

ZSI e-NEWS

The Monthly Electronic Newsletter of Zoological Survey of India

Volume - 03 :: Number - 03

March 2011



ZSI e-NEWS

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Headquarters, Kolkata

Extensive field surveys were conducted in the States of Chhattisgarh, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Uttar Pradesh and West Bengal apart from the surveys in Eastern Ghats of Tamil Nadu, Coastal areas of Orissa and Bivhuti Bhusan Wildlife Sanctuary, West Bengal. Local surveys were carried out in and around the Wetland areas (Bortibeel) of North 24 Parganas, West Bengal.

During the month, the scientists of Headquarters identified, 7 species of Protozoa, 38 species of scleractinian Corals, 1 genus of parasitic nematode of cockroach, 1 genus of Trematoda, 6 species of Collembola, 6 species of Coleoptera, 3 species of Hymenoptera, 6 species of Isoptera, 6 species of Odonata, 5 species of Orthoptera, 7 species of mites, 2 species of earthworms, 21 species of Mollusca, 17 species of Amphibia and 4 species of mammals, from the States of Assam, Himachal Pradesh, Jharkhand, Tamil Nadu, Uttar Pradesh and West Bengal as well as the former collections from Sri Lanka.

A specimen of *Rhinochimera pinnata* (Schnakenbeck) (Class: Chondrichthyes) found at Nagapattinam, Tamil Nadu turned out to be first record from the east coast of India. It was known so far only from the Kerala coast. Out of the Arachnid materials studied, 2 species were found to be new records to India, 3 species to various states and 25 species to the Bivhuti Bhusan Wildlife Sanctuary, West Bengal. A scientist of Headquarters discovered the natural habitat of two interesting Araneid spiders (*Aranius cillinus* and *Parowixia dehani*) and of a Theridiid spider, studied and collected from BBWL Sanctuary, Bongaon, West Bengal and Galudi, Jharkhand, respectively, as well conducted the behavioral observations and photo documentations in field and in captivity.

Identification and advisory services were rendered on six lots of specimens and one lot of amphibian photographs, received from different organisations. Seven specimens of Marine shells received for identification from Wildlife Crime Control Bureau, Ministry of Environment & Forests, Govt. of India, Eastern Region, Kolkata were identified as *Turbo bruneus*.

Eight specimens of rodents received from Shri M. M. Kumawat, Principal Investigator, AINP of Rodent Control, Central Agricultural University College of Horticulture and Forestry, Pasighat, Arunachal Pradesh, were identified as *Hylopetes alboniger*, *Rattus rattus*, *Bandicota bengalensis* and *Mus cookie nagarum*. A piece of confiscated hide received from Shri Ramesh K. Pandey, Reg. Dy. Director, W.C.C.B., (NR), MoEF., New Delhi was identified as the hide of *Vulpus cana*. Pieces of half-boiled meat received from Deputy Field Director, Buxa Tiger Reserve (West) Division, Alipurduar Court, Jalpaiguri Court, Jalpaiguri, West Bengal for identification were identified tricho-taxonomically as the meat derived from Sambar, *Cervus unicolor* Kerr.

During the month, six research papers, one training manual, one book, one DVD and seven posters were published; eight papers accepted and eight papers submitted for publication.

Shri B. S. Bhandari, Under Secretary to the Government of India, Ministry of Environment & Forests, New Delhi; Mr. Subash Chandra Jena, Lecturer in Zoology of Brahmani College, Bidyanagar, Kendrapara, Orissa; twenty M.Sc., students from Centre for Advanced Study in Life Sciences, Manipur University, Manipur; two M.Sc. students from Moulana Azad College, Kolkata; two research scholars from Department of Zoology, University of Calcutta, Kolkata and also Participants of the XII Leadership Course on "Awareness on Protected Areas and Conservation of Wildlife", visited different sections of ZSI Headquarters.

Dr. B.H.C. Murthy, Scientist-C, participated in the “Western Ghats Reptile Conservation Assessment and management Plan Workshop” from 25th February to 7th March, 2011 at Coimbatore. Dr. A. K. Sanyal, Scientist-F, attended the “17th Meeting of expert Group-A Conservation and Sustainable

utilization of Natural Resources” at the Ministry of Environment and Forests, New Delhi, from 28th February to 1st March. Dr. Nivedita Saha, Scientist-B, acted as the judge to determine the best presentation on topics in Zoology in the 18th State Science & Technology Congress from 28th February to 1st March at RKMV College, Narendrapur, Kolkata. Dr. R. Venkitesan, Scientist-C, attended the Workshop on “CRZ Notification 2011” at Kolkata on 1st March, 2011. Shri Bulganin Mitra, Asst. zoologist, Dr. Nivedita Saha, Scientist-B and Dr. Achintya Chattopadhyay, Asst. Zool. visited the Indian Agricultural Research Institute, New Delhi, for discussion and knowledge on database generation and Insect Storage System from 3rd to 6th March. Dr. R. Venkitesan, Scientist-C participated in the “Consultative Workshop on Strategies for Formulation of Forest Genetic Resources Management Network”, organized by the Indian Council of Forestry Research & Education held at the Institute of Forest Genetics and Tree Breeding, Coimbatore, on 9th & 10th March. Dr. V.D. Hegde, Scientist-C, participated in the National Seminar on “Forest Resources: Diversity, Utilization and Conservation” at University of Agricultural Sciences, GKVK, Bengaluru, from 9th to 11th March. Shri Bulganin Mitra, Scientist-B, attended Workshop on “Pollinators and Pollination in a Changing World” at National Centre for Biological Sciences, Bengaluru. Dr. J. K. De, Scientist-D, delivered a lecture on



Dr. K. Venkataraman, Director, ZSI, delivering a lecture during the XII Leadership Course on “Awareness on Protected Areas and Conservation of Wildlife”

“Conservation of Biodiversity in Ancient India” at the Golden Jubilee Celebration of Khejuri HS Balike Vidyalaya at Khejuri, Purba Medinipur, West Bengal on 16th March. Shri, P.C. Mazumdar, Sr. Zool. Asstt. and Dr. P. Grish Kumar, Zool. Asst. attended the 12th leadership course on “Awareness on protected areas and wildlife conservation” held at Zoological Survey of India, Kolkata from March, 22nd -25th. Dr. Ch. Satyanarayana, Assistant Zoologist, participated in a one day workshop at Jamnagar, Gujarat for imparting Biophysical training to reef researchers and managers.

Dr. Ch. Satyanarayana, Assistant Zoologist, along with Dr. R. Venkitesan, Scientist-C, Dr. B. Tripathy, Scientist-C and Shri Amit Mukhopadhyay, Zool. Asst. imparted training in Biophysical Monitoring of Coral reefs to about 50 reef researchers and managers including 20 Frontline staff of Gujarat Forest Department, researchers from GEER foundation, Space Application Centre, Ahmedabad and from the Saurashtra University. This training programme was organized by the Zoological Survey of India, in collaboration with the Marine National Park, Jamnagar, Gujarat during 19th-23rd March, at Gulf of Kachchh, Jamnagar, Gujarat.

Dr. Ch. Satyanarayana, Assistant Zoologist, prepared a pictorial manual for Biophysical monitoring and an interactive DVD (identification tool) consisting of General information on Corals, Coral reefs, Taxonomy of

hard corals and information about Gulf of Kachchh reefs. Dr. Ch. Satyanarayana along with Dr. B. Tripathy, Dr. R. Venkitesan and Shri Amit Mukhopadhyay prepared 7 posters pertaining to the growth form codes of corals and biodiversity information about Kachchh reefs.

Dr. P.S. Roy, Dean, and Dr. Samar Soren, Indian Institute of Remote Sensing, Dehra Dun visited ZSI Headquarters on 2nd March and held a meeting with the Director and scientists. The Research Advisory and Monitoring Committee meeting was held on 29th March under the Chairmanship of Dr. V.V. Ramamurthy, Indian Agricultural Research Institute, New Delhi at ZSI Headquarters, Kolkata.

Dr. Ch. Satyanarayana, Assistant Zoologist, delivered a lecture on "Coral reef diversity and their conservation" to the participants of the Satellite Symposium organized by the Department of Zoology, University of Calcutta, in collaboration with UNESCO, Asia and WWF India, New Delhi on 30th March, to celebrate the "International Decade of Biodiversity".

The Training & Extension Division of the headquarters organised the XII Leadership Course on "Awareness on Protected Areas and Conservation of Wildlife", at Annandale Hall, from 22nd to 25th March. Dr. K. Venkataraman, Director, Zoological Survey of India delivered the presidential address at the inaugural session and the occasion was also graced by Prof. Amalesh Chowdhury, former Professor, Calcutta University, who delivered the inaugural address. Altogether 44 participants from all over India attended the course. Persons of versatile experience delivered lectures on related topics and also a special lecture on "Biodiversity of Sunderban and its



Dr. K. Venkataraman, Director, ZSI, inaugurating the Training Programme on Bio-Physical Monitoring of Coral Reefs and delivering the inaugural speech in Gulf of Kachchh, Jamnagar, Gujarat

conservation" was delivered by Prof. Amalesh Chowdhury.

Dr. K. Venkataraman, Director, ZSI, inaugurated the refurbished invertebrate Gallery in the Government Museum, Chennai at the Centenary Exhibition Hall, on 1st March and also inaugurated the Training Programme on Bio-Physical Monitoring of Coral Reefs in Gulf of Kachchh, Jamnagar, Gujarat on 19th March. The Director, ZSI visited the Marine Biological Centre and Southern Regional Centre, ZSI, Chennai on 1st March and the Sundarban Regional Centre, ZSI, Canning, West Bengal, on 4th March.

The Director, ZSI, also attended the following meetings:

A meeting with Dr. P.S. Roy, Dean, and Dr. Samar Soren, Indian Institute of Remote Sensing, Dehradun, on 2nd March, at ZSI Headquarters, Kolkata on formulation of a database design document for ZSI, including capacity building of ZSI Scientists for the development of the database, as per the minutes of the meeting on AICOP on Inventorying, Monitoring, Conservation and Sustainable Utilization of Biodiversity; Regional Council Meeting of ZSI as the Chairman of the Council at ZSI Headquarters on 8th & 9th March; the Task Force meeting on Marine Biodiversity Conservation at Society of Integrated Coastal Management, MoEF, New Delhi on 14th March;



During the training course imparted by the ZSI Scientists on Biophysical Monitoring of Coral reefs

the 65th Foundation Day Ceremony of Central Inland Fisheries Research Institute, Barrackpore, West Bengal as Guest of Honour on 18th March; the Departmental Screening Committee meeting for 2nd financial upgradation of Zoological Assistants under the Chairmanship of the Secretary, MoEF on 23rd March, at MoEF, New Delhi and the Research Advisory and Monitoring Committee meeting of Zoological Survey of India under the Chairmanship of Dr. V.V. Ramamurthy, Indian Agricultural Research Institute, New Delhi at ZSI, Kolkata on 29th March.

Publications:

1. Venkataraman, K. and Chattopadhyay, A. 2011. Biodiversity and its Conservation. In: *Souvenir and Abstracts of the National Symposium on Biodiversity Status and Conservation Strategies with special reference to North-East India*, pp. 13-31, held on 17th & 18th March, 2011 at Manipur University, Imphal.
2. Jagdish Kishwan and Venkataraman, K. 2011. *Critically Endangered Animal Species of India*, p. 1-24 (Pub.) Ministry of Environment and Forests, Government of India and Zoological Survey of India.
3. Gantait, V.V. 2010. Nematode infestation in bamboos. In: *Nematode Infestations (Part II) Industrial Crops* (Eds. M. R. Khan and M. S. Jairajpuri). National Academy of Sciences, India, Allahabad, India; 444 - 464 pp + 28 plates (released in 2011).
4. Hegde, V.D. and Bhat, G. 2011. First record of charpa tree frog *Polypedates occidentalis* from Karnataka State. *Frog leg News Letter*, 15: 10-11.
5. Hegde, V.D. and Roy, S. 2011. Amphibian fauna of Katarniaghat Wildlife Sanctuary, Uttar Pradesh, India. *Frog leg News Letter*, 15: 12-17.
6. Mohapatra, A. 2011. Molluscan fauna of Vamsadhra & Nagabali Estuaries, *Zool. Surv. India, Estuarine Ecosystem Series*, 6: 47-72.
7. Saha, N. and Basak, J. 2010. Insecta: Isoptera. In: *Fauna of Uttar Pradesh, State Fauna Series*, pp. 1-27, Zoological Survey of India.
8. Satyanarayana, Ch. 2011. *Biophysical Monitoring of Coral reefs- Training Manual*, p. 1-74. Zoological Survey of India.
9. Satyanarayana, Ch. 2011. Interactive DVD on Hard Corals of Gulf of Kachchh (Underwater Paradise open for all) 'A treat for Layman to Lensman'.



Rhinochimera pinnata (Schnakenbeck, 1931), observed at Nagapattinam, Tamil Nadu

Marine Aquarium cum Regional Centre, Digha

The aquarium received an average of 230 visitors per day, during the month. Around 102 examples of live marine and freshwater ornamental animals were liberated for exhibition in the aquarium galleries. The major attractions among the exhibits were the three spotted damsel, Surgeon fish, Bengal sergeant and the Guitar fish. Apart from these exhibits, there were also incidences of breeding of Octopus and black molly. These juveniles also attracted the attention of visitors. Under digitization of collection, 27 specimens belonging to 6 families and 8 genera from the old collections and 12 specimens belonging to 3

families and 4 genera were digitised. A stranding incidence of dolphin (*Orcaella brevirostris*) was reported on Digha coast during the month. A survey party of the Centre completed the scheduled survey under the Annual Plan of Research work, 'Study of macro-benthic fauna (invertebrates) from some coastal areas of Gujarat coast', in the Saurashtra coast of Gujarat. One manuscript on "First Report of a fish from Family: Antennariidae (*Antennarius hispidus*) from Digha Coastal Waters, on the East Coast of India" was communicated to the Records of Zoological Survey of India.



Bat fish (*Platax* sp.)



Elongate surgeon fish (*Acanthurus mata*)



Spiny lobster (*Panulirus ornatus*)



Brindlebass grouper

Sunderban Regional Centre, Canning

A field survey was conducted in and around Canning and Dabu and representative faunal elements were collected and preserved.

Ten species of fishes and 1 species of Crab were identified and registered.



A dead Civet Cat



Sillagoniopsis panijus



Indiscriminate Tiger Prawn collection, a major threat to the Estuarine Biota in Sunderbans

Gangetic Plains Regional Centre, Patna

During the month, 7 species of Mollusca collected from River Damodar were identified. A manuscript entitled 'Reptiles of Bihar and Jharkhand (*Rengane Wale Jeevon ki Sachitra Pustika*)'-in Hindi, was submitted to the Department for publishing.

Dr. Gopal Sharma, Scientist-C attended the National Seminar, 'Recent Advances in Water Resources Development and Management', on 30th-31st March 2011, under the UGC-SAP (DRS-I)-Sponsored programme organized by the Department of Geology, Patna University. Dr.

Gopal Sharma accompanied the DST-team during their visit to observe the Gangetic dolphins (National Aquatic Animal of India) in the main stream of River Ganga. He also attended the Hindi workshop, organized by the Town Official Language Implementation Committee, on 24th March at Patna. Dr. Navneet Singh, Scientist-C and Dr. Gopal Sharma attended the Lecture on "Distributional and behavioral processes minimize competition in Nature", delivered by Dr. Mewa Singh (Professor of Mysore University and the

Chairman of D.S.T Expert Committee), organized by the Central University of Bihar on 13th March, at Indira Gandhi Planetarium, Patna.

Five research scholars of the Department of Zoology, Patna University, visited the Centre for consultation of identified Molluscan collections and 12 persons visited the library. Seven persons visited the museum at the

Centre. Dr. Anjum N. Rizvi, Scientist-C and Dr. Archana Bahuguna, Scientist-C from NRC/ZSI, Dehradun visited the Centre for their DST project presentations.

Publication:

Kirti, J. S & Gill, N.S. 2010 Systematics of Indian Arctiidae (Lepidoptera: Insecta) Pp. 161-179. in Kirti, J. S & Kumar .A (eds.), Advances in Entomology. Kanishka Publication New Delhi.



Collecting benthic macroinvertebrates



Lamellidens marginalis



Corbicula striatella



The Indian Pond Heron, *Ardeola grayii*

Northern Regional Centre, Dehra Dun

Three field surveys were undertaken in Jhilmil Jheel Conservation area and one survey each in Dehra Dun and Haridwar for Ecological and molecular study of fresh water turtles. Apart from collecting the representative faunal samples, 5 species of mammals, 37 species of birds and one species of turtle were observed. Write-ups on the Avifauna and Mammals and

the Overview for the document on Fauna of Haryana are in progress while a chapter on the soil nematodes dealing with 20 species has been submitted. Photomicrography of 5 species of helminths of Vertebrates of Dehra Dun has been completed. Five species of Butterflies collected from Dehra Dun and around, and seven species from Kalesar National park have been

identified. Seven species of soil nematodes collected from Jhilmil Jheel Conservation Reserve have also been identified.

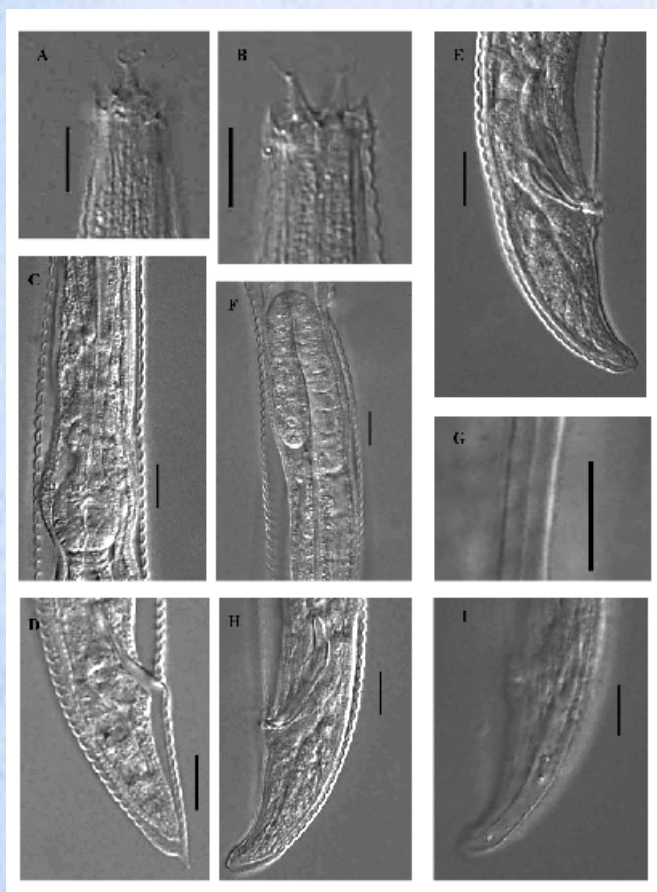
Dr. Vinod Khanna, Assistant Zoologist received a request from the Chairman, Uttarakhand Biodiversity Board to prepare an updated chapter on the Faunal Profile of Uttarakhand for NBSAP, Uttarakhand.

About 37 students with two faculties from the Department of Environmental Science, Srinagar University, J. & K. visited the NRC Museum.

Scientists of the Centre attended a two days' National Seminar on the New Innovations in Parasitological Research at DAV (P.G.) College,

Dehra Dun on 29th and 30th March. While three scientists (Dr. A.N. Rizvi, Scientist-C, Dr. Archana Bahuguna, Scientist-C and Dr. Vinita Sharma, Scientist-C) presented their papers. Mr. P.T. Bhutia, Scientist-F & Officer-in-Charge acted as the Guest of Honour for the Inaugural session of the National Seminar. Dr. P.C. Tak, Scientist-D acted as the Judge for the Young Scientist Award Poster Presentation and Dr. Vinod Khanna, acted as a Resource Person for the Technical sessions.

Dr. A. N. Rizvi supervised the dissertation of two B.Sc Students of Doon Paramedical College and Hospital, Dehra Dun on the topics "Status of Dengue" and "Status of Typhoid".



Cervidellus vexilliger (de Man, 1880) Thorne, 1937, a new record of soil nematode from India. Scale bar = 10µm. Images captured by BX 51 DIC Olympus microscope with DP20 Digital camera



Mr. P.T. Bhutia addressing the National Seminar on 'New Innovations in Parasitological Research', as Guest of Honour



Students from J & K University, Srinagar Visiting NRC Museum

Desert Regional Centre, Jodhpur

A field survey of Sitamata Wildlife Sanctuary, Rajasthan was conducted from 7th-16th March. During the month, 7 species of Nematoda, 9 species of Lepidoptera, 5 species of Odonata, 9 species of Coleoptera and 3 species of Pisces were identified from the various environs of Rajasthan. Identification service was rendered to a Ph. D. Scholar of the Forest Protection Division, Arid Forest Research Institute (ICFRE), Jodhpur, on 4 species of Lepidoptera.

Dr. Gaurav Sharma, Scientist-C delivered lectures on “Faunal diversity of India” and “conservation of Biodiversity” to 14 teachers and 258 school students of five schools from 10th to 14th March during their visit, sponsored by the Department of Science & Technology, Jodhpur.

Dr. Sanjeev Kumar, Scientist-C participated and presented a paper in the “National workshop on *Prosopis juliflora*: Past, Present and Future”, held at the Central Arid Zone Research Institute, Jodhpur from 23rd-24th March.

Two research papers were submitted.

Sixty seven entries of identified fauna were made in the faunal Database of the Centre. 132 entries pertaining to the books in the Centre's library were made in the library database employing the software, *e-granthalaya*.

The Quarterly Official language (Hindi) Workshop was organized on 18th March.

294 visitors visited the Museum.



A view of Sariska Tiger Reserve



Human habitation at Sariska Tiger Reserve



Bar-headed Goose, *Anser indicus* in flight



Painted Stork, *Mycteria leucocephala* in flight

Central Zone Regional Centre, Jabalpur

A faunistic survey of Veerangana Durgavati Wildlife Sanctuary, Madhya Pradesh was conducted from 10th-16th March.

During the month, the backlog collections of Hemiptera belonging to 20 species and scarabaeid beetles (Coleoptera) belonging to 4 species were identified. Three species of Scarabaeid beetles from Veerangana Durgavati Wildlife Sanctuary, Madhya Pradesh, 5 species of Lepidoptera (moths), Coleoptera (Scarabaeidae) belonging to 2 species and 6 species of Freshwater Mollusca from Singhori Wildlife Sanctuary, Madhya Pradesh were also identified besides identifying 4 species of scarabaeid Beetles from Tawang, Arunachal Pradesh.

64 examples of scarabaeid beetles received from the Dept. of Zoology, Govt. Vidarbha Institute of Science & Humanities, Amravati, Maharashtra, were identified and identification & advisory services rendered.

Dr. Kailash Chandra, Scientist-F and the Officer-in-Charge of the Centre attended the Madhya Pradesh Wildlife Advisory Board Meeting at Vidhan Sabha Bhawan, Bhopal on 7th March. He also attended the Meeting of the Research Advisory & Monitoring Committee of ZSI as a special invitee, at ZSI Headquarters, Kolkata on 29th March, 2011.

Dr. S. S. Talmale, Assistant Zoologist visited ZSI, WRC, Pune from 11th-27th for studying the

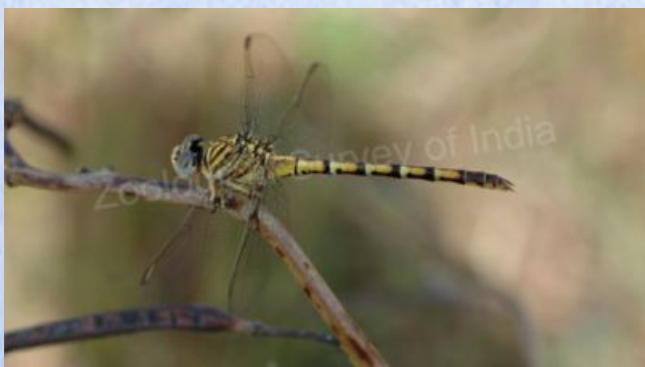
mammalian collection for preparing a Catalogue of the mammals in the collection of ZSI, WRC, Pune.

Two research papers were submitted for publication. Chapters on Freshwater & Terrestrial Mollusca and Mammalia of Radhanagari Wildlife Sanctuary, Dist. Kolhapur and Chandoli National Park, Maharashtra State were submitted to the Officer-in-Charge, ZSI, WRC, Pune.

A team of Professors and a batch of 30 students of M.Sc. Zoology, Home Science College, Jabalpur visited the Centre and the students were briefed about the aims and objectives of the organization and its role in Biodiversity Conservation.

Shri Rajender Singh, DFO, Forest Department, Jabalpur was provided with the information on Faunal Diversity of Jabalpur, for undertaking an EIA study of developmental projects. Shri Niladri Dasgupta SOS, Zoology, Jiwaji University, Gwalior was furnished the information on Aquatic Fauna of Narmada River. Two research fellows of Zoology Department, Govt. Vidarbha Institute of Science & Humanities, Amravati, Maharashtra visited the Centre and information on Coleoptera of Central India was provided to them. Reprints on Nematoda were provided to Dr. Vladimir L. Malkov from Russia. Six M.Sc. Zoology students from the Govt. M. H. College of Home Science and Science, Jabalpur were guided for their project work at the Centre.

Dragonflies of Singhori Wildlife Sanctuary, Madhya Pradesh



Anormogomphus heteropterus Selys



Potamarcha congener (Rambur)

Dragonflies of Veerangana Durgavati Wildlife Sanctuary, Madhya Pradesh



Trithemis aurora (Burmeister)



Orthetrum pruinatum neglectum (Rambur)



Professors and students of M.Sc. (Zoology), Home Science College, Jabalpur and the Students of M.Sc. (Zoology), Mata Gujri College, Jabalpur, during their visit to the Centre

Marine Biology Regional Centre, Chennai

Three species of protozoa, 1 species of Nematoda, 5 species of marine sponges, 1 species of jelly fish and 1 species of sea pen were identified out of the material collected from Gulf of Mannar Biosphere Reserve. Dr. Rajkumar Rajan, Scientist-C and Dr. C. Venkatraman, Scientist-C made power point presentations at the office of PCCF (Wildlife), Tamil Nadu Forest Department, Chennai on "Status assessment of sea cucumber in Gulf of Mannar". Dr. C. Venkatraman delivered a lecture on "Biology of Birds and captive care" in a one day training programme for the Forest department staff, organised by the Arignar Anna Zoological Park, Vandalur, Chennai and attended the Institutional Animal Ethics

Committee (IAEC) meeting at GLR laboratories Pvt. Ltd., Madhavaram, Chennai, as a scientific member. Dr. G. Sivaleela, Asst. Zoologist, delivered a talk on 'Marine sponges', organized by the Fisheries Forum, Chennai. Dr. L. Bindu, Scientist-C and Dr. G. Sivaleela attended the seminar "The experience and competence to handle your needs" at Lotus Hall, Convention centre, T. Nagar, Chennai, in connection with International Women's Day Celebration. One paper was published during the month.

Publication:

Venkatraman, C. 2011. Basic biology of birds and their care in captivity. In: Training programme manual, Tamil Nadu Forest Department, Chennai 48. 46-50Pp.

Southern Regional Centre, Chennai

Faunal identification work for the month includes 2 species of snakes and 8 species of zooplankton specimens (Rotifera, Cladocera and Ostracoda) from Pallikarani, Chennai. Besides, 13 species of fish specimens were identified for MBRC/ZSI, Chennai.

Three identification services were rendered involving the identification of 5 species of fishes (2 lots) and 2 gecko species. Further, 3 manuscripts were refereed for the departmental journal and one project proposal for the Ministry of Environment & Forests, Govt. of India.

One research paper was published.

Dr. R. Aengals, Scientist-C, participated in the "Western Ghats Reptile Conservation Assessment and Management Plan (CAMP) Workshop and Training" from 28th Feb to 4th March at Karl Kubel Research Institute, Coimbatore. Dr. R. Aengals also delivered a talk on ZSI and on the Centre's faunal holdings to the staff of the Department of Fisheries, Andaman and Nicobar Administration Port Blair, when they visited the Centre on 10th March. Dr. S. Prabakaran, Scientist-C, attended the National Conference on 'Scientific Documentation of life of Butterflies, Need, Process and importance', held at St. Philomena's Degree College, Mysore, Karnataka during 5th & 6th March. He also participated in the 'Twelfth Leadership Course

on awareness on Protected Areas and Wildlife Conservation', held at ZSI, Kolkata from 22nd-25th. Dr. K. Ilango, Scientist-D, attended the meeting of the Board of Trustees of the Chennai Snake Park Trust on 26th March.

Publication:

Jayasree Thilak, 2011. On a collection of Fishes from Singhori Wildlife Sanctuary, Dist. Raisen, M.P. *Bionotes*, 13 (1): 21-22.



Cladocera, *Alona rectangula* Sars



Cladocera, *Moinodaphnia macleayi* (King)



White Stork,
Ciconia ciconia (Linnaeus)



Indian White-rumped Vulture,
Gyps bengalensis (Gmelin)



Lalmohania velutina Hutchinson, 1994,
a Monacanthid fish, from Gulf of Mannar

Western Regional Centre, Pune

The reconnaissance Survey of Shastri basin, Ratnagiri district, Maharashtra was undertaken from 16th-19th March for the establishment of a Long Term Ecological Monitoring programme of MoEF. Eight species of Acrididae were collected from district surveys of Maharashtra and Karnataka. 55 species of Odonata collected from various surveys, 33 species of Cladocera and 28 species of fishes collected from Radhanagari Wildlife Sanctuary and Chandoli National Park were identified besides the 2 species of Collembola collected from the Phansad Wildlife Sanctuary.

Three manuscripts were reviewed for The *Journal of Threatened Taxa* and the *Indian Journal of Agricultural Sciences*.

The collection of gallmidges (Diptera: Cecidomyiidae) received from Dr. Moawia A. Mohammed, Agricultural Research Corporation, Shambat Research Station, Khartoum North, Sudan was also identified. A Skin of Black buck (*Antelope cervicapra*), received from CBI, Akurdi, Pune, paws of carnivores received from Lashkar Police Station, Pune and Dy. Conservator of Forest, Nashik and skins of spotted deer (*Axis axis*) and leopard (*Panthera pardus*) received from Crime Investigation Branch, Maharashtra police were also identified and identification & advisory services rendered. Identification services were

also rendered on a Nematomorpha specimen received from the Medical Officer, PHC Rajuri, Beed district, two fish specimens received from the University of Pune and 27 photographs of fishes received from the Centre for Biodiversity Conservation, Bhubneshwar, Orissa.

Dr. R.M. Sharma, Scientist-D and Officer-in-Charge, was invited as chief Guest at the Dr. D.Y. Patil Arts, Commerce and Science College, Pimpri, Pune for the Prize distribution ceremony of their Science Association on 3rd March and he addressed the students on the occasion. He was also invited as a resource person by the Indian Institute of Forest Management, Bhopal to deliver a lecture and impart field guidance on "Insect Identification and their Natural History", during the Park Guide Training Programme at Tadoba-Andhari Tiger Reserve, on 22nd March. Dr. Sharma also delivered a talk on "Insect Diversity in India" at Dept. of Zoology, University of Pune on 25th March, during a Symposium on 'Recent Trends in Biology'.

Dr. K. A. Subramanian, Scientist-C, participated in the ZSI Faunal Diversity Information System meeting with NRSA Scientists held at Kolkata on 2nd March, 2011.

Dr. P.D. Rane, Shri. Satish Kamble and Smt. Kamla Devi attended the Hindi Karyashala for from 21st to 25th at CDA Compound, Pune, organized by the 'Hindi Shikshan Yojana', under the Ministry of Home Affairs. Shri S.S.



Landscape of Phansad Wildlife Sanctuary



Macaca radiata in Phansad Wildlife Sanctuary

Jadhav, attended the project work presentation of 9th std. students of Dnyanprobodhini High School, Nigdi, Pune on 14th March, as external examiner. Shri S. K. Pati participated in the XIIth leadership course on "Awareness on protected areas and wildlife conservation" held at ZSI headquarters, Kolkata from 22nd to 25th March.

Publications:

1. Udikeri, S.S., Patil, S.B., Guruprasad, G.S., Vandal, N.B., Kudari, V.A., Kranthi, K.R., Sandhya Kranthi, Sharma, R.M. and Khadi, B.M. (2011). Pestiferous nature, abundance and potential threat of Mirid bugs and flower bud maggots for Bt cotton cultivation in India. Presented at Gobal Conference on Entomology, March 5-9, 2011, Chiang Mai, Thailand.
2. Chandra, K., Sharma R.M. and Harshey, D.K. (2011). *Gongylus gongylodes* (Linnaeus) (Insecta: Mantodea): A new record for Madhya Pradesh, India. *Bugs R All*, No.17:21
3. Subramanian, K.A. and K.G. Sivaramakrishnan. (2011). Latitudinal



Roarchestes sp. sighted in Phansad Wildlife Sanctuary

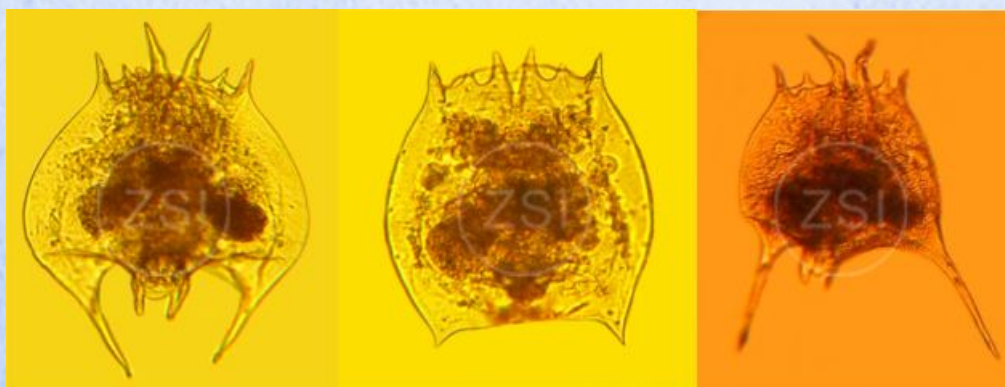
Distribution of Stream Insect Communities of the Western Ghats: In: "ENTOMOLOGY: *Ecology & Biodiversity*" (Eds., Dr.B.K.Tyagi and Dr. Vijay Veer), a festschrift to Prof. T.N. Ananthakrishnan. Scientific Publishers, Jodhpur.

4. Mahapatro Debasish, Panigrahy, R.C., Naik, S., Patil, S.K. and Samal, R.N. (2011). Macrobenthos of shelf zone off Dhamara estuary, Bay of Bengal. *Journal of Oceanography and Marine Science*, 2 (2): 32-42.

Freshwater Biology Regional Centre, Hyderabad

During the month, 9 species of fishes, 4 species of aquatic Hemiptera and 3 species of aquatic Coleoptera from Palair Lake were identified and registered. Besides, 4 species of Cladocera (Daphniidae) and 5 species of Mollusca were also identified. For drawing up the final faunal

inventory of the varied freshwater groups from Kolleru Lake, Andhra Pradesh, a few wetland faunal groups in the collection, have been sent to different group experts for taxonomic confirmation. One research paper was published.



The seasonal cyclomorphic variants of common rotifer *Brachionus quadridentatus*

Dr. S.Z. Siddiqi, Scientist-D & Officer-in-Charge evaluated a Ph.D. thesis (Aquatic Toxicology) from R.T.M. Nagpur University, Nagpur and the report submitted.

As a part of the ZSI initiative for setting up full-fledged DNA Finger Printing Laboratory at the Centre, one DNA Sequencer ABI PRISM 3730 48 capillary Genetic Analyser with reagents, Table Top Centrifuge, PCR Machine etc. were

procured. Further necessary laboratory infrastructure development is in progress.

Publication:

Deepa, J. & CAN Rao, 2011. "On Collections of aquatic and semiaquatic bugs and beetles of KBR National Park, Hyderabad, Andhra Pradesh". *Bugs R All, Newsletter of the Invertebrate Conservation & Information Network of South Asia*, No. 17: 13-15.



Hydrophilus rufocinctus



Diplonychus rusticus

Estuarine Biology Regional Centre, Gopalpur-on-Sea

A field survey was conducted in the Subhadra estuary, Ganjam district, Orissa and 6 species of fishes were identified from the collection. During the survey, the spiny eel *Mastacembelus armatus*, which is primarily a freshwater fish, was collected from the estuary having salinity of 35 ppt. Out of the unidentified collection from the Cauvery estuarine system in the

Centre's faunal depository, 31 species of Mollusca and 6 species of fishes were identified. One research paper was published in an international journal and one submitted for publication.

Dr. Swetapadma Dash, Scientist-C attended a training workshop on "Systematics and Evolution" from 9th-15th March, held at the



A view of Subhadra Estuary, Orissa



Rapana rapiformis (Born)

Centre for Environmental Management of Degraded Ecosystem, Delhi University, New Delhi.

Publication:

Dash, S. and Hazra, R. K. 2011. Mosquito diversity in the Chilika Lake areas, Orissa, India. *Tropical Biomedicine*, 28(1): 1-6.



Laccotrephes ruber (Linnaeus)

North Eastern Regional Centre, Shillong

During the month, 6 species of Amphibians from Manipur and Meghalaya were identified and registered. Besides, 9 species of fishes from Arunachal Pradesh and Manipur, out of the backlog collection of the Centre were identified.

Range extension of the toad *Duttaphrynus mizoramensis* (Mathew & Sen) was confirmed in Meghalaya after an individual of the species was identified from Nokrek Biosphere Reserve,

Meghalaya. The species was described in 2009 from Mizoram by the scientists of the Centre.

Mrs. Jennifer Lyngdoh, Scientist-C of the Centre attended the meeting on 'Meghalaya Zoo Project Implementation Society' at Shillong on 19th March.

One research paper was submitted for publication.



Duttaphrynus mizoramensis



Duttaphrynus manipurensis



Rhacophorus bipunctatus

Arunachal Pradesh Regional Centre, Itanagar

A survey team proceeded on tour to Roing and Anini areas of Arunachal Pradesh w.e.f. 31st March, to study the water birds of Arunachal Pradesh. The Odonata samples collected from the Namdapha Tiger



School students visiting the APRC museum and Library

Reserve of Arunachal Pradesh were received from Mrs. K. G. Emiliyamma, Scientist-C of WGRC/ ZSI, Calicut, after the identification work. Dr. Gopinathan Maheswaran, Scientist-C and Officer-in-Charge of the Centre has been included in the state committee, set up by the Principal Chief Conservator of Forests (WL), to conserve vultures in Arunachal Pradesh, under an initiative by the MoEF, Government of India. Twenty-three students visited the museum and library during the month.

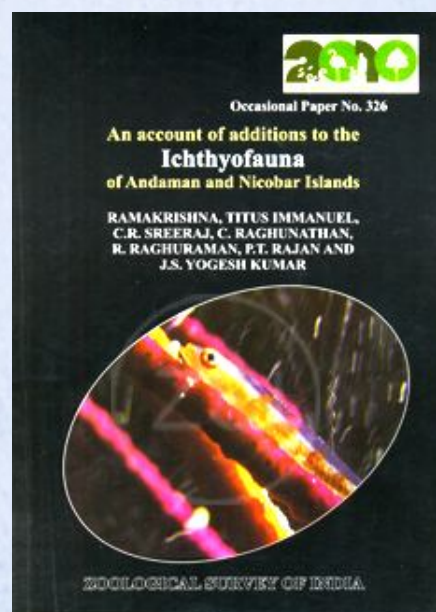
Andaman and Nicobar Regional Centre, Port Blair

Surveys were conducted in Great Nicobar Island, Grub Island and Pongibalu from 1st-5th, 2nd and 30th-31st March respectively to study the faunal communities in marine and terrestrial ecosystems. A total of 50 species of corals, 23 species of echinoderms, 2 species of sponges, 7 species of soft corals, 21 species of gastropods, 22 species of opisthobranchs, 2 species of crabs and 56 species of fishes were identified from the marine habitat while 27 species of butterflies and 90 species of moths were recorded from the terrestrial ecosystem of the areas surveyed. Apart from that, 44 species of fishes were identified from the unnamed collection of the Centre. Among the species identified, 6 species of nudibranchs, *Chromodoris albopunctata* (Garret, 1879), *Chromodoris lineolata* (van Hasselt, 1824), *Costasiella paweli* Ichikawa, 1993, *Gastropecten bicornutus* (Baba and Tokioka, 1991), *Hypselodoris emma* Rudman, 1977 and *Phyllidiopsis annae* Brunckhorst, 1993 are new addition to the Opisthobranchs of India. Coral reef monitoring study conducted at Pongibalu and Grub Island in South Andaman revealed the replenishment of bleached coral from 27-36%. A total of 50 species of corals, 18 species of echinoderms, 3 species of gorgonids, 66 species of opisthobranchs, 20 species of butterflies, 5 species of dragonflies, 5 species of moths and 2 species of spiders were registered in the National Zoological Collection of the Centre. Manuscripts on Status of coral reefs in A&N Islands, New records of Polyclads and Octocorals, Captive breeding of reticulated python, and Conservation of green turtle in A&N Islands have been submitted to various journals for publication. Besides, a Checklist of Scleractinian Corals of A&N Islands and a Checklist of Opisthobranchs of India were prepared and submitted for posting in the ZSI website.

The state wildlife board of A&N unanimously

agreed upon to de-list the scheduled marine gastropod *Trochus niloticus* from the Schedule IV of Wildlife Protection Act 1972, as recommended by ZSI, Port Blair, for a period of 3 years.

As requested by the National Institute of Ocean Technology, Port Blair, 7 species of sponges, 2 species of soft corals and 2 species of gastropods were identified. Approval has been received from Border Roads Task Force, Ministry of Defence to conduct the EIA study for the construction of road in Great Nicobar Island. Mr. P.T. Rajan, Sr. Zoological Assistant, Dr. T.S. Christopher Roy, Research Associate and Mr. Koushik Sadhukhan, JRF participated and presented their papers in the International Conference on Tropical Island Ecosystem, organized by Central Agricultural Research Institute (ICAR), Port Blair from 23rd-25th March, while Mr. Tamal Mondal, JRF participated in the 'Leadership Programme for Awareness of Protected Areas and Wildlife Conservation', held at ZSI Headquarters, Kolkata from 22nd-25th March. Dr. C. Raghunathan, Scientist-C & Officer-in-Charge served as a member in 'Sectoral Action Plan for Green India Mission



Book published

and Sustaining Island Ecosystem in connection with Climate Change Action Plan for A&N Islands', held at the Dept. of Environment and Forests, A&N Administration on 4th March. He also made a presentation on the proposed new boundary for Great Nicobar Biosphere Reserve prepared by the ZSI, Port Blair, as per the recommendations of UNESCO for the senior officials of A&N Administration, Coast Guard, Indian Navy, Andaman & Nicobar Command and other stake holders, on 8th March at the PCCF Office, Port Blair. Besides, Dr. Raghunathan attended the 'Meeting of Expert Group-B on Conservation and Sustainable Utilization of

Natural Resources' to be held at Centre of Advanced Study in Marine Biology, Annamalai University, organized by MoEF from 23rd-24th March and the meeting of the 'State Wildlife Board of A&N Islands', chaired by the Honorable Lieutenant Governor of A&N Islands on 29th March.

Publication:

Ramakrishna, Titus Immanuel, C. R. Sreeraj, C. Raghunathan, R. Raghuraman, P. T. Rajan and Yogesh Kumar, 2010. An account of addition to the Ichthyofauna of Andaman and Nicobar Islands. *Rec. zool. Surv. India, Occ. Paper No.326*: 1-140.



Black Coral, *Antipathella supopinnata*



Coral, *Psammocora digitata*



Sponge, *Monanchora arbuscula*



Echinoderm, *Stichopus chloronotus*



Echinoderm, *Comaster mutibrachiatus*



Echinoderm, *Comanthina nobilis*

High Altitude Regional Centre, Solan

Two technical reports on the 27th Indian Expedition to Antarctica have been submitted to the Department of Ocean Development, Govt. of India. Dr. Anil Kumar, Scientist-C participated in the National Workshop on Systematics and Evolution at the Centre for Environmental Management of Degraded ecosystem, Delhi University, from 9th-15th

March and also presented a paper in the National Seminar, "New Innovations in Parasitological Research" (29-30th March) at the Dept. of Zoology, DAV PG college, Dehradun. A research scholar of Himachal Pradesh University, Shimla was provided library and identification services. A research paper on Lepidoptera was reviewed for a national

journal. A unit of the Compact Insect Storage System was installed at the Centre.



Collared Scops Owl, *Otus bakkamoena*



Papilio polyctor at Kalatop-Khijjar Wildlife Sanctuary

Western Ghat Regional Centre, Kozhikode (Calicut)

A field survey was conducted in Balussery, Kozhikode district, Kerala on 23rd March. During the month, description of a new species of *Ichthyophis* (Ichthyophiidae: Gymnophiona: Amphibia) was made ready and the species photographed for finalising a research paper. Besides, 5 species of Pteromalidae (Hymenoptera: Insecta) and 5 species of Centipedes (Scolopendridae: Chilopoda) were identified. During the month, one research paper and two popular articles were published, two research papers were accepted and two submitted for publication. Two identification and advisory services were rendered.

Dr. K. Rajmohana, Scientist-C, supervised the M.Sc Dissertation work entitled “Systematic inventory of egg parasitoids in paddy and radish agroecosystems in North Tamil Nadu”, of Ms. S. Divya of Loyola College, Chennai.

C. Radhakrishnan, Scientist- F & Officer-in-Charge attended the Meeting of the Research Advisory & Monitoring Committee of ZSI as a special invitee, at ZSI Headquarters, Kolkata on 29th March, 2011.

C. Radhakrishnan, Scientist-F, Dr. P. M. Sureshan, Scientist-C and Dr. Muhamed Jafer Palot, Asst. Zoologist, delivered lectures on

topics such as the Functions and Role of ZSI in Biodiversity Research and Biodiversity of Kerala, to the selected students of Special Project for the Gifted Children of Kozhikode district at the Centre on 18th March, sponsored by the State Education Department, Govt. of Kerala. Dr. K. P. Dinesh, Zool. Asstt, presented a talk on “Collection, Preservation and Taxonomy of Amphibians” at the Dept. of Zoology, Mangalore University, in a workshop held on 18th and 19th March.

Prof. Dr. Gopal Krishna Bhatta visited the Centre for studying the caecilian (Amphibia: Gymnophiona) collection at the Centre from 4th-6th March. During his visit, he also delivered a lecture on caecilian amphibians before an invited audience.

During the month, 1196 visitors paid their visits to the museum at the Centre.

The Centre was awarded first prize for outstanding performance in the use of Official Language (Hindi) in Kozhikode Zone during the year 2009-2010 (under the section of small offices without Hindi Officers), by the Town Official Language Implementation Committee, Kozhikode, as decided by the Regional Implementation Office, Kochi.

Publications:

1. Balakrishnan, V.C., Muhamed Jafer Palot and K. P. Rajesh, 2011. Observations on the flora of Madayipara, a midland laterite hill in Kannur district, Kerala. *Malabar Trogon*, 8 (2&3): 14-28.
2. Rajmohana, 2011. '2010, The International year of Biodiversity' 'Manjeeram.' (Annual School Magazine, Tiruvannur Govt. UP School, Calicut) 21-22.
3. Muhamed Jafer Palot, 2011. Keralathinte Jaaivavaividhyam. 'Manjeeram.' (Annual School Magazine, Tiruvannur Govt. UP School, Calicut) 25-27.



Prof. Dr. Gopal Krishna Bhatta speaking on caecilian amphibians before an invited audience during his visit to WGRC/ZSI, Calicut



During the programme conducted at the Centre for the Gifted Children of Kozhikode district



Cheddikulama straminea, a rare praying mantis from southern Western Ghats

*Opisthacantha keralensis* Sharma -dorsal view*Scelio spinifera* Mukerjee, Head-Anterior view

(Platygastridae: Hymenoptera: Insecta)

[Images captured in Leica M205A Stereomicroscope at WGRC/ZSI, Calicut]

ANIMAL OF THE MONTH

Double-spotted Red-webbed Tree Frog *Rhacophorus bipunctatus* Ahl, 1927



[Text & Photo: North Eastern Regional Centre, Zoological Survey of India, Shillong]

VIDEO: <http://zsi.gov.in/video2.html>

The Double-spotted Red-webbed Tree Frog, *Rhacophorus bipunctatus* Ahl, 1927, is a tree frog of the family Rhacophoridae. This species is found in India, Bangladesh, Myanmar, China, Laos, Cambodia, Vietnam, Malaysia and Thailand. In India, it is found in the North Eastern States of Assam, Arunachal Pradesh, Meghalaya, Manipur, Tripura, and Nagaland;

however, it was originally discovered and described from the Khasi Hills, Meghalaya, India.

R. bipunctatus is a medium sized frog found within the vicinity of water. Its snout is pointed. The body dorsum is green or brown in living condition. The back is sometimes with tiny dark or white speckles. Ventrally and laterally,

foam nests on trees overhanging moving water bodies. The eggs after hatching fall in to water, where they develop. The adults develop through metamorphosis.

This species is listed under the category, 'Least Concern' of the IUCN Red List.

Further Reading:

Chanda, S.K. 1994, Anuran (Amphibia) Fauna of North East India, *Mem. Zool. Surv. India*: 116-117 (Published by Director, Zoological Survey of India, Kolkata).

Mathew, R and Sen, N. 2010, Pictorial Guide to the Amphibians of North East India: 109-110. (Published by Director, Zoological Survey of India, Kolkata).

http://en.wikipedia.org/wiki/Rhacophorus_bipunctatus

<http://research.amnh.org/vz/herpetology/amphibia/?action=references&id=25107>

<http://www.iucnredlist.org/apps/redlist/details/58981/0>

ZSI IN NEWS

The Ministry of Environment and Forests, Govt. of India in collaboration with the Zoological Survey of India released a comprehensive document on '*Critically Endangered Animal Species of India.*'

<http://moef.nic.in/>

http://moef.nic.in/downloads/public-information/critically_endangered_booklet.pdf

Scientists study coral reefs in Gulf of Kutch

<http://m.timesofindia.com/PDATOI/articleshow/7774147.cms>

ONLINE PUBLICATION OF ZSI

Records of the Zoological Survey of India- A Journal of Indian Zoology

http://zsi.gov.in/publications/online_publication.html

OUT OF THE BOX

Decaying vegetable matter threatens Manipur's Loktak Lake

<http://www.zeenews.com/news688102.html>

Fossil shows man walked tall 3 million years ago

<http://www.asianage.com/newsmakers/fossil-shows-man-walked-tall-3-million-years-ago-073>

Has the Earth's sixth mass extinction already arrived?

<http://www.hindu.com/seta/2011/03/03/stories/2011030353141400.htm>

PAINTINGS FROM ZSI HERITAGE ALBUM



Himalayan Quail
Ophrysia superciliosa (J. E. Gray, 1846)