



# ***ZSI e-NEWS***

The Monthly Electronic Newsletter of Zoological Survey of India

Volume - 03 :: Number - 08

August 2011

***ZSI in the 96<sup>th</sup> year of Service to the Nation  
(1916 to 2011)***



**Back issues of *ZSI e-NEWS***

[Visit [www.zsi.gov.in/...](http://www.zsi.gov.in/...)]

## Headquarters, Kolkata

Extensive field surveys were undertaken in the States of Himachal Pradesh, Maharashtra, and also in the Sajnekhali Wildlife Sanctuary, South 24 Parganas and Bethua Dahri Wildlife Sanctuary, Nadia, West Bengal. Local surveys were carried out in the fish landing center of Canning and in and around wetland areas (Bortibeel) of North 24 Parganas, West Bengal.

During the month, Scientists of Headquarters identified, 5 genera of Protozoa, 5 species of earthworms, 4 species of Collembola, 22 species of Coleoptera, 12 species of Hemiptera, 48 species of Hymenoptera, 8 species of Isoptera, 10 species of Lepidoptera, 8 species of Odonata, 5 species of Orthoptera, 6 species of Crustacea, 35 species of spiders, 38 species of Mollusca and 7 species of Amphibia from the States of Himachal Pradesh, Jharkhand, Maharashtra, Uttar Pradesh and West Bengal. Besides, Reduviidae and Pentatomidae bugs (Hemiptera) of Kanyakumari Wild life Sanctuary received from Southern Regional Centre, Chennai, have also been identified.

6 specimens of *Xenophrys*, collected from Assam and to be described as a new species to Science, were donated by Dr. Saibal Sengupta of Arya Vidyapeeth College, Guwahati, Assam to the Amphibia Section, ZSI, Kolkata.

Paratypes of following species of Hemiptera, *Kutara striata* Viraktamath, *Nirvana peculiaris* Viraktamath & Wesle, *Idioscopus anasuyae* Viraktamath, *Macropsis leucasperae* Viraktamath, *Macropsis ziziphi* Viraktamath, *Macropsis karnatakana* Viraktamath, *Deltocephalus (Recilia) trispinosus* Dasu & Viraktamath, *Deltocephala (Recilia) biliveatus* Dasu, *Deltocephala (Recilia) agroecus* Dasu & Viraktamath, *Deltocephala (Recilia) breviculus* Dasu & Viraktamath, *Deltocephala (Recilia) albofasciatus* Dasu & Viraktamath, *Deltocephala (Recilia) jogensis* Dasu & Viraktamath, *Deltocephala (Recilia) jogensis* Dasu &

Viraktamath, *Deltocephala (Recilia) brevis* Dasu & Viraktamath, *Macropsis nigrolineata* Viraktamath, *Sophonia complicata* Virakt. & Wesley, *Busonomimus manjunathi* Virakt. & Virakt., *Ideoscopus anasyea* Virakt. & Wesley, *Macropsis leucasperae* Viraktamath, *Durgades aviana* Viraktamath, *Hishimonoides bougainvilleas* Murthy & Virakt., *Hishimonoides spinosus* Viraktamath & Murthy, *Grammacephalus raunoi* Viraktamath, *Cestius terminaliae* Viraktamath were deposited at ZSI, Headquarters, by Prof. Dr. C. A. Viraktamath, Department of Entomology, University of Agricultural Sciences, GKVK., Bangalore.

Identification and advisory services were rendered on twelve lots of specimens, received from different Institutions and Organizations.

Two samples of fish skin seized by Wildlife Crime Control Bureau (Eastern Region), Ministry of Env. & Forests, Nizam Palace, Kolkata and two fish skins seized by Diamond Harbour P. S. (West Bengal) have been identified and reports submitted. An enquiry on *Nanorana* group of frogs received from Mr. Jigme Tshelthrim Wangyal, Faculty of Forest Science, College of Natural Resources, Royal University of Bhutan, Lobesa, Punakha, Bhutan was also attended. Two manuscripts were reviewed for the *Journal of Threatened Taxa*.

During the month, one research paper was published, 10 papers were accepted and eleven papers communicated.

Mr. Homethevi Rahmani, Associate Professor and Dr. Mahadimenkabar Md. Dawood, Senior Lecturer, Institute for Tropical Biology and Conservation, University of Sabah, Malaysia, visited different sections of Headquarters on 1<sup>st</sup> August and had discussions with Dr. K. Venkataraman, Director, ZSI on matters concerned with the proposed International Training Course on Integrated Biodiversity and Ecosystem Management" to be held during 4th

to 27th October 2011 at Sabah, Malaysia, under the Third Country Training Programme 2011. Shri Ranjan Chatterjee, Consultant, Planning Commission visited ZSI Headquarters on 4<sup>th</sup> August. Dr. N. K. Krishnakumar, Director, National Bureau of Agriculturally Important Insects (NBAIL), Bangalore, visited different sections of Headquarters on 7<sup>th</sup> August. Dr. K.C. Pandey, Emeritus Professor, Lucknow University, U.P., visited ZSI Headquarters on 11<sup>th</sup> August.

Dr. K. A. Subramanian, Scientist-C, as an expert, participated in the DST-Bird Biology Interaction Meeting at SACON from 5<sup>th</sup> -7<sup>th</sup> August at the Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.

Dr. Kaushik Deuti, Assistant Zoologist, delivered a talk on the Amphibians and Reptiles of Kolkata in the "Workshop on Biodiversity of Kolkata" held on 11<sup>th</sup> August at West Bengal Biodiversity Board, Kolkata.

Shri Inderjit Pal, Assistant Office attended the workshop on "Fixation of Pay for the Officers dealing with Pay fixation cases" held at ISTM, New Delhi between 16<sup>th</sup> and 18<sup>th</sup> August.

Dr. K. A. Subramanian, Scientist-C participated and presented a concept note on National Environment and Ecology Information Grid (NEEIG) on behalf of Zoological Survey of India to the working group on "Ecosystem Resilience and Biodiversity" of 12th Five Year Plan, Planning Commission, Govt. of India on 19th August at Ashoka Trust for Ecology and Environment (ATREE), Bangalore.

Dr. G. P. Mandal, Scientist-C and Dr. Varadaraju, Scientist-B, attended the Training Programme on "ITO (Intellectual Property Right) and WTO (World Trade Organisation) Issues" at TERI, Gurgaon, organized by TIFAC, PFC & DST, during 22<sup>nd</sup> to 26<sup>th</sup> August.

Dr. R. Babu, Scientist-C, participated and delivered a lecture in the "2<sup>nd</sup> International Congress on Global Warming on Biodiversity of Insects: Management and Conservation"

held from 24<sup>th</sup> to 26<sup>th</sup> August at Bharathiar University, Coimbatore.

A team headed by Dr. K. Venkataraman, Director, met Dr. Sudershan Ghosh Dastider, Minister of Environment, Govt. of West Bengal, at Writers Building, Kolkata, in connection with the modernization of Marine aquarium at MARC, Digha on 12.08.11 and also attended a meeting with Sri Debasish Sen, Principal Secretary, Urban development Ministry, Govt. of West Bengal at Saikatabas, Digha to discuss matters regarding the World Bank Project for modernization of Marine aquarium and Museum at MARC, Digha.

Dr. K. Venkataraman inaugurated the 9<sup>th</sup> International Symposium on "Reproductive Physiology of Fish" organized by Madras Christian College at Thrissur, Kerala on 9<sup>th</sup> August and attended a meeting at Ministry of Environment & Forests, Govt. of India, on 17<sup>th</sup> August, at New Delhi. He also attended a meeting at the National Biodiversity Authority on 23<sup>rd</sup> August, at Chennai.

The following administrative staff members were deputed to attend the 11<sup>th</sup> Advanced Computer Applications for Administrative Personnel of the S&T Departments Government of India from 29<sup>th</sup> August to 2<sup>nd</sup> September, 2011 at IIPA, New Delhi:

Shri Amit Dutta, Office Superintendent, Shri Narayan Ch. Das, Asstt. Office, Shri Goutam Ghosh, Asstt. Office, Shri Pradyut Kr. Das Roy, U.D. Clerk, Shri Kameshwar Prasad Singh, L.D. Clerk, Shri Shyam Sunder Saha, L.D. Clerk, Shri Ajay Kr. Sinha, L.D. Clerk, Shri Sandip Kumar Mahato, L.D. Clerk and Shri Guru Charan Nayak, L.D. Clerk.

#### **Publication:**

Sivaramakrishnan, K.G., Subramanian, K.A., Arunachalam, M., Kumar, C.S. & Sundar, S. 2011. Emerging trends in molecular systematics and molecular phylogeny of mayflies (Insecta: Ephemeroptera). *Journal of Threatened Taxa* 3(8): 1975-1980.



During the independence Day celebrations at ZSI, Kolkata



During the visit of Sri Ranjan Chatterjee, Consultant, Planning Commission and Dr. N. K. Krishnakumar, Director, NBAII, Bangalore to ZSI, Kolkata



During the meeting of scientists from the University of Sabah, Malaysia, with Director, ZSI

## Andaman and Nicobar Regional Centre, Port Blair

Marine and terrestrial ecosystems of Great Nicobar Island, North Bay and Alexandra & Grub Islands of Mahatma Gandhi Marine National Park have been surveyed during 28<sup>th</sup>

July to 5<sup>th</sup> August, 18<sup>th</sup> to 20<sup>th</sup> August and 23<sup>rd</sup> to 24<sup>th</sup> August respectively to assess the faunal communities. A total of 126 species of scleractinian corals, 21 species of echinoderms,

48 species of opisthobranchs, 1 species of polyclad, 45 species of gastropods, 5 species of brachyuran crabs and 52 species of fishes were identified from marine habitats while 29 species of butterflies, 24 species of dragonflies, 28 species of birds and 2 species of mammals were identified/observed from the terrestrial environments of the areas surveyed. Among the species identified, 10 species of opisthobranchs viz. *Aegires villosus* Farran, 1905; *Aeolidiella alba* Risbec, 1928; *Chelidoneura fulvipunctata* Baba, 1938; *Dermatobranchus rodmani* Gosliner and Fahey, 2011; *Glossodoris rufomarginata* (Bergh, 1890); *Glossodoris tomsmithi* Bertsch and Gosliner, 1989; *Kaloplocamus acutus* Baba, 1955; *Noumea alboannulata* Rudman, 1986; *Noumea angustolutea* Rudman, 1990; *Thoridilla indopacifica* Gosliner, 1995 and the polyclad *Phirkoceros katoi* Newman and Cannon, 1996 are new to the Indian waters. Manuscript of a book on the Common Crinoids of Andaman and Nicobar Islands has been submitted for publication. A revised nomination form for Great Nicobar Biosphere Reserve for inclusion in UNESCO-MAB network has been submitted to the PCCF, A&N Administration for onward transmission to MoEF. An MoU has been signed between ZSI and Department of Environment and Forests, A&N Administration to conduct the 'Status survey on Holothurians (Sea cucumbers) in Andaman and Nicobar Islands' and the study has been initiated. Comments on the Taiwan Racing Pigeon (*Columba livia*) with tag and microchip caught in Great Nicobar Island and kept under captivity in the Forest Department have been offered to the PCCF on request. An article on the ZSI's contribution on Echinoderm survey in Andaman and Nicobar Islands has been published in the Independence Day-2011 special supplementary issue of the newspaper *The Daily Telegram*. The 'Rapid EIA report on the Road Alignment from Shastri Nagar to Indira Point, Great Nicobar Island, Phase-II' has been submitted to the Border

Roads Task Force, Ministry of Defense. Dr. C. Sivaperuman, Scientist-C underwent the training on Right to Information at ISTM, New Delhi during 16<sup>th</sup> to 17<sup>th</sup> August 2011. Dr. C. Raghunathan, Scientist-C and Officer-in-Charge served as a Member in the State Level Steering Committee meeting for Great Nicobar Biosphere Reserve held on 18<sup>th</sup> August, chaired by Chief Secretary, A&N Administration. Dr. Raghunathan attended the meeting of the 12<sup>th</sup> Five Year Plan working group for A&N Administration on 19<sup>th</sup> August chaired by Chief Secretary, A&N Administration and the Research Advisory Committee meeting at the Department of Environment and Forests on 23<sup>rd</sup> August. Dr. Raghunathan participated and presented a paper in the international conference on 'Marine Mammals Research and Conservation in Indian Ocean' held at CMFRI, Kochi during 26<sup>th</sup> to 27<sup>th</sup> August; besides, he reviewed the project proposal on coral reef ecosystem in west coast of India received from the MoEF and refereed the manuscript for the *Indian Journal of Geo-Marine Sciences*, CSIR and offered comments.

#### **Publications:**

1. Raghunathan, C., K. Venkataraman and P.T. Rajan, 2011. Status of *Dugon dugon* in Andaman and Nicobar Islands. *Proceeding of the International Conference on Marine Mammal Research and Conservation in Indian Ocean* held at CMFRI, Kochi during 26<sup>th</sup> to 27<sup>th</sup> August 2011. p.33.
2. Tamal Mondal, C. Raghunathan and K. Venkataraman, 2011. Five Scleractinian Corals from Andaman and Nicobar Islands A new addition to Indian Marine Fauna. *World Journal of Fish and Marine Sciences*, 3(5): 450-458.
3. Tamal Mondal, C. Raghunathan and Ramakrishna, 2011. Notes on three new records of Scleractinian Corals from Andaman and Nicobar Islands. *Journal of Oceanography and Marine Science*, 2(5): 122-126.

4. Tamal Mondal and C. Raghunathan, 2011. New record of two Scleractinian corals from Neil Island, Ritchie's Archipelago. *International Journal of Plant, Animal and Environmental Sciences*, 1(2): 76-78.



Echinoderm, *Cyphastrea chalcidicum* (Forskal)

5. Tamal Mondal, C. Raghunathan and Ramakrishna, 2011. Occurrence of seven Scleractinian Corals in Ritchie's Archipelago. *Proceedings of the Zoological Society*, 64(1): 57-61.



Echinoderm, *Fromia indica* (Perrie, 1869)



Echinoderm, *Fromia monilis* (Perrier)



Echinoderm, *Capillaster multiradiatus* (Linnaeus)

### Southern Regional Centre, Chennai

A field survey was undertaken in Puzhal eri and Cholavaram eri on 24<sup>th</sup> August to collect

zooplankton samples and other faunal representatives. During the month, 10 species



An exotic ornamental Cichlid species  
*Hemichromis bimaculatus*



Featherback - *Notopterus notopterus*  
from Cholavaram Lake Chennai

of Protozoa, 1 sp. of Rotifera, 13 spp. of Cladocera, 2 spp. of Ostracoda, 6 spp. of Pisces, 5 spp. of Reptilia and 6 spp. of Lepidoptera, were identified from Southern Eastern Ghats. Four identification services were rendered. One research paper was published. Five manuscripts were refereed. Dr. K. Ilango, Scientist-D, attended the meeting of the

Entomological Academy of India (EAI) on 27<sup>th</sup> August as an Executive Member of the EAI.

**Publication:**

Revathy. K., Prabakaran. S. and Swathy. 2011. Bio ecological studies on *Neostylopyga rhombifolia* (Stål) and *Supella longipalpa* (Fabricius) (Blattodea: Insecta). *Hexapoda* 18(1): 47-53. ISSN0973-8592.

## Marine Biology Regional Centre, Chennai

A status assessment of sea cucumber in Palkbay and Gulf of Mannar and a deep sea faunal survey off in a trawl boat off Chennai coast were carried out and various faunal samples collected. Scientists of this Centre identified 1 species of polychaete and 3 species of seagrass associated rhizopods, 4 species of marine nematodes, 6 species of foraminifera and 9 species of mollusks out of the material collected from the Gulf of Mannar Marine Biosphere Reserve. Scientists of the Centre exhibited a stall on the marine biodiversity, in the Chennai Coastal Carnival for School Children, organised by Centre for Environment Education, Tamil Nadu State from 5<sup>th</sup>-6<sup>th</sup> August. Various marine animals and posters were provided for MANIFEST-2011, an Expo organised by Bharathiyar Matriculation Higher Secondary School, Guduvancheri.

Dr. C. Venkatraman, Scientist-C & Officer-in-

Charge, attended the DST-SERC Interaction Meeting in Bird Biology, organised by the Sálím Ali Centre for Ornithology and Natural History (SACON) Coimbatore from 5<sup>th</sup>-7<sup>th</sup> August. 3 species of mollusks were identified for the Station House Officer, Sagarpur Police Station, New Delhi, in connection with a case and rendered advisory service to KREEDA, a Chennai based NGO, on the identification of marine shells. Two manuscripts for the International Journals were reviewed. Dr. L. Bindu, Scientist-C and Dr. G. Sivaleela Asstt. Zoologist delivered lectures on freeliving protozoa and their importance as bioindicators and on marine sponges to B.Sc., Zoology students of Stella Mary's college, Chennai. Shri S. S Jawahar, IAS, Commissioner of Museum, Govt. of Tamil Nadu, Chennai, visited the marine aquarium and museum at the Centre.



*Upeneichthys porosus*



*Dactylopterus orientalis*



Commissioner of Madras museum, visiting MBRC

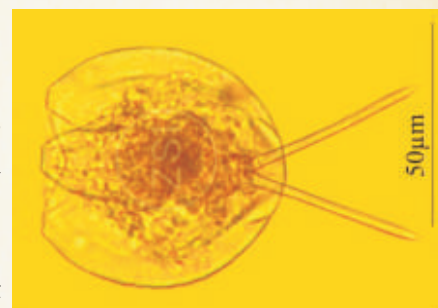


Stall of MBRC in the Chennai Coastal Carnival

## Freshwater Biology Regional Centre, Hyderabad

The proposed long tours for the quarter (July to September, 2011), stand completed and the wetland faunal collections, besides composite heterogenous zooplankton samples from 8 significant sampling sites, made were sorted and distributed for taxonomic identification. Writing up of the final manuscript on estuarine faunae (fishes and crustaceans) of Budhabalanga River, Balasore, Odisha is in progress. Six varied type urban/semiurban freshwater ecosystems (reservoir/irrigation tanks and temporary water ponds) were surveyed. Detailed qualitative/quantitative and other enumerative studies on the species composition of the zooplankton community, their abundance, seasonal variation and species diversity were continued. Three species of fishes and 5 species of Cladocera were identified and registered. *Dipleuchanis propatula*

Gosse 1886, (Ploimida/Euchlanidae) was identified from Osman Sagar, Hyderabad, since the first report by Dhanapathi, 1978 (Andhra Pradesh) and Sharma, 1979 (West Bengal) [Siddiqi & Karuthapandi].



*Dipleuchanis propatula* Gosse, 1886  
(Rotifera: Ploimida: Euchlanidae)

Infrastructure laboratory set up for DNA Analysis studies stands completed.

Two advisory services on the identification of 4 species of Cladocera and on aquacultural tanks set up for monoculture of Snakeheads (*Channa* spp.) were rendered.



A view of Gel Documentation System and RT PCR installed at the Centre

### Western Regional Centre, Pune

During the month, 6 species of Orthoptera, 3 species of Collembola, 10 species of Mollusca, 6 species of fresh water crabs and 13 species of Odonata were identified. A list on endemic species of Indian Freshwater fishes was prepared and submitted. Dr. R.M. Sharma, Scientist-D & Officer-in-Charge delivered an invited lecture on insect identification & their Natural History on 24<sup>th</sup> August, at the Indian Institute of Forest Management (IIFM), Bhopal, and imparted field guidance on 25<sup>th</sup> August to the participants (Forest park Guides of Madhya Pradesh). He also reviewed a scientific paper. Confiscated elephant ivory, canine claws and jaws, tiger skin etc. received for identification from the State Enforcement agencies and forest department were identified and reports submitted. Identification service was also rendered to ISEC, Bangalore, on 4 species of

Odonata. Representative samples of different animal groups were collected during a local survey to Bhimashankar Wildlife Sanctuary. Eighty students from City Pride School, Nigdi, Pune, visited museum on 12<sup>th</sup> August. Five papers were submitted to the *Maharashtra State Fauna Series* and *Bionotes* during the month. Two research papers were published.

#### Publications:

1. Pati, S.K., M.V. Rao, M. Balaji and Anish V. Pachu. 2011. Community structure of fouling on a sunken vessel from Visakhapatnam harbour, east coast of India. *Journal of Marine Biological Association of India*, 53 (1): 14-20.
2. Pati, S.K., M.V. Rao and M. Balaji. 2011. Fouling communities of the static substrata in a tropical Indian harbour. *Ibid*, 53 (1): 81-88.



Confiscated Ivory



Fake skin of Tiger



Students being briefed in the Museum



Independence Day Celebration

### High Altitude Regional Centre, Solan

A field survey was conducted in Chail Wildlife Sanctuary, Solan district and representative samples of 10 faunal groups were collected. Dr. Anil Kumar, Scientist-C attended the DST-SERC Interaction meeting in Bird Biology from 5<sup>th</sup>-7<sup>th</sup> August at Salim Ali Centre for Ornithology and Natural History, Coimbatore.



*Barilius barila* (Hamilton-Buchanan)

Four species of butterflies from Kalatop-Khajjiar Wildlife Sanctuary, two species of Orthoptera from Chail Wildlife Sanctuary and two species of fishes out of the earlier collection from river Beas were identified. The details of 31 species of fishes were finalised for the Pictorial Handbook on the Pisces of Himachal Pradesh.



*Gryllus bimaculatus* De Geer

### Sunderban Regional Centre, Canning

A seasonal survey was conducted in and around Ganga Sagar and Bakkhali from 30<sup>th</sup> July to 8<sup>th</sup> August to study the taxonomy & ecology of brachyuran crabs of Sunderban. A study on the population of crabs was carried out, in the Ganga Sagar and Bakkhali sea beaches, using randomly designed block samples. In addition,



*Charybdis rostrata*

a study on the burrow pattern of Crabs was undertaken using Plaster of Paris.

One local survey was conducted in the Canning landing centre and Dabu and faunal samples collected.

12 species of fishes and 1 species of crab were identified and registered.



Ocypode burrow

### Arunachal Pradesh Regional Centre, Itanagar

An interaction meeting jointly organized by the Department of Science & Technology (DST) and the Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, was attended at SACON by Dr. Gopinathan Maheswaran, Scientist-C and Officer-in-Charge, from 5<sup>th</sup>-7<sup>th</sup> August, and presented a project proposal titled 'Foraging ecology of White-bellied Heron *Ardea insignis* in Namdapha Tiger Reserve, Arunachal Pradesh. Dr. Maheswaran also attended a quarterly review meeting of the state forest department

on 12 August 2011 wherein projects proposals received from various institutions and NGOs to carry out research activities in Arunachal Pradesh were reviewed and necessary recommendations given. A new project proposal on the zooplanktons of Arunachal Pradesh, especially from high altitude lakes and water bodies has been submitted to Headquarters office by Dr. Bikramjit Sinha, Scientist-C of the Centre. 14 school children visited the library and museum.

### North Eastern Regional Centre, Shillong

A field survey was conducted in West Khasi Hills district of Meghalaya from 1<sup>st</sup>-5<sup>th</sup> August to study and to make a representative collection of the aquatic and semi aquatic fauna of the area. Out of the collection made, 8 species of Pisces, 3 species of Amphibia and 3 species of Aquatic Hemiptera were identified and registered. Four species of Amphibia and 1 species of Coleoptera were also identified and registered out of the back log collections present in the Centre. Identification report on 12 species of fishes and 2 species of amphibian were sent to Dr. K.K. Jha, Jawaharlal Nehru College, Pasighat, Arunachal Pradesh.

Mrs. I.J. Kharkongor, Scientist-C attended and

presented a paper on "Cavernicolous faunal diversity of the limestone caves of Meghalaya and their conservation", at the national seminar on status of biodiversity in India: Conservation and social relevance to NE India, organized by the Botany and Zoology Departments, Don Bosco College, Tura on 9<sup>th</sup> August. 30 students and a teacher from Lady Keane College, Shillong visited the Centre on 19<sup>th</sup>. The ZSI publication '*Fauna of Mizoram*' was provided to the State Forest Dept., Mizoram, as complimentary copy for their reference in preparing the working plan for various forest divisions in Mizoram.



During a field survey in West Khasi Hills District



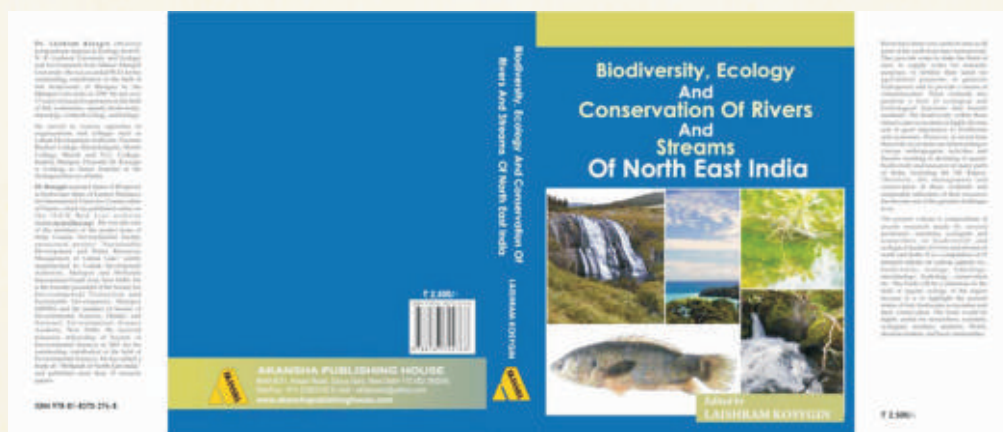
College students during their visit to the Centre

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

Five species of molluscs from the collection of the Nuanai estuary, Puri district, five species of fishes from the collection of the Khodokhai River, Mayurbhanj district and 4 species of mosquito fauna of Ganjam district, Orissa were identified during the month. One research paper was submitted for publication. Twenty visitors paid their visits to the museum. Dr. Swetapadma Dash, Scientist-C delivered a lecture as Chief Guest and Judge for evaluation of scientific projects of Secondary Students of Saraswati Vidya Mandir, Gopalpur on 30<sup>th</sup> August.

### Publications:

1. Kosygin, L. (ed.) 2011. *Biodiversity, Ecology and Conservation of Rivers and Streams of North East India*. Akansha Publishing House, New Delhi, 373 pp.
2. Kosygin, L. 2011. Biodiversity and conservation strategies of fishes of the Tlawng river, Mizoram, India with some new records. Pp. 1-13. In: *Biodiversity, Ecology and Conservation of Rivers and Streams of North East India*. Akansha Publishing House, New Delhi.
3. Singh, S. S., Dhamendra, H. and Kosygin, L. 2011. Ecology and biodiversity of Ningthoukhong river, Manipur, India. Pp. 369-368. In: *Biodiversity, Ecology and Conservation of Rivers and Streams of North East India*. Akansha Publishing House, New Delhi.
4. Gurumayum, S. D. and Goswami, U. C. 2011. Studies on ecological aspects of Manipur river system, India. Pp. 83-108. In: *Biodiversity, Ecology and Conservation of Rivers and Streams of North East India*. Akansha Publishing House, New Delhi.



Book Published



A view of Rushikulya Estuary, Ganjam district, Orissa



During the Independence Day celebrations

### Desert Regional Centre, Jodhpur

The EIA survey of Gurah (West) Lignite Mine Block Project district Bikaner, Rajasthan was conducted during the month. Four species of Nematodes, 4 species of Lepidoptera, 3 species of Odonata and 2 species of Pisces were identified from various environs of Rajasthan. Dr. Gaurav Sharma, Scientist-C participated in DST sponsored Techno Scientific Management Training Programme for Scientists at the Administrative Staff College of India, Hyderabad from 1<sup>st</sup>-12<sup>th</sup> August. Ten species of Pisces, Amphibia and Reptilia were digitized. 100 entries were made in the faunal database. 80 library entries were made employing the software *e-granthalaya*. Lists of Endemic species of Aves and Mammalia of Rajasthan & Gujarat were submitted. Dr. Sivakumar and Dr. S. P.

Goyal, Sr. Scientists of Wildlife Institute of India, Dehradun visited the Centre on 24<sup>th</sup> August and were given information on vertebrate fauna known from Kailana Lake, Jodhpur. They were also provided with the references of the scientific publications of ZSI pertaining to the fauna of Kailana Lake. 12 students of M.Sc. (Wildlife) and Dr. Fatima Sultana, Asst. Professor from University of Kota, Rajasthan visited the museum on 11<sup>th</sup> August and were given information on fauna of Rajasthan and Gujarat States. Mrs. Dimple Bhati, naturalist from Kanha National Park, Madhya Pradesh visited the Centre on 25<sup>th</sup> August and was provided with information on Lepidoptera of Jodhpur district.

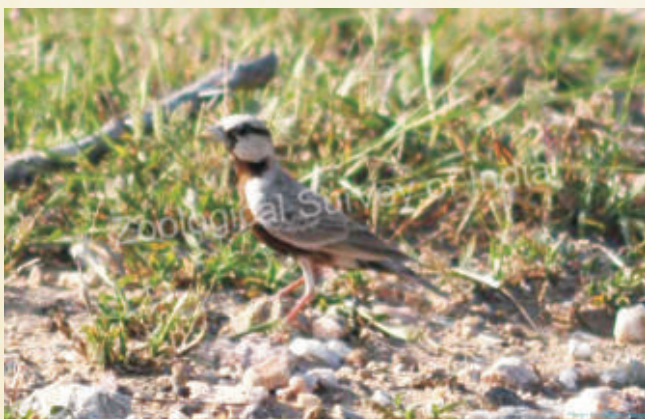
### Some birds in the environs of Sardar-samand Reservoir, Rajasthan



*Accipiter badius*



*Cursorius coromandelicus*



*Eremopterix grisea*



*Dicrurus macrocercus*

### Gangetic Plains Regional Centre, Patna

Adhoc aquatic macro-invertebrate collections were made from the NMCH Pond, Kothia monsoon Pond near NH-30 Patna by-pass and Hajipur Mamau bhanja pokhar in Vaishali district. 6 species of Mollusca were identified from River Damodar. Two popular articles were published during the month. Dr. Gopal Sharma, Scientist-C and Officer-in-Charge, delivered a lecture on "Selection of Science subject for future career" in the Inspire internship science sponsored by MoST, New Delhi for students of Bihar on 6<sup>th</sup> August, at Jagdam College, Chhapra, J. P. University. Three research scholars of Patna University,

Patna visited for library consultation. 30 school students and 10 University students visited the museum. Independence Day was celebrated in the office premises on 15<sup>th</sup> August, 2011.

#### Publications:

1. Gopal Sharma 2011: Bharat ka rastriy jaliy-jeev dolphin (sons) "Pahal" Hindi Patrika-Praveshank, page 33-35, published by Department of Income-Tax, Patna.
2. Gopal Sharma 2011: Hindi ke karyakalap: Ek avlokan, "Pahal" Hindi Patrika-Praveshank, page 96-97, published by Department of Income-Tax, Patna.

### Central Zone Regional Centre, Jabalpur

The backlog collections of 29 species of Coleoptera, 22 species of Hemiptera, 12 species of Arachnida and 8 species of Mollusca from Singhori Wildlife Sanctuary as well as 12 species of moths (Lepidoptera) from Veerangana Durgawati Wildlife Sanctuary were identified and registered. Identification and advisory service was rendered to the Govt. Vidarbha Institute of Science & Humanities, Amravati, Maharashtra on 33 pellet samples pertaining to spotted owl (*Athene brama*) and 3 species of rodents. Eight M. Sc. Students from

Home Science College and St. Aloysius College, Jabalpur completed their Internships on Coleoptera (Cerambycidae), Lepidoptera (Nymphalidae), Orthoptera (Acrididae), Mantodea, Odonata (Libellulidae) and Aquatic Hemiptera (Gerridae), at the Centre. Eight B. Sc. students from St. Aloysius College, Jabalpur also completed their Internship programme on Insect Life-cycle and their importance and Collection, Preservation and Identification of Small mammals, at the Centre.

### Odonata (Insecta) of Veerangana Durgavati Wildlife Sanctuary



*Ceriagrion coromandelianum* (Fabr.)



*Brachythemis contaminata* (Fabr.)

*Acisoma panorpoides* Rambur*Aethriamanta brevipennis* (Rambur)*Brachydiplax sobrina* (Rambur)*Ictinogomphus rapax* (Rambur)

## Marine Aquarium cum Regional Centre, Digha

During the month, 189 examples of live marine ornamental exhibits were collected for exhibition in aquarium galleries. The major attractions among the aquarium exhibits during the month were conger eel (*Muraenesox cinereus*), porcupine fish (*Diodon hystrix*) and a school of scats (*Scatophagus argus*). The aquarium received an average of 280 tourists per day. Besides, 94 examples were collected through local surveys and 3633 examples were collected through survey of Gulf of Kutch (Gujarat coast) under the annual plan of research work. 41 specimens were identified during the month including *Seriolina nigrofasciata*, *Dussumieria elopsoidea*, *Gymnura micrura* and *Rhinoptera javanica*. The Centre also

organized meetings with the State Project Management Unit of World Bank for executing various project works and planning of Community Training on ICZM to be held at the Centre.

*Rhinoptera javanica*

### Northern Regional Centre, Dehra Dun

Four intensive faunal surveys were undertaken under the Programme “Fauna of Dehradun District” and representative fauna belonging to 12 faunal groups collected, besides collecting helminth parasites from amphibians and soil nematodes from soil samples. Field observations were made on 33 species of birds and 5 species of mammals. During the month, following faunal groups were identified: 44 species of butterflies and 2 species of amphibia from Dehradun district; one species of amphibia, 22 species of butterflies, 8 species of soil nematodes and 5 species of helminths from Jhilmil Jheel Conservation Reserve; 33 species of butterflies and 10 species of soil nematodes from Haryana.

Nine species of Helminthes are recorded for the first time from Jhilmil Conservation Reserve, Haridwar.

Permanent slides of hair medulla & cuticular structures of species of lagomorpha *Ochotona roylei*, *Lepus hispidus* Blandford were prepared for trichotaxonomy.

Two research papers were submitted for publication.

Information on Migratory birds was provided to Dr V.V Balasubramanyam, Dept. Zoology,

Sri Krishnadevaraya University and comments were offered on a project report received for evaluation.

Shri P.T.Bhutia, Scientist-F and Officer-in-Charge & Dr. Archana Bahuguna, Scientist- C, attended a meeting of the Uttarakhand Biodiversity Board, Dehradun, for evaluation of projects and Dr Archana attended the Technical committee meeting for Molecular laboratory at ASI, Dehradun.



*Uperodon systoma* (Schneider, 1799)



During the field Surveys conducted in Jilmil Jheel and Vinog Sanctuary

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

Scientists of the Centre, in collaboration with other naturalists, discovered 10 species of Amphibia (Anura: Rhacophoridae), new to science, from southern Western Ghats. They belonged to the genera, *Raorchestes* and *Polypedatus* and 2 research papers describing the new species were published. Besides, a new species of Pteromalidae (Hymenoptera) from Namdapha Tiger Reserve in Arunachal Pradesh, 4 new species of *Telenomus* (Hymenoptera) and a new genus of Platygastriidae from southern Western Ghats were identified which are under description. 3 species of Pteromalidae (Hymenoptera), 4 species of Odonata (Insecta) and 5 species of Centipedes (Chilopoda: Scolopendromorpha) were also identified during the month. Apart from the two research papers published as mentioned above, Dr. Muhamed Jafer Palot, Asst. Zoologist of the Centre co-authored a book entitled '*Birds of Kerala- Status and distribution*'. 2 research papers were accepted during the month and 5 papers were submitted for publication.

The Centre received 29 species (38 specimens) of Reptilia (Ophidia) as donation from Mr. V. P. Ajith, Herpetologist, Kodungallur, Kerala.

Two identification and advisory services were rendered. Facilities were extended to the scientists from NIO, Cochin, on 5<sup>th</sup> August to study the performance of the Table- top SEM in operation at the Centre.

Dr. K. Rajmohana, Scientist-C, delivered an invited lecture on "Essentials of Biodiversity Science" at The Academic Staff College, University of Calicut, as a resource person during the Refresher course for College Teachers, organized by the UGC. Dr. P. M. Sureshan, Scientist-C, supervised the research

work of a JRF of the Centre as well as that of a M. Sc. student from Chittur Government College, Palakkad for his project work. Dr. K. Rajmohana, Scientist-C, supervised the research projects of the two JRFs of the Centre as well as 3 M. Sc. students from Chittur Government College, Palakkad and Kannur University for their project works. Ms. Dhanya Balan, JRF participated in the training programme on "Research data analysis using computers" conducted by IGNOU at Ernakulum Regional Centre, Cochin, on 11<sup>th</sup> and 12<sup>th</sup> August, and got trained on the basics of software estimates for diversity indexing and SPSS for statistical analysis.

During the month, 193 visitors paid their visits to the museum.

Staff of the Centre celebrated the 65<sup>th</sup> Indian Independence Day on 15<sup>th</sup> August 2011.

#### **Publications:**

1. Anil Zachariah, K. P. Dinesh, E. Kunhikrishnan, Sandeep Das, David V. Raju, C. Radhakrishnan, Muhamed Jafer Palot & S. Kalesh. 2011. Nine new species of frogs of the genus *Raorchestes* (Amphibia: Anura: Rhacophoridae) from Southern Western Ghats, India. *Biosystematica*, 5 (1): 25-48.
2. Anil Zachariah, K. P. Dinesh, C. Radhakrishnan, E. Kunhikrishnan, Muhamed Jafer Palot & C. K. Vishnudas. 2011. New species of *Polypedates* Tschudi (Amphibia: Anura: Rhacophoridae) from Southern Western Ghats, Kerala, India. *Biosystematica*, 5 (1): 49-53.
3. Sasikumar, C., Praveen, J., Muhamed Jafer Palot and P. O. Nameer. *Birds of Kerala- Status and distribution*. DC Books, Kottayam, Kerala, 835 pp.

**New Discoveries**  
(New species of amphibians from Western Ghats)



*Raorchestes agasthyaenis*



*Raorchestes crustai*



*Raorchestes johnceei*



*Raorchestes kadalarensis*



*Raorchestes theuerkaufi*



*Raorchestes manohari*



*Raorchestes ravii*



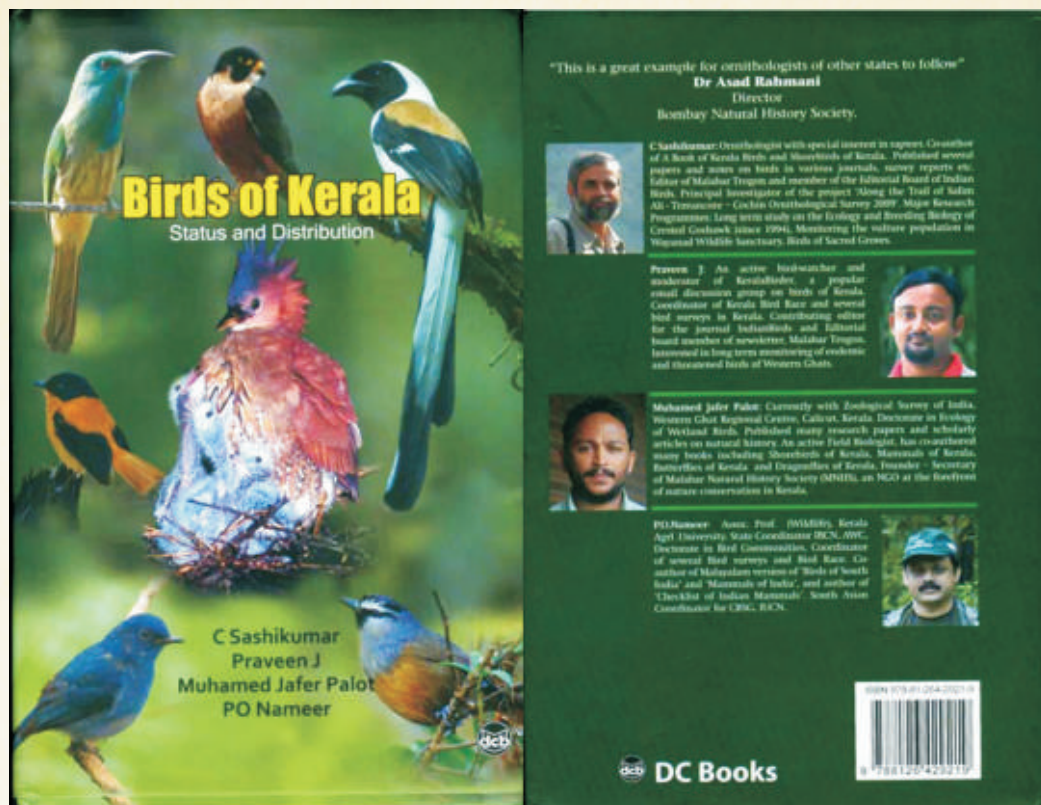
*Raorchestes thodai*



*Raorchestes uthamani*



*Polypedates bijui*



Book Published



Scientists from NIO, Cochin, during their visit to study the performance of the Table- top SEM at the Centre

During the 65<sup>th</sup> Indian Independence Day Celebrated at WGRC/ZSI, Calicut

## ANIMAL OF THE MONTH

**The Crimson Sunbird***Aethopyga siparaja seheriae* (Tickell, 1833)

[Text &amp; Photos: Dr Kaushik Deuti, Zoological Survey of India, Kolkata]

The Crimson Sunbird (*Aethopyga siparaja*) is found in India in the Himalaya, hills of North-eastern India and in the Western Ghats. There are four subspecies in India. The bird in the images was photographed at Barog, Himachal Pradesh. It is *Aethopyga siparaja seheriae* (Tickell, 1833), the subspecies named by S.R. Tickell, after Seheria, the type locality in Uttarakhand.

Barog is a small railway station on the Kalka-Shimla narrow-gauge rail-route just before Solan. There are 103 tunnels on this mountain rail route, the longest one (1143 meters) beside this railway station, named after Charles Barog, the British Engineer who initiated building this tunnel. Barog made the mistake of digging from

both ends and as he made some error in his calculations, he soon realized that the tunnels from both ends would not meet. As a result fresh tunneling had to be done and for this the Indian Railway levied a fine of Rupee One on the engineer for wasting government money. Unable to bear this embarrassment, Barog committed suicide beside the tunnel by shooting himself by borrowing his guard's pistol! As per his desire, he was buried there itself and today there are some flower-beds constructed on his grave. The picture of the bird was taken there.

An interesting observation made on the bird was that it does not put its long curved bill



Purple Sunbird feeding in usual manner



Purple Sunbird feeding by piercing calyx

Back in Kolkata, I was spending my Saturday

On the morning of August 27, at last, I was able to take to my satisfaction the two photographs I was trying to take, over the last three weekends - the Purple Sunbird (*Nectarinia asiatica*) feeding by the two different methods on the Kalke (*Thevetia nerifolia*) flower. Five mornings (Saturdays and Sundays) of observation revealed that they fed 83 times by the short-cut method and only 29 times by the usual method.

[http://findarticles.com/p/news-articles/dna-daily-news-analysis-mumbai/mi\\_8111/is\\_20110802/petrol-pump-manager-arrested-possessing/ai\\_n57945792/](http://findarticles.com/p/news-articles/dna-daily-news-analysis-mumbai/mi_8111/is_20110802/petrol-pump-manager-arrested-possessing/ai_n57945792/)

**The Daily  
Telegrams**

**Monday  
August 15, 2011**

**17**

**Special  
Supplement**

**ZSI's contribution on Echinoderm  
Survey in A&N Islands**

Echinoderms are exclusively marine and occur wherever habitat from the intertidal zone to the deep sea touches. They have two unique features, which are not found in any other group of animals. The first one is the presence of water vascular system and the other is the possession of biotextile like structures called tube feet. These animal forms may be carnivorous, omnivorous, herbivorous, detrital feeders, and planktonic and asperated sediment feeders. As present, more than 8400 species of echinoderms are living in the various seas of the world. In India we have about 649 species known and most of them are deeper waters.

Andaman and Nicobar Islands have clear and unpolluted waters all around. The coast fringed with coral reef extending in biodiversity. In addition, the coastline provides other special habitats such as rocks, sand, mud, mangroves etc. All these factors have encouraged a rich settlement of echinoderm fauna of those islands. As a result of surveys conducted by Zoological Survey of India, six echinoderm faunas of these islands harbours nearly 165% (1,62,32) species of the genera reported from Indian coast, though the coastline of these islands is only one-fourth and the Exclusive Economic Zone only one-fifth of the Indian sub-continent. These included 30 species of Crinoids (sea lilies), 106 species of Asteroidea (Sea stars, 148 species of Echinoidea (Sea urchins), 39 species of Echinoidea (sea cucumbers) and 65 species of Holothuroidea (Sea cucumbers). Among them, 220 species distributed exclusively in Andaman Islands and 31 species also widely in Nicobar Islands while 99 species are currently distributed in both the group of islands. Of the 225 species of echinoderms reported from these islands, 224 species living in association with coral reef habitat.

Holothurians or sea cucumbers have been known since ancient times as they are consumed as a delicacy of local, tribal and coastal communities. They live together and look alike but are diversified in different ecological niche as they adapted themselves to live in different habitats. This productive industry now derived from processed holothurians is commercially important and considered as a delicacy in China, Japan and Korea. Besides, the sea cucumber has aphrodisiac qualities and the pharmacological properties for treatment of high blood pressure, muscular disorder and cholesterol problems. According to FAO annual statistics for 1994 the world wild stock was highest in 1985 amounting to approximately 19,000 tonnes. The Indian, Indo-Pacific industry is more than 1,000 years old. Presently, India, Andaman, and Nicobar Islands, Sri Lanka and Gulf of Mannar with their potential sea cucumber resources supported the industry in India. The export record of Indian Sea cucumber was fluctuating and it earned very high foreign exchange of Rs. 1.55 crore during year 1995 & reduced to Rs. 6.31 crore due to overexploitation as indicated by Marine Products Export Development Authority.

**Anger is never without an argument, but seldom with a good one.**

-Indira Gandhi

**Melobastus pyralis (Schellenk, 1863)**

Around 1400 species of Melobastriinae are reported from various parts of the World Seas. In India we have nearly 200 species belonging to 6 orders and 16 families are recorded so far in Andaman and Nicobar Islands along 14 species reported. Among them, 12 species such as *Actinopyga salmieri*, *Actinopyga monstrosa*, *Dactylogaster schelleri*, *Melobastria arca*, *Echinocarpa auriculata*, *Schelusio suberosus*, *Gilgistrinus variegatus*, *Polydora senilis*, *Melobastria munda*, *Melobastria caea*, *Melobastria arcata* and *Melobastria pyralis* are commercially important. Out of 34 species of sea cucumbers reported from Andaman and Nicobar Islands, 25 species are exclusively distributed in Andaman Islands while 4 species (*Buthostichia crinita*, *Polysiphonia saepe* (*Aphrodusia grana*) and *Melobastria senilis*) are broader biotopes, whereas 5 species are common to both the group of islands.

Sea cucumbers fill an important role in coastal livelihoods, marine ecosystems and support fisheries that provide a significant source of employment and income to coastal people. From both an ecological and socio-economic perspective, the long-term sustainability of sea cucumber fisheries is of great importance to coastal communities. Unfortunately, sea cucumber stocks have been overlooked in many countries as a result of over-exploitation, unsustainable harvesting or over-increasing fishery management. At least 46 species of sea cucumbers more than 40 countries and most of the harvests are processed then exported to Asian markets. The top five global fish for sea cucumbers is changing rapidly. Traditional methods for catching sea cucumbers, such as gleaning on reefs or trawling off coasts and bottom trawling, are being replaced by the use of large boats, diving equipment and bottom dredges. These changes allow fishers to collect zones of deep-sea-moving animals easily, even in remote places and deep-water locations, making widespread over-fishing of sea cucumbers. Over-fishing is also being driven by the increasing need for cash in rural areas across the Pacific. The constant gains drives of sea cucumber stocks in numerous countries can be attributed to three broad causes: rampant exploitation, over-expanding market demand and loss of key fishery management. The various life history traits of holothurians also make these species especially vulnerable to overfishing. \*

(Please zoom to read)

## OUT OF THE BOX

**Ancestor of all birds knocked from its perch**

<http://www.channelnewsasia.com/stories/lifestylenews/view/1143524/1/.html>

**Fossil find suggests dinosaurs became extinct in a single blow**

<http://www.thehindu.com/sci-tech/energy-and-environment/article2224150.ece>

**Life building blocks found in meteorites**

<http://ibnlive.in.com/news/life-building-blocks-found-in-meteorites/174364-19.html>

## PAINTINGS FROM ZSI HERITAGE ALBUM



**Indian Wild Buffalo**

*Bubalus arnee* (Kerr, 1792)

**SPECIAL REPORT****The largest fresh water Turtle from Tungabhadra River,  
Hampi, Bellary District, Karnataka**

On 14<sup>th</sup> August, 2011, a fisherman from Kaddi Rampura went for fishing in Tungabhadra River near Kalagatta. As he had kept a net the previous night, he went to collect the fish but instead found a huge turtle. The turtle was identified as *Nilssonia leithii*, (Gray, 1872). He brought the huge turtle (a female) back to his village Kaddi Rampura and was about to sell it for Rs.25, 000/-But before that the forest officials seized the animal and transported in a Tata Ace vehicle and released in to the Tungabhadra Dam near Gunda Forest Guest House. The turtle was having a length of 160 cm and width of 110 cm (measured by the Forest officials) though the earlier reported maximum

length of the species was only 63 cms (Das, 1995). The Turtle was weighing about 130 kg.

The turtle which was caught by fisherman from Kaddi Rampura is the largest fresh water turtle hitherto known from Indian waters for its size. The species is endemic to southern peninsular rivers and belongs to the group of soft shelled turtles (Family: Trionychidae). The species is the most exploited soft shell turtle for its 'Calipee' (Posterior cartilaginous portion of the Carapace, illegally exported to China) and meat consumed by local tribes and village people (Murthy, in press). Our turtle group expert, Shri. Samad Kottur has reported this incident from Hospet.



The turtle caught from Tungabhadra River

[Posted by: B.H.C.K.Murthy, Zoological Survey of India, Kolkata and Samad Kottur,  
Govt. Pre-University College, Tungabhadra Dam, Hospet (T.K), Bellary Dist., Karnataka]

## OBITUARY



**DR. K. C. Jayaram**  
(14.2.1926 8.8.2011)

Dr K. C. Jayaramakrishnan, born on 14-02-1926, lived a life dedicated to the study of the freshwater fishes of India till he breathed his last on 8<sup>th</sup> August 2011. After graduating in Zoology, Dr Jayaram joined the ZOOLOGICAL SURVEY OF INDIA in 1947 as a technical assistant and with sheer hardwork and dedication rose to the level of Joint Director. He was a contemporary of other renowned Indian Ichthyologists viz. Dr. A. G. K. Menon, Dr. E.G. Silas and Dr. P. K. Talwar and was lucky to have been trained and guided by the father of Indian Ichthyology, the late Dr S.L.Hora under whom he completed his doctoral studies. His INDEX HORANA is a tribute to his mentor. Subsequently Dr. Jayaram got his D.Sc degree from the Madras University. He was a Fellow of the Indian National Science Academy, Allahabad, Zoological Society of India, Bhubaneshwar and the Madras Science foundation, Chennai. He was awarded the prestigious Pitambar Pant National Environment Fellowship by the Ministry of Environment & Forests, Govt. of India. His contributions to the study of the taxonomy of Siluriform fishes, the zoogeography of freshwater fishes and his revisionary contributions on the freshwater fish genera viz. *Puntius*, *Labeo* and *Tor*, including descriptions of new species and genera won him both National and International acclaim. Several new species and genera have also been named after him. No freshwater study is complete or can begin without referring to his book on 'FRESHWATER FISHES OF THE INDIAN REGION' and

'FUNDAMENTALS OF FISH TAXONOMY'. Apart from this he also took up the study of the various river systems in the country. He has conducted intensive surveys of many large river systems for their fish fauna such as Brahmaputra, Cauvery, Krishna and Mahanandi. His work on the Cauvery fish fauna is a comprehensive first-time account of the fish fauna of the entire river system. This work served as the basis for an integrated research programme on the same river funded by the Ministry of Environment & Forests, Govt. of India. Eleven post graduate colleges and six Universities participated in this three year programme. Dr. Jayaram was the Director of this project and the results were published under his executive editorship. He was a member of several scientific committees and his advice was sought after on matters related to river ecology and biodiversity, especially in respect of the fish fauna. He has trained and guided a number of students who occupy important positions. He has to his credit several books on Fish Taxonomy and about 120 papers including several monographs published in India and abroad including those on the Deccan Mahaseers. His recent publications include the revised 2010 edition of THE FRESHWATER FISHES OF THE INDIAN REGION and the CATFISHES OF INDIA which kept him busy in recent years. He donated several of his books and literature collections to the Southern Regional Centre of the Zoological Survey of India at Chennai, where he worked as the Officer-in-Charge during 1973-74. He showed keen interest in keeping himself abreast with current revisions and new descriptions, till his last. He was a source of encouragement to all the scientists.

His demise has left a large void in Indian Ichthyology though his publications will keep his spirit alive through subsequent generations of ichthyologists.

He is survived by his wife, three children and four grandchildren and a host of budding ichthyologists.

[Posted by: Dr. K. Remadevi, Scientist-E, Southern Regional Centre, ZSI, Chennai]