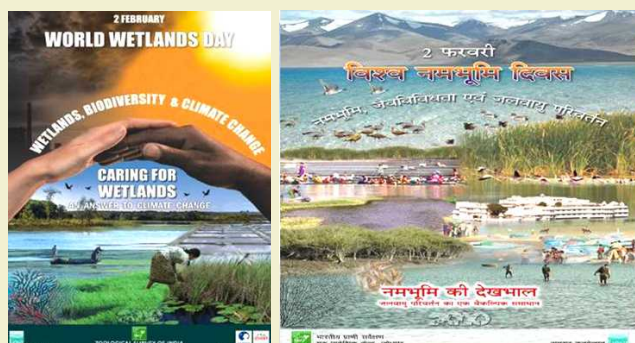
A Field survey was conducted from 10th-21st February in parts of the Aravalli Range falling in four districts of Rajasthan and identified 6 species of Odonata, 17 species of Lepidoptera, 3 species of reptiles, 162 species of Aves and 9 species of mammals. Scientists of the Centre identified 4 species of Nematoda, 14 species of Lepidoptera, 9 species of Coleoptera and 1 species of Reptilia from various environs of Rajasthan. Besides, 3 species of Nematoda were identified from the forest areas of Gujarat. 4 research papers were published. 42 entries of identified fauna were made in the faunal Database of the Centre. 60 entries pertaining to the books in the Centre's library were made employing the software, *e-granthalaya*.

The World Wetland Day, 2010 was celebrated on 2nd February. Dr. T. S. Rathore, Director, AFRI (ICFRE), Jodhpur acted as the Chief Guest. During the occasion, two posters were

released, lectures delivered and a field trip organized. Three Scientists of the Centre participated in the "National Seminar on Desert: Its Biodiversity and Conservation", held at the Department of Zoology, J.N.V. University, Jodhpur on 9th February and the "Regional Consultation on Biodiversity", organized by the Centre for Community Economics and Development Consultants Society (CECOEDECON), Jaipur, held at Sri Ram Excellency, Jodhpur on 23rd February. Scientist of the Centre delivered lectures on Biodiversity in the training programme on "New Techniques in Forest Management", organized by the Office of the Deputy Conservator of Forest, Desert Forest Training Centre, State Forest Dept., Jodhpur, on 24th February. A scientist of the Centre participated in a one day seminar on RTI Act, 2005 organised by ISTAR, New Delhi on 22 February. 148 visitors paid their visits to the museum.



During the World Wetland Day, 2010 celebrated at DRC



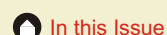
Posters released on the World Wetland Day, 2010



Spotted Deer at Sariska Tiger Reserve



Nilgai at Sariska Tiger Reserve




Southern Regional Centre, Chennai

Out of the material collected through the recent faunistic surveys in Tamilnadu and Karnataka, 8 species of Mollusca and 5 species of Reptilia were identified. Photographs of primary types of 12 species of amphibia were digitised for the data base, 'Primary Type Information System' being developed in Western Ghat Regional Centre, Kozhikode (Calicut). The primary types of 18 species of fishes were also photographed and the relevant literature scanned. Identification service was rendered on 15 species of aquatic and semi aquatic Hemiptera to the Dept. of Ecology & Environmental Sciences, Pondicherry. A Senior Scientist attended the environmental audit meeting of the Adyar Poonga on 24th February, to evaluate reasons for the mass fish death in Adyar River. 5983 entries were made in the library database, employing the software *e-granthalaya* and the library

networking has been completed. Six manuscripts were reviewed for departmental publications. A senior scientist of the Centre attended the meeting on "Expert Group on Zoological Survey of India Faunal Diversity Information System" at MBRC, Chennai on 7th February. A Videograph on Common Bronzeback Tree Snake documented is hyperlinked with the departmental website www.zsi.gov.in.

Publication:

Karunamoorthy, K., Ilango, K. & Murugan, K. 2010. Laboratory evaluation of traditionally used plantbased insect repellent against the malaria vector *Anopheles arabiensis* Patton (Diptera: Culcidae). *Parasitology Research* (on line DOI 10.1007/s 00436-010-1797) (Impact factor 1.473) Published by Springer-Verlag.

 In this Issue

Marine Biology Regional Centre, Chennai

Five species of marine sponges, 2 species of soft corals and one species of sea fan were identified and registered out of the material collected from the Gulf of Mannar Biosphere Reserve. Nine species of fresh water fishes were identified for scientists outside ZSI. A senior scientist of the Centre presented a paper in a National Symposium at Aligarh. Three research manuscripts were corrected and returned for an outside journal and one manuscript was refereed for an international journal. Four advisory services were rendered.

A senior scientist of the Centre organized the meeting on "Expert Group on Zoological Survey of India Faunal Diversity Information System". The Scientists of MBRC participated in the Science City festival organized by the State Science & Technology (Tamil Nadu), Anna University and displayed live coral reef ecosystem in a marine aquarium, and different species of marine diversity of India. Mr. Anuar Kasman, Consul General of Malaysia and his

wife Mrs. Maryani Majeed accompanied by ten officials of the Consulate General of Malaysia visited the marine aquarium and marine museum of the Centre. A senior scientist of the Centre delivered a lecture on "Climate change and Biodiversity" in a Faculty Development Training Programme, organized by the Algology Laboratory, Center for Advanced Studies in Botany, School of Life sciences, University of Madras, Guindy Campus, Chennai. He also served as a Panelist during the



School children visiting the marine aquarium stall of MBRC/ZSI during Science festival


discussion on Climate Change and Biodiversity, organized by the Science City, Chennai, during the Chennai Science Festival 2010, on 5th February, at the Science City Auditorium and presented a power point



presentation on “ Wildlife and Climate Change” to the students from various schools. One thousand two hundred and ninety eight students and tourists visited the marine aquarium during the month.



During the visit of the Consulate General of Malaysia to the MBRC/ZSI marine aquarium

 In this Issue

Western Regional Centre, Pune

Faunistic surveys in Chandoli National Park and Radhanagari Wildlife Sancturay were conducted during the month. In collaboration with Western Ghat Regional Centre, Kozhikode (Calicut), over 1000 point locations of endemic amphibians of the Western Ghats were georeferenced and preliminary mapping of 132 species were completed. Scientist of the Centre reviewed 2 research papers for the journals, *Entomon* and *Journal of Threatened Taxa* and a project for Critical Ecosystem Partnership Fund (CEPF) Small Grants Programme.




Leaf insect at Radhanagari WLS



Bats in a cave at Radhanagari WLS



Eurasian Thick Knee at Chandoli NP

 In this Issue

Freshwater Biology Regional Center, Hyderabad

Monthly field studies were initiated on varied types of freshwater lakes/wetlands in and around the metropolitan limits of Hyderabad, for ecological evaluation of limnobiological profile using different non-conservative and conservative parameters (various molecular species/ forms of phosphorous/nitrogen ions) and facies of ecological indicator species- Zooplankton, littoral faunae, fish and bird nekton (wetland birds). One mesotrophic fresh water lake was surveyed and adequate zooplankton/biological and surficial water samples collected for studying the limnological profile. Further, follow-up studies for preparing an inventory of aquatic entomofaunal profile (major lakes in Hyderabad), and two others on wetland faunal diversity in the raw water reservoir, Palair, Khammam district and the ecologically degraded swampy, grassy habitat (Kolleru

Lake, West Godavari and Krishna districts), were continued. Field observation/follow-up studies revealed ecological resilience, as evidenced by reappearance of quite a few groups of indicator species (bird nektons/others). Two taxonomic enquiries received, from a regional university, were attended. One research paper has been communicated.



Black Ibis and White Ibis in Umda sagar, Hyderabad

In this Issue

Estuarine Biology Regional Centre, Gopalpur-on-Sea

Six species of crabs and three species of prawns from Nuanai Estuary, four species of mosquitoes from Ganjam district, Orissa and five species of freshwater fishes from the Namdapha National Park and Tiger Reserve, Arunachal Pradesh were identified. *Amblyceps apangi* Nath and Day which has so far been reported only from the Dikrong, Subansiri, Panye and Kalpangi rivers of Arunachal

Pradesh has been identified for the first time from Namdapha.

One research paper was published and another accepted for publication.

Publication:

Dash. S and Mishra S. S. 2007. Notes on the fish resources of the Bahuda estuary Orissa, India. *Journal of Indian Fisheries Association*, 34: (11-14).



A view of Namdapha National Park




Amblyceps apangi, first record from Namdapha



Aborichthys kempfi collected from Namdapha



Semiplotus semiplotus collected from Namdapha

 In this Issue

Western Ghat Regional Centre, Kozhikode (Calicut)

In collaboration with the Western Regional Centre, Pune, over 1000 point locations of endemic amphibians of the Western Ghats were georeferenced and preliminary mapping of 132 species were completed. Out of the Odonata (Insecta) collection received from NRC/ZSI, Dehradun, 16 species were identified. Part of a rich collection of Diapriidae (Proctotrupeoidea) and Platygastridae (Platygastroidea) [Hymenoptera], from the recent ZSI expedition to Namdapha Tiger Reserve (Arunachal Pradesh) has been sorted and mounted for taxonomic studies. Two research papers were published.

A scientist of the Centre visited the National Bureau of Agriculturally Important Insects, Bangalore to study the Reference Collection of

Platygastridae (Hymenoptera) of the Oriental Region and attended the workshop “National Consultation on Advancing the Science of Taxonomy in India for Biodiversity Conservation”, organized by ATREE, Bangalore on 23rd February, as an invitee. She also delivered an invited Lecture “Women in Research-Some Gender Aspects” on 27th February, at the Department of Zoology, Pazhassi Raja N.S.S College, Mattannur, Kannur, at a Seminar on Gender Equity & Biodiversity Conservation organized in connection with National Science Day Celebrations.

A senior scientist of the Centre chaired the meeting on “Expert Group on Zoological Survey of India Faunal Diversity Information



The Malabar Flying Frog, *Rhacophorus malabaricus* Jerdon and its foam nest

System" at MBRC, Chennai on 7th February. Another senior scientist of the Centre took part in the Biodiversity meeting held by the State Forest Department at Thiruvananthapuram on 4th February.


During the month, 2700 visitors paid their visits to the museum.

Publications:

1. K. C. Gopi and C. Radhakrishnan. 2009.

Charles Darwin: A biogeographer par excellence and a figurehead of rational Science. *Rec. zool. Surv. India*, 109 (3):1-4.

2. Muhamed Jafer Palot, Bimalnath K. G. and C. Radhakrishnan. 2009. *Holostemma ada-kodien* Schult (family: Asclepiadaceae), a new larval food plant of the Blue Tiger, *Tirumala limniace* Cramer (Insecta: Lepidoptera: Nymphalidae). *Rec. zool. Surv. India*, 109 (4):105-106.

 In this Issue

ANIMAL OF THE MONTH

THE CHINKARA OR INDIAN GAZELLE, *Gazella bennettii* (Sykes)



Female



A Group



Male

(Text and Photos: P.L. Kankane, ZSI, Kolkata)

Gazelles (16 species in the world) inhabit the desert and semi-desert regions of Africa, the Middle East and the Central Asia. *Gazella bennettii* (Sykes), an Indian species, has wide distribution covering nine states of the country viz. Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Karnataka, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh. Throughout its range of distribution, this species was subjected to extensive persecution and have been exterminated in many areas. Despite the fact that it has enjoyed legal protection for the last 37 years, except for the western edge of their distributional range, the population of Chinkara is mostly confined to Protected Areas only. Rahmani (1990) has

reported its extermination from Punjab, most of Haryana and reduction in its range in Uttar Pradesh and Kankane (2000) has reported their distribution as severely fragmented in Rajasthan.

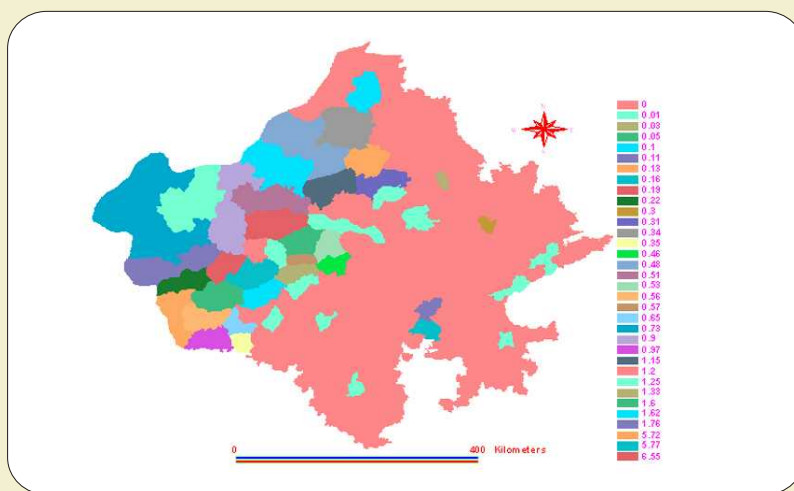
The Indian Gazelle, *Gazella bennettii* (Sykes) is a small, slender and gracefully built animal. Males bear annular horns (maximum length 40 cm), while females are normally with small, straight, smooth, thin spikes curving backward without any annulations. The Chinkara is light chestnut above, white on sides, buttocks, chin, breast and lower parts; tail black; knee brushes dark brown; face rufous with white streaks on it. During summer, the coat colour is reddish buff with smooth and highly glossy fur. This is

probably an important adaptation for reflecting back some of the sun rays and thus minimizing heat absorption during the very high day time temperature experienced in its habitat.

The Indian gazelle is very swift, not particularly wary and when alarmed stamps its fore feet and hisses through the nose, hence named Chinkara the Sneezer.

Unlike the blackbuck, the digestive system of

Chinkara is adapted to better management of water so they can live in extremely arid areas, receiving as low as 50 -100 mm annual rainfall. Probably this is the factor why they are still successful in Rajasthan and Gujarat, and rightly declared as the state animal of Rajasthan. In some *Vishnoi* community areas, their population density reaches 31.6 per km² (Rahmani, 1994).



Relative density (per sq km) of Chinkara in different development blocks of Rajasthan (after Kankane, 2000 and Alfred *et. al.* 2001)

Animal Profile:

Life Span - 8 to 10 years; Sexual Maturity - two years (Roberts, 1977); Gestation Period - 5 to 5 1/2 months; Litter Size - Single but twins noticed frequently (Dunbar Brander, 1923); Adult Weight - 21 to 23kg.

Legal Status:

Indian Wildlife (Protection) Act (1972): Schedule I, Part I.

IUCN: Least Concern

References

Alfred, J.R.B., Kankane, P. L., Kumar, A., Roy, P.S., Singh, S. and Verma, M. (2001) Habitat Suitability Analysis of Chinkara, *Gazella benetti* in Rajasthan A Remote Sensing and GIS Approach. *Rec. zool. Surv. India, Occ. Paper No. 189: 1-71* Zoological Survey of India, Calcutta.

Dunbar Brander, A. (1923) *Wild animals in central India*, Edward Arnold & Co., London.

Kankane, P.L. (2000) Status survey of Chinkara and Desert Cat in Rajasthan (with 11 tables, 13 figures and maps, 38 color photographs). *Rec. zool. Surv. India, Occ. Paper No. 179: 1-71*, Zoological Survey of India, Kolkata.

Rahmani, A. R. (1990) Distribution of the Indian Gazelle or Chinkara, *Gazella bennetti* (Sykes) in India. *Mammalia*, 54 (4): 605-619.

Rahmani, A.R. (1994) *Wildlife situation in the Thar*. World Wide Fund for Nature, New Delhi.


Roberts, T.J. (1977). *Mammals of Pakistan*. Ernest Benn, London.

ZSI IN NEWS



Wildlife Week 2009 celebrated by Western Ghat Regional Centre, ZSI, Kozhikode, Kerala

<http://www.zoosprint.org/ZooPrintMagazine/2010/February/22-24.pdf>

 In this Issue



OUT OF THE BOX

Origin of life Scientists rule out 'Metabolism first' theory

http://www.thaindian.com/newsportal/health/metabolism-first-theory-on-origin-of-life-rejected_100301308.html

Scientists discover oldest footprints on Earth: Four-legged animals walked on earth 18 million years earlier than previously thought

<http://www.telegraph.co.uk/science/science-news/6945194/Four-legged-animals-walked-on-earth-18-million-years-earlier-than-previously-thought.html>

Newly found fossils Show Earliest Animal Trails

<http://www.sciencedaily.com/releases/2010/02/100203085914.htm>

Does evolution always lead to bigger brains?

http://www.eurekalert.org/pub_releases/2010-01/uoc-dea012510.php

Birds are losing their voice

http://www.downtoearth.org.in/full6.asp?foldername=20100131&filename=sci&sec_id=12&sid=2

Scientists identify traits that make toads world conquerors

<http://beta.thehindu.com/sci-tech/science/article102221.ece?homepage=true>


Scientists find new frog that changes colour with age

<http://www.hindustantimes.com/News-Feed/europe/Scientists-find-new-frog-that-changes-colour-with-age/Article1-504086.aspx>

Clever octopus builds a mobile home-Finding marks first reported instance of an invertebrate acquiring tools

<http://www.youtube.com/watch?v=1DoWdHOTlrk>

<http://www.msnbc.msn.com/id/34417758/>

 In this Issue



PICTURE GALLERY

Coral Associated molluscs in Andaman & Nicobar Islands



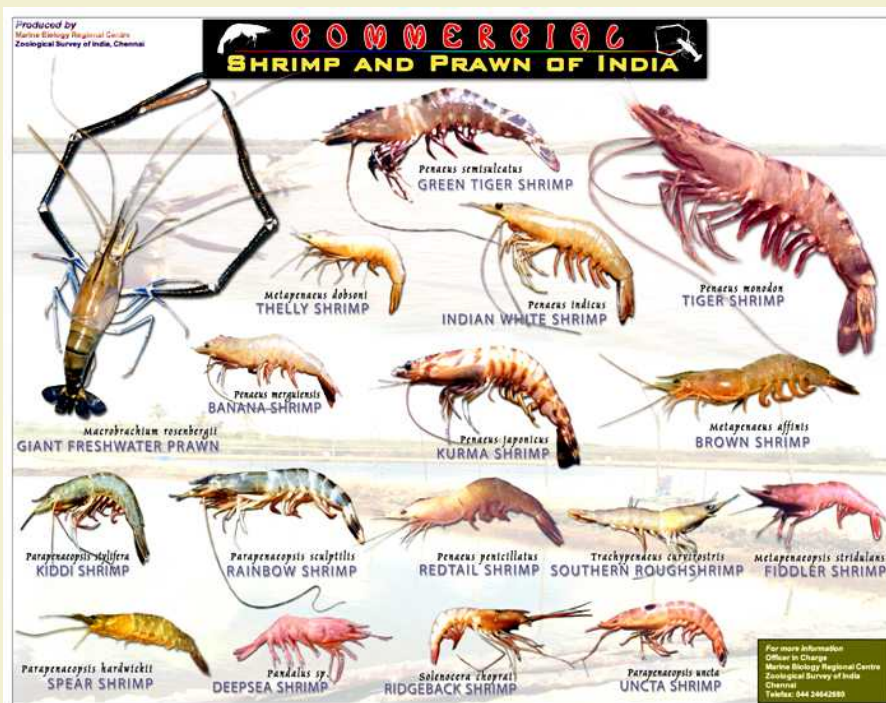
In this Issue



POSTER SERIES

2


(Contributed by the Marine Biology Regional Centre, ZSI, Chennai)



In this Issue

PAINTINGS FROM ZSI HERITAGE ALBUM

1

Chinkara, *Gazella bennettii* (Sykes) In this Issue