

ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India



Back issues of ZSI e-NEWS

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IN THIS ISSUE

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

ANIMAL OF THE MONTH



Giant Tiger Centipede

Check-list of fauna of India:

1. Sarcophagidae
(Diptera: Insecta)
2. Calliphoridae & Rhiniidae
(Diptera: Insecta)
3. Land Mollusca

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ZSI IN NEWS



OUT OF THE BOX



PICTURE GALLERY



VIDEO



Himalayan Marmot

POSTER SERIES



PAINTINGS FROM ZSI HERITAGE ALBUM



From the Director's Desk

I am quite happy to state that the contribution made by ZSI to the knowledge on the biodiversity information through its scientific activities of survey, identification and documentation of the faunal diversity of the country has continued to prosper during the month. Some of the other highlights are the participation of ZSI scientists in the IUCN assessment of Freshwater biodiversity of Eastern Himalaya, conducting refresher courses, identification of material confiscated by the wildlife Crime Bureau, participation in the Tiger Census at Sunderbans, Status Survey of a mollusc related to the livelihood options of the islanders, environment impact studies, participation in National and International symposia and seminars and the scientific contributions made in terms of research papers and documents.

I wish to congratulate the scientists for their performance.

Dr. Ramakrishna

Headquarters, Kolkata

Extensive field surveys were undertaken to study the fauna of the States of Assam, Bihar, Jharkhand, Himachal Pradesh, Karnataka, Uttar Pradesh, Orissa, West Bengal (including the Bhimbhuti Bhusan Wildlife Sanctuary, West Bengal) and the East Coast of Andhra Pradesh and Orissa. Local surveys were undertaken in and around the Wetland areas of North 24 Parganas, West Bengal.

During the month, a trematode, *Paryphostomum ghoshi* (Echinostomatidae: Echinostomatinae) has been described as new to science.

Two species of Vespidae (Hymenoptera), 2 species of Asilidae, 2 species of Bombyliidae, 3 species of Calliphoridae, 13 species of Syrphidae, 5 species of Tachinidae, 5 species of Tephritidae (Diptera); 16 species of Cicadelloidea, 5 species of Fulgoroidea, 6 species of Cicadoidea, 35 species of Pentatomoidea, 27 species of Reduviidae, 9 species of Lygaeidae, 16 species of Pyrrhocoridae, 31 species of Arctiidae and Sphingidae and 5 species of Odonata identified out of the material collected from the State of Uttarakhand, turned out to be new records for the State. Out of the collection from Namdapha Biosphere reserve, Arunachal Pradesh, 6 species of Mammalia belonging to the genera *Suncus*, *Rhinolophus*, *Megaerops*, *Cynopterus*, *Mus* and *Chiropodomys* were identified. Besides, 5 species of Scleractinian corals, 4 species of sponges, 7 species of Hymenoptera, 8 species of Isoptera, 8 species of Hemiptera, 25 species of Lepidoptera, 12 species of Odonata, 15 species of spiders, 6 species of Crustacea, and 22 species of Mollusca, were also identified out of the material collected from the States of Arunachal Pradesh, Bihar, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Orissa, Sikkim, Uttarakhand, Uttar Pradesh, West Bengal and from the Bhimbhuti Bhusan Wildlife Sanctuary, West Bengal.

Thirty eight research papers were published, seven accepted for publication and nine communicated by the scientists of the Headquarters.

Holotype and Paratype of *Leptolalax tamdil* from Mizoram, deposited by Dr. Saibal Sengupta, Arya Vidyapeeth College, Guwahati, and Holotype and two Paratypes of *Paryphostomum ghoshi* sp. nov. (Echinostomatidae: Echinostomatinae), have been added to the National Zoological Collection.

Identification services were rendered on four



During the field trip conducted in connection with the IXth Refresher Course on Collection and Preservation Techniques of Zoological Specimens

lots of specimens, received from different organizations. Two snake photographs received from the Deputy Field Director, Sunderban Tiger Reserve, West Bengal, were identified as *Boiga cyanea* (Duméril, Bibron & Duméril, 1854). Confiscated goods (foot wear) received from the Deputy Director, Wildlife Crime Control Bureau, New Delhi, for identification were identified and confirmed as articles made of *Python* skin. Two deer skulls with antlers received from the Forest Dept., Govt. of West Bengal, two seized wildlife materials received from the Maharashtra Police and a flat skin along with its skull received from the Crime Branch, Maharashtra, were identified and identification and advisory service rendered.

A group of Post-graduate students of Zoology from Cotton College, Guwahati, Assam, under the leadership of Prof. B. K. Deka, visited different sections of the Headquarters on 19th of March. A Research Associate from the National Institute of Advanced Studies, Bangalore visited the Mammals & Osteology Section for the study of Civet specimens in the collection of the Section.

Eminent Scientists, Dr. Allen David and Dr. Kevin Smith from the Freshwater Biodiversity Unit, International Union for Conservation of Nature, Cambridge, UK, visited the Mollusca Section on 22nd March.

A scientist from Headquarters delivered a

lecture with slide show on “Effect of Global warming on the Antarctic ecosystem” in Serampore College, Hugli, West Bengal, on 6th March. Another scientist delivered lectures on the topic “Conservation and Management of Coral reefs the paradises underwater”, to the Post graduate students of Andhra University, Vishakapatnam and to the Naval Diving Team of Eastern Command at Gopalpur, to create awareness, much needed for the conservation of threatened coral reef ecosystems. Scientists and a scientific staff of the Headquarters participated and presented papers in the “National Symposium on Parasite Taxonomy, Biodiversity and Fish Health: Environmental Impact”, held on 12th and 13th March, at Andhra University, Vishakapatnam. A scientist attended the “Golden Jubilee symposium on Contemporary trends in Plant and microbial sciences” organized by the Department of Botany, University of Burdwan, Burdwan, from 19-20th March. Two Scientists of the Headquarters participated in the “IUCN Eastern Himalayas Freshwater Biodiversity Assessment and High ARCS Evaluation Workshop” from 22nd - 26th March, at Kolkata.

Five scientists of the Headquarters office

attended the training course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.

The IXth Refresher Course on 'Collection and Preservation Techniques of Zoological Specimens' was conducted by the Training & Extension Division from 16th - 19th March at ZSI, Kolkata. Dr. J. R. B. Alfred, Former Director, ZSI, delivered a lecture on the importance of the collection and preservation of Zoological Specimens, at the Inaugural Session, on 16th March, as Chief Guest, and Dr. S. K. Gupta, Former Jt. Director, ZSI, delivered a lecture on “Pests and diseases of medicinal plants and their management” in the Valedictory Session, as a guest of Honour on 19th March. 39 participants from various parts of India attended the programme. A field trip was conducted along with the participants at the Ramakrishna Vivekananda Mission, Sibalaya, Duttapukur, 24 Parganas (North) on 18th March. During the month, 20 employees of Headquarters were deputed to participate in Training on IT Awareness and E-Governance under the Information Technology Programme of the Administrative Ministry.

New records from the State of Uttarakhand



Vespa basalis Smith



Vespa orientalis Linnaeus



Vespa tropica Linnaeus

Sunderban Regional Centre, Canning

The Centre participated in the Tiger Census at Sunderbans from 4th - 8th March 2010. As an alternative to the usual pugmark method, tiger scat collection was introduced in Sunderbans. The collected scat was preserved with silica gel for DNA analysis.

In connection with the annual programme “Taxonomy and Ecology of Brachyuran crabs in Sunderbans”, the faunistic survey scheduled during the pre-monsoon period was conducted from 10th - 19th March in and around Dobanki, Neti Dopani, Jharkhali, Satjelia and Bali Island. The brachyuran crab population was estimated by Quadrat Method. Since the pond ecosystem in Bali Island was observed to be disturbed, the water and soil samples from the area were collected for salinity and heavy metal analyses.

Representative samples of fishes, brachyuran crabs, anomuran crabs, horse shoe crabs, prawns, stomatopods, gastropods and cuttle fishes were collected for further study. Besides, a local survey was conducted in connection with the annual programme “Preliminary survey on the faunal communities in the fish landing centers of Sunderbans”, on 21st of the month. The survey was conducted in and around Canning and Dabu Mangrove areas. Representative fish fauna was collected and preserved for further studies.

A staff member of the Centre participated in the IXth refresher course on Collection and Preservation Techniques of Zoological specimens from 16th - 19th March, at ZSI Headquarters.



Tiger pug marks



Preserved Tiger scat



Estimating the abundance of crabs



Non-targeted fauna of Matla

High Altitude Regional Centre, Solan

Compilation of different chapters for the document on the fauna of Churdhar Wildlife Sanctuary and Pangi Valley is in progress. Two research papers have been published in national journals including a new record of a turtle from Himachal Pradesh. Another paper has been accepted in a national journal. A scientist of the Centre delivered a talk on the diversity, distribution and status of certain faunal groups of Pangi Valley, Chamba district in the "International Conference on Mountain biodiversity: Conservation and sustainable utilization", held at Doon University, Dehradun (13-15th March, 2010). The full paper on the subject was submitted for publishing in the proceedings of the conference.

A scientist of the Centre attended the training course on 'Current Trends in Faunal Diversity

Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March. Another scientist of the Centre participated in a two day workshop on RTI at ISTM, at New Delhi from 29 - 30th March.

Publications:


1. Saikia, Uttam, H. S. Mehta and D. K. Sharma (2010): New distributional record of Eastern Black Turtle *Melanochelys trijuga indopeninsularis* from Simbalbara WLS, Sirmour district, H. P. *The Indian Forester* 136(2): 273-275.
2. Mehta, H. S., Indu Sharma and Avtar Kaur Sidhu (2010): Occurrence of Himalayan Marmot rich zone near Kyaghar Lake, Ladakh, Jammu & Kashmir *Uttar Pradesh Journal of Zoology* 29(3): 409-411.



Fabriciana kamala mudpuddling at Churdhar (H. P.)



Melanochelys trijuga indopeninsularis
from Simbalwara WLS, Himachal Pradesh

 In this Issue

Marine Biology Regional Centre, Chennai

Two faunistic surveys to Gulf of Mannar Marine Biosphere Reserve were conducted from 9th - 15th and 21st - 27th March 2010 and representative fauna collected from the offshore and inshore habitats. Two species of marine sponges, 2 species of soft corals and 35 species of Mollusca were identified and registered. Three research manuscripts were revised and submitted to an Indian journal. One advisory service was rendered.

A senior scientist of the Centre delivered three lectures, one in the Meeting of the IMO Level-1 training on Pollution Response Team (East) of the Indian Coast Guard at Chennai on "Wildlife Causalities" on 11th March, another on Role of Youth in Climate Change and Globalisation: on "Biodiversity Conservation and Climate Change" on 19th March in Rajiv Gandhi National Institute of Youth Development, Sriperumputhur, and the third one on

“Reducing pressure on spawning areas”, organized by the Project Management Unit of International Fund for Agriculture Development (IFAD) assisted Post Tsunami Sustainable Livelihood Project (PTSLP) on “Fisheries Resource Management” based on the issues consolidated from Cluster Level Workshop in Chennai on 23rd March; the scientist also attended the National Subcommittee meeting on Coral Reef, Mangrove and wetlands under the Ministry of Environment and Forests in CAS, Marine Biology, Annamalai University, Chidambaram from 29th - 30th, March. A senior scientist participated in the IUCN Eastern Himalayas Freshwater Biodiversity Assessment and High ARCS Evaluation Workshop” from 22nd - 26th March, at Kolkata. 2 scientists of the Centre attended the training course on 'Current Trends

in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.

138 live specimens of a variety of echinoderms, fishes and marine snakes were added to the aquarium. 608 students and 928 tourists visited the marine aquarium during the month.




An Eel fish displayed in the marine aquarium tank



Holothuria atra observed in the inter-tidal region



Leather Coral, *Sarcophyton* sp.  In this Issue

Southern Regional Centre, Chennai

Five species of Mollusca and 4 species of reptiles were identified out of the collections procured from Tamilnadu and Karnataka. Two research papers were reviewed. An invited plenary lecture on the diversity & distribution of Phlebotomine Sand Flies (Diptera: Psychodidae) was presented by a scientist of the Centre at the “National Conference on Biodiversity of Insects and Environment”, organized by the Department of Zoology, Bharathiar University, Coimbatore, held on 15 and 16th of the month and the scientist was also

selected as the editorial member of the Journal of Vector systematics. 2 scientists of the Centre attended the training course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March. A Research Fellow from the Kerala University visited the Centre to study the caecilian (Amphibia) type specimens. A videograph on Himalayan Marmot documented is hyperlinked with the departmental website www.zsi.gov.in.

North Eastern Regional Centre, Shillong

A field survey was conducted in Manipur from 8th - 17th March and out of the material collected, 15 species of fishes were identified. A local survey of 2 days duration was conducted at Deepor beel (a Ramsar site) in Assam from 19th - 20th March and water samples and qualitative and quantitative plankton samples were collected from 6 sampling sites. 10 species of Rotifera and 13 species of Cladocera were identified and registered. Two research papers were published.

The Type specimen register of the Centre was updated with 53 entries. 40 data entries were made on Pisces.

Identification service on Pisces and Amphibia were rendered to Forensic Science Lab, Shillong College, and Synod College in Shillong.

Children from various schools of Meghalaya visited the museum on 5th March in connection with the 'State Level Science and Environmental Fair 2010', organized by the State Council of Science, Technology and Environment, Govt. of Meghalaya.

A scientist of the Centre attended the training

course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.

Publications:

1. Mathew, R. and N. Sen, 2009, Description of a new species of *Leptobrachium* Tschudi, 1838 (Amphibia: Anura: Megophryidae) from Meghalaya, India: *Rec. zool. Surv. India*: 109(3): 91-108.
2. Sharma, B.K. and Sharma, S., 2009, Biodiversity and distribution of freshwater Rotifers (Rotifera: Eurotatoria) of Tamil Nadu. *Rec. zool. Surv. India*: 109(3): 41-60.




Leptobrachium nokrekensis Mathew and Sen



Students on their Science Exposure programme at the Museum of NERC



 In this Issue

Arunachal Pradesh Regional Centre, Itanagar

A field survey tour to Yazali and Zero areas of Arunachal Pradesh was initiated on 31st March. Identification of the invertebrate specimens collected during the survey at Pakke Tiger Reserve is under progress. 62 species of birds

were recorded during the survey tour to Pakke Tiger Reserve and the interesting species include, Great Necklaced Laughingthrush (*Garrulux pectoralis*), Maroon Oriole (*Oriolus traillii*), Great Pied Hornbill (*Buceros bicornis*),

Wreathed Hornbill (*Aceros undulates*), Oriental Pied Hornbill (*Anthracoceros albirostris*), Black-crested Bulbul (*Pycnonotus melanicterus*), Grey-peacock Pheasant (*Polyplectron bicalcaratum*) and White-cheeked Partridge (*Arborophila atrogularis*). Based on the data collected during the expedition to Tawang and the surrounding areas, research papers on birds and mammals of the area are under finalization. 4 research

papers are in press, 1 accepted and 3 communicated.

Two researchers from the G.B. Pant Institute of Himalayan Environment & Education, Almora, visited the Centre to seek information on the faunal resources of Namdapha and Mouling National Parks.

22 students visited the museum and library during the month.



Aceros undulates



Arborophila atrogularis



Chalcophap indica



Garrulux pectoralis



Oriolus traillii



Polyplectron bicalcaratum



Pycnonotus melanicterus

Western Regional Centre, Pune

Scientists of the Centre carried out faunistic survey of Chandoli National Park and Radhanagari Wildlife Sanctuary. Surveys for documenting the riverine fauna of Western Ghats were carried out in Radhanagari WLS and Kankavali areas. A Scientist of the Centre functioned as a course instructor in the




Landscape of Radhanagari WLS

departmental Training Programme “Current Trends in Faunal Diversity Studies”, organized at the Western Ghats Regional Centre, Calicut (Kozhikode) from 17th - 19th March. Veterinary doctors and officers from Mumbai veterinary college visited the Centre as part of their Wildlife management training course.



A Gaur observed at Radhanagari WLS

 In this Issue

Andaman and Nicobar Regional Centre, Port Blair

Surveys were conducted at Henry Lawrence, John Lawrence, Inglis, Havelock and Neill Islands of Ritchie's archipelago from 16th - 23rd March. A total of 129 species of corals, 122 species of molluscs, 8 species of echinoderms, 23 species of fishes, 3 species of sponges and 15 species of brachyuran crabs were identified from the sub-littoral zone of these Islands. Besides, 109 species of birds, 18 species of spiders, 40 species of butterflies and 7 species of mammals were also recorded. The extent of live coral cover in these islands has also been

estimated as 44.2 to 62.0%. Volume on the diversity and distribution of Corals of Andaman and Nicobar Islands has been prepared for publication. Database on corals, soft corals, crustaceans, echinoderms, insects, avifauna, reptiles and mammals has been updated. A manuscript on *Montipora samii* sp. nov. (Scleractinia: Acroporidae) has been communicated for publication. 40 specimens of corals have been registered in the National Zoological Collection of ZSI. A report on the status survey on schedule-IV gastropod *Trochus*



Coral, *Symphyllia radians*



Coral, *Physogyra lichtensteini*

niloticus in A & N Islands has been submitted to the administrative Ministry as required. A grant-in-aid project on 'Faunal Diversity of Great Nicobar Biosphere Reserve' for a period of 3 years has been sanctioned by the Ministry. As per the request of Dept. of Environment and Forests, Andaman and Nicobar Administration, a research proposal entitled 'Studies on the Corals and its inhabitants of Ritchie's Archipelago' has been submitted, seeking financial support. A scientist of the

Centre participated in the All India Co-ordinated Committee meeting on Rodent Control, held in Central Agricultural Research Institute, Port Blair, on 19th and 20th March.

Publication:

Ramakrishna, C. Raghunathan and C. Sivaperuman, 2010. Status survey on *Trochus niloticus* (Linnaeus, 1767) in Andaman and Nicobar Islands. *Technical Report, Zoological Survey of India, Port Blair*, 52p.



Coral, *Goniastrea edwardsi*




Coral, *Coeloseris mayeri*



Coral, *Acropora palifera*



Cephalopod, *Nautilus pompilius*

 In this Issue

Northern Regional Center, Dehra Dun

With the final survey in the Kalesar Wildlife Sanctuary, Haryana having been undertaken from 25th - 31st March, 2010, the surveys for the two Annual Programms approved under annual plan of work 2009 - 2010, viz., Kalesar Wildlife Sanctuary (under Conservation Area programme) and the Haryana State (under the State Fauna programme), have been completed on target. Studies conducted earlier under the State Fauna of Uttarakhand have been

completed. The State Fauna Series 18 (Volume II) dealing with Insecta, and Vol. III dealing with other Invertebrates have been published by the publication division of ZSI. Volume (I) dealing with the vertebrates of Uttarakhand is in press. 32 species of the centipedes have been documented in the Uttarakhand document that contains the descriptions of two subspecies new to science and 6 species new to Uttarakhand. The other projects completed and

submitted for publication on target are, 'Taxonomic Studies on the Nematode parasites of insect pests of Teak (*Tectona grandis*) and Sal (*Shorea robusta*)', and 'Trichotaxonomy of Indian species of Herpestidae, Viverridae, Sciuridae, Mustelidae (Mammalia)'. Studies on the sequencing of the gene Histone 4 was completed for the species turtle *Morenia petersi* and *Melanochelys trijuga* under the project 'Ecological and Molecular studies of freshwater turtles'. The same gene has been sequenced for species *Laudakia tuberculata*. 5 species of scolopendrids were identified out of the material collected from Namdapha (Arunachal Pradesh) Tiger reserve. 5 research papers were published. 4 manuscripts received for reviews from an International Foreign journal were offered suitable comments. A scientist of the Centre has been appointed as Associate Editor of an International Foreign Journal.

Two scientists of the Centre were deputed to Botanic Garden of Indian Republic (BGIR) and NOIDA for faunal inventorying of Birds and Soil Nematodes of the area from 3rd - 6th March. Five scientists of the Centre attended an International Conference on Mountain Biodiversity: Conservation and Sustainable Utilization, conducted by the School of Environment and Natural Resources of the nascent Doon University, Dehra Dun, from 13th - 15th March; a scientist of the Centre acted as Chairperson for one of the sessions on Faunal Diversity. One Scientist of the Centre was nominated for a one week Training Workshop for Women Scientists on Wildlife Conservation: Issues and Challenges from 8th - 12th March at the Wildlife Institute of India, Dehradun and 2 scientists attended the Training Course 'Current trends in Faunal Diversity', organized at the Western Ghat Regional Centre, Calicut, from 17th - 19th March. Four officers of the Centre performed the duties of the Inspecting Officers, at four different centers, for the written exams for selection to Junior Engineers (Civil and

Electrical Exam 2010), conducted by Staff Selection Commission, Lodhi Road, New Delhi, on 21st of the month.

Publications:

1. Khanna, V. 2010. Chilopoda: Scolopendromorpha: Centipedes. *Zool.Surv.India, Fauna of States, State Fauna Series*, 18(Part-3), 209-241.
2. Khanna, V. 2010. Chilopoda: Scolopendromorpha. *Zool.Surv.India, Fauna of Ranthambore National Park, Fauna of Conservation Area Series* 43: 61-66.
3. Parmod Kumar, 2010. Lepidoptera: Rhopalocera. *Zool.Surv.India, Fauna of States, State Fauna Series*, 18(Part-2), 2010, 611-689.
4. Parmod Kumar, 2010. A new distributional record of *Euthalia lubentina* (Cramer, 1777) (Lepidoptera: Nymphallidae) from Kalesar National Park, Haryana. *Zoos' Print*, 25(4): 19.
5. Rizvi, A. N. 2010. Nematoda (Plant and Soil Nematodes) *Zool.Surv.India, Fauna of States, State Fauna Series*, 18(Part-3), 2010: 81-166.



Greater Coucal



Turtle Dove

Marine Aquarium cum Regional Centre, Digha

The aquarium was under overall renovation during the month and efforts were made to develop further facilities. The assigned monthly local survey was conducted in the coastal areas along Digha. The data recorded on population and settlement studies of benthic invertebrate fauna along the Digha coast, based on the collections made during the year 2009'10, is being processed. During the month, 42 examples of marine invertebrates from

different group viz. Mollusca, Crustacea, Cnidaria, Echinodermata etc. were collected under the annual programme of research work. Three research manuscripts were communicated to the Records of ZSI. The proofs of 3 accepted manuscripts were also submitted after proof-reading for publication in the Records of ZSI. Advisory services were also rendered to various schools, colleges and institutions.



 In this Issue

Central Zone Regional Centre, Jabalpur

A week-long faunistic survey was initiated in Veerangana Durgavati Wildlife Sanctuary from 31st March. During the month, 36 species of fresh water fishes collected from various localities of Madhya Pradesh and Chhattisgarh, 15 species of beetles under 3 families from Veerangana Durgavati WLS and 7 species of beetles under 3 families from Singhori WLS, were identified and registered in the National Zoological Collection. Checklists on Sarcophagidae, Calliphoridae and Rhiniidae

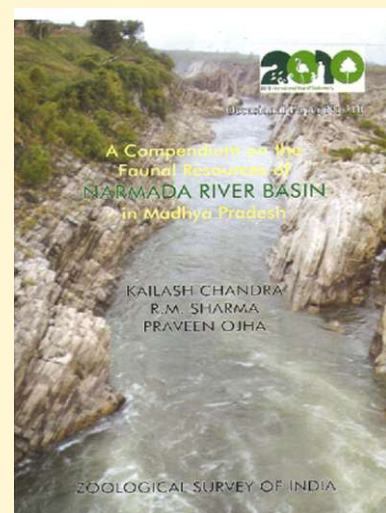
(Diptera: Insecta) of India were prepared and uploaded in the departmental website. Two research manuscripts on the dipteran families, Sarcophagidae and Calliphoridae containing 27 and 16 species respectively, were contributed to the document 'Fauna of Karnataka', and a chapter on the family Cecidomyiidae (Diptera) was added to the 'Fauna of States, Part-3 - Madhya Pradesh and Chhattisgarh'. Four scientific papers were reviewed for different journals.

A scientist of the Centre attended the training course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.


Information on various aspects of faunal diversity in Madhya Pradesh and Chhattisgarh and activities of Zoological Survey of India were provided to 20 visitors. Media personnel of local news papers representing 'Peoples Samachar', 'Raj Express' and 'Dainik Bhaskar' were provided the literature and information on Butterflies of Madhya Pradesh and Chhattisgarh.

Publication:

Chandra, K., Sharma, R. M. and Praveen Ojha, 2010. A compendium on the Faunal Resources of Narmada River Basin in Madhya Pradesh. *Rec. zool. Surv. India, Occ. Paper No.*, 310: 1-152 (Published by the Director, *Zool. Surv. India*, Kolkata).



Document published on the Faunal resources of Narmada River Basin

 In this Issue

Freshwater Biology Regional Center, Hyderabad

Field limnological studies on Umdasagar Lake were continued to cover all significant sampling points. Littoral samples of surfacial water net zooplankton and associated aquatic entomofaunae were collected and photographed. Additionally, a relatively unmanaged small lake located downstream was also surveyed for ecological evaluation *vis-à-vis* lake water quality. Studies on Pallair reservoir, Kolleru Lake and the lakes in around Hyderabad were continued.

An examination on Hindi (Pragya) was conducted at the Centre on 1st March for officers and staffs of ZSI and BSI by the Department of Official language, Ministry of Home Affairs, Hindi Training Scheme, Hyderabad.




A view of Umdasagar Lake, Hyderabad



Grey heron, *Ardea cinerea*



Spotbill, *Anas poecilorhyncha*

 In this Issue

Desert Regional Centre, Jodhpur

An Environmental Impact Assessment survey was conducted in Hadla Rawaleton, Hadla Bhatiyar and Mokha Lignite Block, Bikaner from 9th - 12th March. Scientists of the Centre identified 5 species of Nematoda, 9 species of Lepidoptera, 6 species of Odonata and 2 species of Coleoptera from various environs of Rajasthan. Besides, 5 species of Nematoda were identified from the forest areas of Gujarat. The first gallery proofs of the documents *Fauna of Maharashtra* and *Pictorial handbook on plant and soil nematodes of Rajasthan* were revised according to the referee's comments. A research document on the *Fauna Ranthambhore National Park, Rajasthan* has been published and 12 research papers were contributed by the scientists of the Centre to the volume. 36 entries of identified fauna were made in the faunal Database of the Centre.

Scientists of the Centre participated in "PRAKRITI-2010 - A Festival of Indian Documentary Films on Environment, Development & Human Rights" from 4th - 6th March, at Dr. S. N. Medical College Auditorium, Jodhpur, organized by the Educational Multimedia Research Centre, Jai Narain Vyas University, Jodhpur and

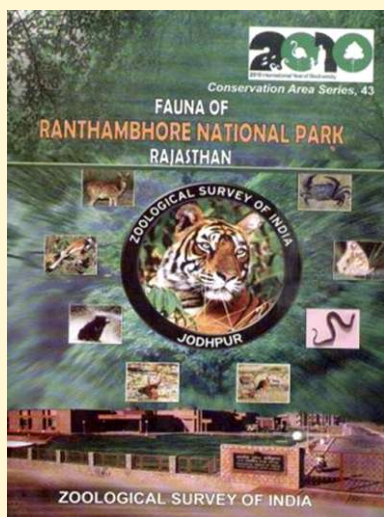
Consortium for Educational Communication, New Delhi. Scientists of the Centre participated and delivered lectures on Indian Wetlands and their Conservation in the Workshop on Environment Conservation and Environmental Laws, organised by the Office of the Deputy Conservator of Forest, Rajasthan State Forest Department, at Pali, on 10th March. A scientist of the Centre attended the training course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.

Quarterly Official Language workshop was organized on 23rd March.

126 visitors paid their visits to the museum.

Publications:

1. Fauna of Ranthambhore National Park, Rajasthan. *Conservation Area Series: 43* (Pub.: Director, Zool. Surv. India, Kolkata).
2. Sharma, G. 2009 (published in 2010). Life history and Reproductive behaviour of *Ceriagrion coromandelianum* (Fabricius) (Odonata: Insecta). *Annals of Forestry-An International Journal of Forest Sciences*. 17(2):298-310.



Document published on
the Fauna of Ranthambhore National Park



A Bar-headed Goose at Keoladeo National Park




A view of Sariska Tiger Reserve, Rajasthan



Indian Chamaeleon, *Chamaeleo zeylanicus*



A Radio collared Tiger at Sariska Tiger Reserve

 In this Issue

Estuarine Biology Regional Centre, Gopalpur-on-Sea


A field survey was conducted at Brahmani-Baitarani Estuary and representative estuarine faunal components collected. 3 species of prawns and 10 species of fishes were identified from the collections. The aquatic hemipteran insects collected belonged to the families, Nepidae, Pleidae and Belostomatidae. Among neipids, *Ranatra filiformis* Fabricius has been identified.

Scientists of the Centre attended the following Meeting/Training / Seminar:

Meeting on Expert Committee for Revalidation of Potential Yield of the Fishery Resources of Indian EEZ, at CMFRI, Cochin on 9th March; training programme on "Purchase

Management in Government", organized by the Institute of Secretariat Training and Management, Department of Personnel and Training, Government of India, New Delhi from 29th to 31st March; national seminar on Modern Biology and Human Welfare, organized by Dept. of Zoology, Berhampur University, Orissa from 28th to 29th March. A scientist of the Centre also presented a paper on Post-cyclone investigations on faunal diversity of mosquitoes from southern coast of Orissa, India, during the seminar.

Thirty visitors paid their visits to the museum, during the month.

 In this Issue

Gangetic Plains Regional Centre, Patna

Description of a new species of *Psilocera* Walker (Insecta: Hymenoptera: Pteromalidae) from Namdpaha National Park has been completed. A manuscript dealing with 17 species of

praying mantids (Insecta: Mantodea) from Namdapha National Park has been finalized which included 3 species reported for the first time from Arunachal Pradesh and 6 species

reported for the first time from the Park. 10 species of Moths (Lepidoptera) from Tawang District, Arunachal Pradesh and zooplankton samples from the River Subernrekha, Jharkhand were identified. 229 gangetic dolphins were recorded from the river Gandak in Bihar in a stretch of 260 km during the field survey. Two Research papers were published.

Identification service has been rendered to the students of Patna University on Zooplankton.

The International workshop on conservation of the Irrawady dolphin with special reference to underwater acoustic study, organized by the Chilika Development Authority, was attended by a scientist of the Centre at Bhubneshwar on

25th & 26th March. A Workshop on “Hindi Niyam Adhiniyam” was organized. 2 scientists of the Centre attended the training course on 'Current Trends in Faunal Diversity Studies' organized at the Western Ghat Regional Centre, Calicut, Kerala, from 17th - 19th March.

Publications:

1. Sureshan, P.M. 2009. On a collection of Chalcidoidea (Hymenoptera: Insecta) from Orissa, India. *Rec. zool. Surv. India*, 109 (4): 87-104.
2. Sureshan, P.M. & Sambath, S. 2009. Mantid (Insecta: Mantodea) fauna of old Bihar (Bihar & Jharkhand) with some new records for the state. *Rec. zool. Surv. India*, 109 (3): 11-26.



Phyllothelys westwoodi Wood-Mason
(Insecta: Mantodea) - First record from Arunachal Pradesh



Hierodula beieri Mukherjee (Insecta: Mantodea) -
First record from Namdapha National Park



Gharial (*Gavialis gangeticus*) in River Gandak, Bihar

Some moths from Tawang district, Arunachal Pradesh



Notodonta albifascia Moore



Dilemera arctata Walker



Numenes patrana Moore

Western Ghat Regional Centre, Kozhikode (Calicut)

An Ichthyofaunal survey to the major river systems of Idukki and Pathanamthitta districts in Kerala was conducted from 28th February - 10th March 2010 and collected representative faunal samples of fish and other faunal groups. The faunal samples received from other Centers of ZSI (NRC, Dehradun; FBRC, Hyderabad and SRC, Chennai), were studied and identified as, 15 species of Odonata, 4 species of Amphibia and 43 species of Butterflies. Two research papers and a *Forward* to a book were published and a research paper on the range extension of the amphibian *Philautus chromasynchysi* in *Western Ghats communicated*.

Type specimens of a caridean Crustacea (received from Dr. Jayachandran, Head, Department of Fishery Biology, College of Fisheries, Kerala Agricultural University, Cochin), were deposited in the faunal depository of the Centre and added to the National Zoological Collections.

A scientist of the Centre attended a meeting in connection with the seminar on declaration of Malabar Wildlife Sanctuary on 15th at the Office of the Chief Conservator of Forests, Calicut; he also presented a paper on the Faunal diversity of Malabar Wildlife Sanctuary at a seminar on 20th March, organized by the Kerala Forests & Wildlife Department, jointly with the Zoological Survey of India (Western Ghat Regional Centre), Kerala State Biodiversity Board and the Malabar Natural History Society, Kozhikode, in connection with the official declaration of the Malabar Wildlife Sanctuary in the context of 'International year of Biodiversity'. Another scientist of the Centre delivered an invited talk on Prof. Hunt Memorial Annual Lecture, 'A Tribute to the Living World' at Malabar Christian College Calicut, on 29th March and also served as a

member of the Editorial Board, for the book "*Zoostalgia*" of the Olive publications, Calicut.

A senior scientist of the Centre attended the training on 'Purchase Management in Government', at the Institute of Secretarial Training Management, New Delhi from 29th to 31st March.

A departmental in-house Training Course on "*Current Trends in Faunal Diversity Studies*" was organized at the Centre from 17th - 19th March. Dr. H. S. Sudhira (Centre for Ecological Sciences, Indian Institute of Science, Bangalore), Dr. K. Rajmohana, Scientist-C (WGRC, Calicut) and Dr. K. A. Subramanian, Scientist-C (WRC, Pune) imparted the training, as course instructors on the topics: use of GIS in faunal diversity assessment, Cyber Taxonomy and Electronic databases, fundamentals of Spatial Sampling Design, respectively. 19 officers from various Regional Centres and Headquarters of ZSI attended and made use of the Course. Dr. Ramakrishna, Director, ZSI gave away the Course certificates to the participants.

During the month, 1363 visitors paid their visits to the museum.

Publications:

1. C. Radhakrishnan. 2010. 'Foreword': *Zoostalgia* (a commemoration volume brought out by the Malabar Christian College, Kozhikode, during its centenary celebrations). Olive Publications, Kozhikode.
2. C. Radhakrishnan. 2010. New discoveries of Amphibia from Western Ghats, India, in the new millennium. *Zoostalgia*, 70-89. Olive Publications, Kozhikode.
3. Rajmohana. K, 2010. Our Changing Climate. *Zoostalgia*, 182-184. Olive Publications, Kozhikode.

During the Training Course on 'Current Trends in Faunal Diversity Studies' conducted at WGRC



Dr. K. Rajmohana delivering lecture on Cybertaxonomy



Dr. K. A. Subramanian delivering lecture on Spatial Sampling Design



Practical sessions on the application of GIS and GPS



Dr. Ramakrishna, Director, ZSI, presenting the course certificates



Participants of the course

ANIMAL OF THE MONTH

GIANT TIGER CENTIPEDE,
Scolopendra hardwickei Newport, 1844

(Class: Chilopoda; Order: Scolopendromorpha; Family: Scolopendridae)



(Text and Photo by: Vinod Khanna, NRC/ZSI, Dehradun)

The Giant Tiger Centipede, *Scolopendra hardwickei* is the largest and perhaps the most dangerous Indian centipede, belonging to the family Scolopendridae in India. The species is reported very common in Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, West Bengal and Andaman & Nicobar Islands. It has recently been recorded from Orissa and Bihar too. Outside India, the species is known from Sri Lanka and Sumatra (Indonesia).

It is the only species of centipede that can be identified by its conspicuous color pattern on its body, hence named, 'Giant Tiger Centipede'. Length: 160 mm. Colour: Head and 2, 4, 6, 9, 11, 13, 15, 17 and 19 leg bearing tergal segments dark brown or dark green, alternating with yellow to yellow-brownish segments - a typical colour pattern not met within any other Scolopendrid centipede. In some areas, the yellow colour on the tergal segments is replaced by red or reddish brown.


Centipedes are an amazing group of animals, taxonomically considered to be part of the Myriapods along with the Millipedes (Diplopoda), Symphyla and Pauropoda. All Centipedes have numerous body segments, with one pair of legs per segment. The number of leg bearing segments and the pairs of legs range from 15 to 177, but are always an odd number. Despite the fact that no centipedes pose real danger for human beings, the bite of a large centipede such as a *Scolopendra*, however, can be painful to an adult and dangerous to a small child. All centipedes are primarily nocturnal and are shy of the light. They are also primarily carnivorous. The larger *Scolopendra* may take small vertebrates including Mammals, Birds and Reptiles. Though some species are easily kept in captivity, their basic carnivorous lifestyle can lead to cannibalism if many are kept together.

ZSI IN NEWS



Case slapped on five-star hotel for serving sea cucumber

<http://news.bbc.co.uk/2/hi/8557621.stm>

 In this Issue



OUT OF THE BOX

NIO breeds endangered yellow seahorses successfully

<http://www.deccanherald.com/content/57098/nio-breeds-endangered-yellow-seahorses.html>

Extinct snake devoured baby dinosaurs

<http://www.deccanherald.com/content/55787/extinct-snake-devoured-baby-dinosaurs.html>

Common toads can detect earthquakes in advance

<http://www.telegraph.co.uk/science/science-news/7538400/Common-toads-can-detect-earthquakes-in-advance.html>

Phylogenetic analysis of Mexican Cave Scorpions
suggests adaptation to caves is reversible


<http://www.sciencedaily.com/releases/2010/03/100312133722.htm>

Coral reefs may disappear within 100 years

<http://www.telegraph.co.uk/science/science-news/7298781/AAAS-Coral-reefs-could-disappear-by-the-end-of-the-century.html>

Island of dwarf dinosaurs really existed

<http://www.telegraph.co.uk/science/dinosaurs/7291186/Dwarf-dinosaur-island-really-did-exist-scientists-claim.html>

 In this Issue



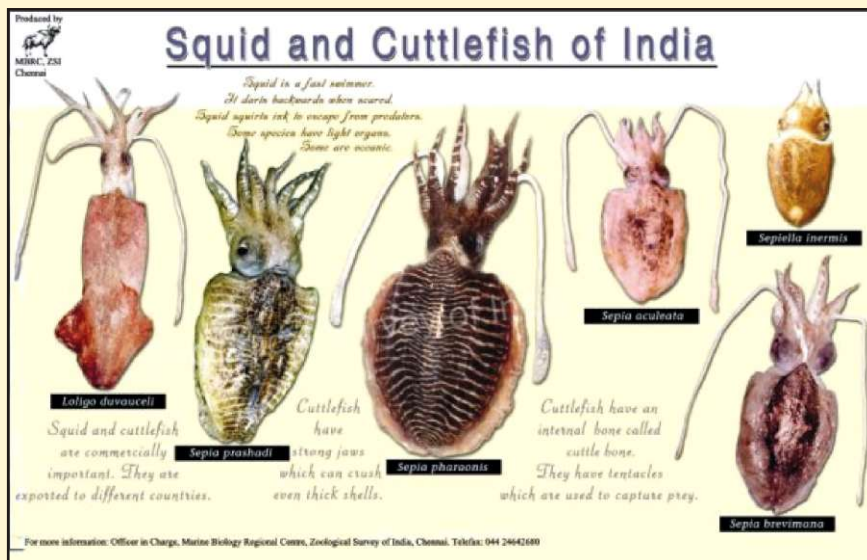
PICTURE GALLERY





POSTER SERIES

3



In this Issue

PAINTINGS FROM ZSI HERITAGE ALBUM

2

Sambar deer, *Cervus unicolor* Kerr, 1792



In this Issue