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ZSI e-NEWS

July 2014

The Monthly Electronic Newsletter of Zoological Survey of India

*ZSI in the 99th year of Service to the Nation
(1916 to 2014)*

FROM THE DIRECTOR'S DESK

Many of my colleagues in ZSI would know better that more and more scientists in HQ office and Regional Centres are being equipped with microscopes and cameras besides GPS to document the faunal distribution more precisely so that the data collected over the years can be used for database preparation and digitization. The ZSI is seriously pursuing the administrative Ministry to accord sanctions to purchase various software and hardware to start the process of digitizing National Zoological Collections acquired over the years from across the breadth and length of the country. Digitization is vital and photo-documentation of various species either using microscope

or camera is fast becoming a new trend in Indian zoology. This month, we have organised a small training programme for our scientific staff on how to apply camera in the field to capture the images of wildlife especially insects. Due to various legislations and restriction in place from collecting faunal representatives from the field while we go on survey, many of us now rely on photo-documentation as a tool to produce evidence while writing articles or giving presentation before the audience. Hence, I strongly encourage every scientific staff of ZSI to learn the art of nature and wildlife photography keeping conservation of fauna in mind.

Dr. K. Venkataraman
Director, Zoological Survey of India, Kolkata

Back issues of ZSI e-NEWS [visit: www.zsi.gov.in]

HEADQUARTERS, KOLKATA

During July, 2014, field surveys have been undertaken in the States of Maharashtra, Arunachal Pradesh, Himachal Pradesh, Kerala, Jharkhand, Mizoram, Gujarat and Duars area of northern West Bengal (North Bengal). Scientists of HQ office have identified 18 species of Rhizopods, 7 species of Platyhelminthes, 1 species of leech, 19 species of crabs, 2 species of Isopods, 1 species of Stomatopods, 10 species of Collembola, 12 species of Lepidoptera, 22 species of Hemiptera, 5 species of Coleoptera, 9 species of Hymenoptera, 5 species of Orthoptera, 3 species of Mantodea, 10 species of Isoptera, 7 species of soil oribatid mites, 26 species of fishes, 15 species of amphibians and 4 species of reptiles from Buxa Tiger Reserve and Chilapata Reserve Forest of northern West Bengal, Kalatop-Khajjia WLS and from the States of Maharashtra, Uttarakhand, West Bengal, Arunachal Pradesh, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Odisha, Rajasthan and Andaman and Nicobar Islands.

Eight species under 7 genera and 3 families of Collembola have been recorded for the first time from Simbalwara Wildlife Sanctuary, Himachal Pradesh, India.

A male of the species *Anterhynchium* (*Dirhynchium*) *coracinum* Vecht (Hymenoptera: Vespidae: Eumeninae) has been described for the first time. The subspecies *Anterhynchium* (*D.*) *flavomarginatum curvimaculatum* (Cameron) (Hymenoptera: Vespidae: Eumeninae) has been synonymized under the nominate species *Anterhynchium* (*D.*) *flavomarginatum* (Smith). The subspecies *Anterhynchium* (*Anterhynchium*) *abdominale* (Illiger) (Hymenoptera: Vespidae: Eumeninae) has been reported for the first

time from Delhi, Jharkhand, Karnataka, Odisha and Tripura. The subspecies *Anterhynchium* (*A.*) *abdominale bengalense* (de Saussure) (Hymenoptera: Vespidae: Eumeninae) has been reported for the first time from Delhi, Tamil Nadu, Tripura and Uttarakhand. The subspecies *Anterhynchium* (*A.*) *abdominale bengalense* (de Saussure) (Hymenoptera: Vespidae: Eumeninae) has been reported for the first time from Nepal. *Anterhynchium* (*A.*) *mellyi* (de Saussure) (Hymenoptera: Vespidae: Eumeninae) has been reported for the first time from Assam, Karnataka and Meghalaya. *Anterhynchium* (*D.*) *coracinum* Vecht (Hymenoptera: Vespidae: Eumeninae) has been reported for the first time from Delhi, Himachal Pradesh, Jammu & Kashmir, Meghalaya, Sikkim, Uttarakhand and West Bengal. Similarly, *Anterhynchium* (*D.*) *coracinum* Vecht (Hymenoptera: Vespidae: Eumeninae) has been reported for the first time from Pakistan. *Anterhynchium* (*D.*) *flavolineatum* (Smith) (Hymenoptera: Vespidae: Eumeninae) has been recorded for the first time from Arunachal Pradesh, Meghalaya and West Bengal.

Identification and advisory services have been rendered on 20 lots of specimens received from different institutions and organizations. In addition to that identification and advisory services have also been rendered to the Officer-in-charge of APCR, ZSI, Itanagar on the identification of fishes by Freshwater Fish Section, ZSI HQ; Ms. Pritha Dey, Research scholar, WII, Dehradun India has been provided with laboratory facilities by the Lepidoptera Section, ZSI HQ and Mrs. S. Salini, Scientist, National Bureau of Agriculturally Important Insects (ICAR) visited Hemiptera Section from 21-25 July,

2014 and laboratory facilities have been extended and advisory services have been rendered to her to study the specimens belonging to the superfamily Pentatomoidea kept at Hemiptera Section and type specimens at Central entomological Laboratory. Mr. Mona Chauhan, Research Scholar, Wildlife Institute of India, Dehradun, Uttarakhand visited the Hymenoptera Section for identification of Hymenoptera specimens on 22 July, 2014. Sh. Pradip Kr. Sahu, Research Scholar, Department of Zoology, Guwahati University, Guwahati has studied different species of family Muridae belongs to order Rodentia from 8-18 July, 2014.

Dr. Gaurav Sharma, Scientist-D and Officer-in-Charge, Mammals & Osteology Section has identified confiscated wildlife article *i.e.* one cut piece of skin belonging to Tiger *Panthera tigris* received from the D.F.O., Jaldapara Wildlife Division Cooch Behar, West Bengal.

Training & Extension Division of ZSI, HQ has organized a Training Workshop on "Monsoon Photography" at Zoological Survey of India, HQ on 14 & 15 July, 2014, for 15 participants of ZSI, Headquarters. Mr. Somyajit Maitra, Technical Expert, Nikon India has provided training on the Basic Photography Guide for Beginners followed by the Field visit for providing first-hand experience on the Photography of the specimens in natural habitat at the Indian Botanical Garden, Kolkata. Dr. M. E. Hassan, Scientist-C and Officer-in-charge of Hemiptera Section reviewed a manuscript for publication in *PROMMALIA*.

Shri Rustagi, Chief Engineer, Civil Construction Unit, MoEF, New Delhi visited Coleoptera Section on 3 July, 2014.

Dr. Kailash Chandra, Scientist-F has attended the inaugural and valedictory programme of workshop on 'Monsoon Photography'

beingorganised by the Training and Extension Division, ZSI at Annandale Hall of ZSI's HQ office on 14 & 15 July, 2014, respectively. Dr. Kailash Chandra, Scientist-F on behalf of the Director, ZSI has attended the 23rd Annual General Meeting of SACON Society, held at the Ministry of Environment, Forests and Climate Change on 30 July 2014.

Dr. K. Venkataraman, Director, ZSI, has inaugurated a training programme on 'Monsoon Photography' held at Annandale Hall, ZSI HQ on 14 July, 2014. Dr. Venkataraman has attended a meeting on 15 and 16 July, 2014 at MoEF & CC, New Delhi regarding Capital Construction. He also attended a meeting at Zoological Society, Kolkata on 18 July, 2014. Dr. K. Venkataraman also attended an Expert Committee on Access and Benefit Sharing held at National Biodiversity Authority, Chennai from 25-28 July, 2014.

Publications

- Mandal, G.P. and K.K.Suman (2013) Collembola fauna from Simbalwara wild life sanctuary, Himachal Pradesh, India. *Rec. Zool. Surv. Ind.*, 113 (3):23-28.
- Biswas, S., Hussain, K.J., Das, Das, N.P.I., Russell, B.C., Satpathy, K.K. & Mishra, S.S. (2014) Imprint of monsoonal patterns on the fish assemblage in coastal waters of south-east India: a case study. *Journal of Fish Biology*, doi: 10.1111/jfb.12461.
- Sethy P. G. S., Bulliyya, G., Rautray, T. R., Behera, S., and Kar, S. K. (2014) Status of Serum Trace Elements among Preschool Children in Rural Bhubaneswar, Odisha, India. *International Journal of Advanced Nutritional and Health Science* 2(1): 59-66.
- Sethy P. G. S., Bulliyya, G., Rautray, T. R., Behera, S., and Kar, S. K. (2014) Nutritional Status of Preschool Children in Association

with Some Trace Elements in Rural Gram Panchayatas of Bhubaneswar, Odisha, India. *Advanced Science Letters*, (3-4): 868-873.

- Pratihari, S., Clark, H.O., Dutta, S., Khan, M.S., Patra, B.C., Ukuwela, D.B.U., Das, A., Pipeng, L., Jianping, J., Lewis, J.P., Pandey, B.N., Razzaque, A., Hassapakis, C., Deuti, K & Das, S. (2014) Diversity and Conservation of amphibians in South and South-east Asia. *Sauria Berlin.*, 36(1): 9-59.
- Majumder, A, Raha, A, Mitra, B. and Chandra, K. (2014) Contributions to the Studies on Prioninae (Coleoptera: Cerambycidae) of Central India with Checklist Of Indian Species. *Mun. Ent. Zool.* 9(2): 848-857.
- Bhowmik, B., Mitra, B and Bhadra, K. (2014) Diversity of insect pollinators and

their effect on the crop yield of brassica juncea., npj-93, from southern West Bengal. *International Journal of Recent Scientific Research* 5(6): 1207-1213.

- Mitra, B. (2014) Insect faunal diversity in the sacred groves of Sonamukhi Block, Bankuradistrict, West Bengal, India. *J. Environ. and Sociobiol.* 11(1):79-88.
- Majumder, A., Raha, A., Mitra, B. & Chandra, K. (2014) Contributions to the studies on Prioninae (Coleoptera: Cerambycidae) of Central India with checklist of Indian species. *Munis Entomology & Zoology* 9(2): 848-857.
- Girish Kumar, P. 2014 (2013). A study on the genus *Anterhynchium* de Saussure (Hymenoptera: Vespidae: Eumeninae) from Indian subcontinent. *Records of Zoological Survey of India.* 113(4): 139-158.



Pempheris malabarica Cuvier in Cuvier & Valenciennes, 1831



Siganus corallinus (Valenciennes, 1835)



Photographs taken at Indian Botanical Garden during photography training workshop.



Asiatic Lion
Panthera leo persica
(Meyer)

Photo: Gaurav Sharma



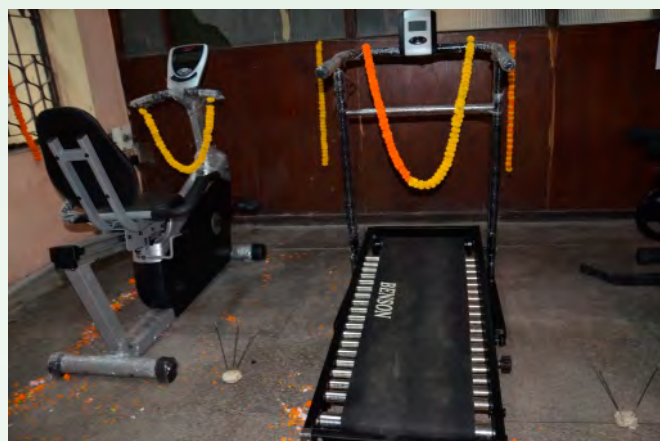
Participants during training workshop on Monsoon Photography.



Participants during training workshop on Monsoon Photography.



Director, ZSI inaugurated the gym at ZSI HQ building for staff and officers.



ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

Marine ecosystem of Oliver Island, Sound Island and Mayabunder in Middle Andaman has been surveyed from 8-14 July, 2014 while 8 local surveys in the terrestrial ecosystem of South Andaman have been conducted to assess the faunal diversity. A total of 237 species comprised of 79 species of scleractinian corals, 7 species of sea anemones, 51 species of gastropods, 6 species of bivalves, 10 species of opisthobranchs, 10 species of echinoderms, 11 species of crabs, 7 species of ascidians and 2 species of marine insect-*Halobates* have been identified from marine environment; while, 27 species of butterflies, 6 species of insects and 21 species of birds have

been identified/observed from terrestrial environment. Among species recorded in marine environment scleractinian coral *Halomitra meierae* Veron and Maragos, 2000; brachyuran crabs *Tetralia nigrolineata* Serene & Dat, 1977, *Ceratoplax ciliata* Stimpson, 1858 and *Lissoporcellana spinuligera* (Dana, 1853) are new record to Indian waters. Besides, a total of 206 specimens including 71 specimens of coral, 11 specimens of opisthobranch, 9 specimens of sea anemone, 1 specimen of hydrozoa, 2 specimen of scyphozoa, 2 specimens of *Hablobates*, 64 specimens of mollusc, 2 specimens of crab, 12 specimens of ascidian, 1 specimen of spider, 1 specimen of

odonate, 18 specimen of butterfly, 1 specimen of reptile and 1 specimen of bird have been registered in the National Zoological Collections. The seized material of edible nest swiftlet and scheduled gastropod shells have been identified for Department of Environment and Forests, Port Blair on request and the reports submitted. State-of-the-art article on Ctenophora, Ehiura and Brachiopoda have been submitted to ZSI headquarters. In addition, project proposals on 'Determination of the conservation value of the coral reefs of Andaman' to NCSCM/MoEF&CC, Chennai; REIA studies on 'Biotic components in the proposed site for the extraction of impervious mineral in South Andaman' to Andaman Public Works Department, A&N Administration; AICOPTAX proposal on 'Taxonomical Investigations of Lesser Known Marine Animals' to ZSI HQ have been submitted. Approval has been received from the administrative ministry for grants-in-aid project, 'Reproductive biology of scleractinian corals of Andaman and Nicobar Islands'. Dr. C. Raghunathan, Scientist-D & Officer-in-Charge served as an external examiner for Ph.D. viva-voce at University of Madras, Chennai on 4 July, 2014; Selection committee member for the recruitment of various posts in National Sample Survey Organization, Port

Blair on 17th July 2014; served as a member in State Board for Wildlife meeting chaired by Hon'ble Lt. Governor of A&N Islands held at Rajniwas on 30 July, 2014. Dr. Raghunathan also served as a member of Science and Technology Council meeting held as Secretariat, Port Blair on 30 July, 2014. Dr. C. Sivapeurman, Scientist-D has delivered a lecture on 'Estimation of spotted deer population' for frontline staff of Department of Environment and Forests, Port Blair on 15 July, 2014 and assisted department on deer population estimation conducted at Ross Island on 16 July, 2014. Mr. D. Deivaprakasam, Sr. Zoological Assistant has attended a workshop on 'Interfacing innovation and IPR for diffusion of technology' being organized by the NRDC and Science and Technology Council of A&N Islands at Port Blair on 9 July 2014.

Publications

- Rajan, P.T., and Sreeraj, C.R. (2014) New record of two species of *Belobranchus* (Teleostei:Gobioidei: Eleotridae) from Andaman Islands. *Rec. zool. Surv. India* 114 (Part-1): 155-158.
- Rajan, P.T. and Sreeraj, C.R. (2014) Seven new records of fishes from Andaman Islands. *Rec. zool. Surv. India* 114 (Part-1): 125-132.



Opishobranch *Gymnodoris striata* Bergh 1905



Opisthobranch *Flabellina bicolor* Kelaart 1853



Opisthobranch *Flabellina exoptata* Gosliner Willan 1991



Opisthobranch *Glossodoris atromarginata* Cuvier 1804



Opisthobranch *Glossodoris hikuerensis* Purvot-Fol 1954



Opisthobranch *Jorunna funebris* Kelaart 1858



Opisthobranch *Phyllidiella nigra* van Hasselt 1824



Opisthobranch *Phyllidiella zeylanica* Kelaart 1859

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE (CALICUT)

During the month, a new species of Scorpion under the genus, *Buthoscorpio* Werner (Buthidae: Scorpiones: Arachnida) described from Chinnar Wildlife sanctuary, Kerala and the manuscript made ready for submission. Other identifications during the month include 04 species of Scorpiones (Arachnida) under 03 genera, 18 species of Odonata under 11 genera, 3 sp. Butterflies, 2 sp. Pteromalidae (Hymenoptera), 2 sp. Reptilia and a collection of Amphibia from the shola grassland ecosystem of Western Ghats identified up to the genus level. Stock verification of the identified and unidentified faunal holdings of the Centre has been completed and the report submitted to HQ office, Kolkata. Nine identification and advisory services have been rendered to outside researchers and students. Dr. P. M. Sureshan, Scientist-D has delivered a lecture on the Biodiversity of India, Status, threats and Conservation during the vacation training programme for talented students at Youth Hostel, Calicut on 11 July, 2014. Dr. Md. Jafer Palot, Asst. Zool. has delivered a lecture on the "Biodiversity of Kerala" to the teachers in a one-day preparatory workshop for high school teachers (SEED programme) - at Nalanda Auditorium, Kozhikode on 3 July, 2014 being organized by Mathrubhumi Daily.

International Tiger Day-2014 has been celebrated in the Centre jointly with Kerala Forest Department and Regional Science Centre and Planetarium, Kozhikode on 30 July, 2014. Painting and quiz competitions on the theme "Tiger our National Animal" have been organized for high school students. During this occasion, Dr. P. M. Sureshan, Scientist-D has delivered a lecture on the Status and Conservation of Tigers in India. Prizes were distributed to the winners.

Dr. P. M. Sureshan, Scientist-D has supervised the research project of three research scholars and Dr. K. Rajmohana, Scientist-C has supervised the research projects of five research scholars of the Centre for their doctoral degrees. During the month, 156 visitors paid their visits to the museum.

Publications

- Palot, M.J. and Balakrishnan, V.C. (2014) *Madayiparayile Jaivavaividhyam* (A pictorial Pocket book on Biodiversity of Madayipara Hill). Kerala Forest Research Institute, Peechi, Thrissur. 99pp.
- Palot, M.J. (2014) *Uragangal: Theliyan pambu* (Reptiles: Striped Keelback) *Koodu-* An environmental Magazine in Malayalam. Vol.2 (15): 45.

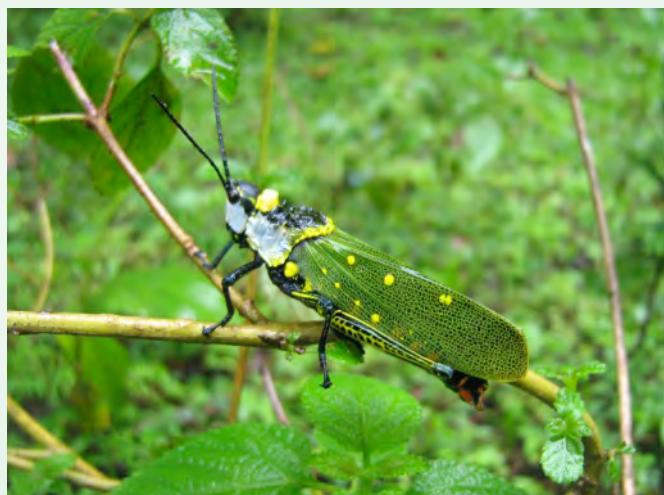




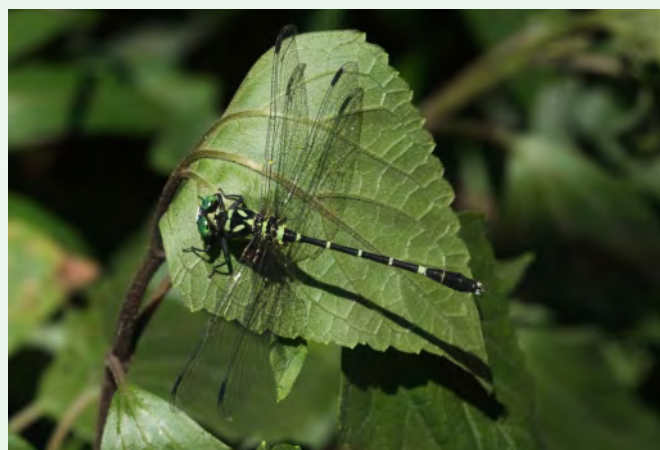
Buthoscorpio sp. (Scorpiones : Buthidae)



Isometrus thrustoni (Scorpiones : Buthidae)



Coffee locust, *Aularches miliaris*



Microgomphus souteri (Insecta : Odonata)



Leaf insect. *Phyllium* sp.



Psilocera keralensis Sureshan, 2014. (Hymenoptera : Pteromalidae)

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA

During the month, eight examples of molluscs belonging to five species under four genera and three family have been identified from the unidentified collections of EBRC, ZSI (Brahmani-Baitarani Estuary). A total of 92 specimens of aquatic Coleoptera belonging to 10 genera and 24 species have been identified from the collections of Tampira Lake, Rishikulya and Subhadra estuary survey. Twelve specimens belonging to two orders

and four families of aquatic Hemiptera and Coleoptera have been identified under 5 genera and 5 species from the collections of Bharuch, Gujarat 1st Narmada and Tapi Estuary survey. Twenty-nine museum specimens have been digitized and their metadata entered. Dr Swetapadma Dash, Scientist-C & Officer-in-Charge has reviewed one manuscript for the *Journal of Mosquito Research*.

*Guignotus flammulatus* (Sharp)*Laccophilus ellipticus* Regimbart*Laccophilus parvulus* Aube*Pseudovelgia sexualis* (Paiva)*Regimbartia attenuata* Fab.*Anisops kurowae* Matsumura

SUNDERBANS REGIONAL CENTRE, CANNING

One local tour has been conducted by Mrs. Supriya Nandy, Scientist-B and her team in different fish landing centres of Kakdweep in Sunderban and collected 41 specimens of fishes including Ray fishes. Scientists of this Centre also have identified 13 specimens of Crustacea belonging to four species from

three family and three genera and also one species of fish from two specimens have been identified and registered. One Official Language meeting has been conducted in the office for the progressive use in Official language. Fifteen students from the nearby school visited the museum of our Centre.

NORTHERN REGIONAL CENTRE, DEHRADUN

One local survey has been undertaken in Rajaji National Park, Uttarakhand for collection of Acridoidea. The scientists of the Centre have identified the following fauna during the month: 23 species of Lepidoptera and 9 species of soil Nematodes from Punjab; 2 species of soil Nematodes from Sultanpur BS & NP; 7 species of soil Nematodes from Govind WLS (Uttarakhand); 5 species soil Nematodes and 33 species of Lepidoptera from Dehradun.

DNA has been extracted from 10 samples belonging to 2 species of Pieridae butterflies, while 700bp amplicon of COI gene using Universal primers obtained from 6 samples belonging to 3 species of Pieridae butterflies and sequences of 6 species have been received, while samples for another 5 species have been sent for sequencing. Around 300 permanent slides of nematodes for morphological studies have been prepared from soil samples collected from Punjab,

Govind WLS and Dehradun surveys.

During the month we have registered around 155 examples of Lepidoptera identified from Punjab and Dehradun surveys, while 70 examples of soil nematodes from Punjab, GWLS and Dehradun surveys. Fifteen entries of nematodes and 87 entries of Lepidoptera have been entered in the invertebrate database. Digitization of amphibia with 60 images has been made and their metadata entered.

Under Indo-German Technical Cooperation, Access and Benefit Sharing (ABS) Team comprising of three members visited NRC, Dehradun on 28th July, 2014.

Necessary cooperation was extended to the Dolphin Institute of Paramedical Sciences for the joint workshop on HOT & DNA Bar-code to be held in October 2014. Around 15 visitors visited the Museum and Library of NRC during July 2014.

MARINE AQUARIUM & REGIONAL CENTRE, DIGHA

A survey has been conducted in the coastal areas of Tamil Nadu to document the ornamental fauna along the east coast of India and in total 882 numbers of specimens have been collected. Our Marine Aquarium received in an average 780 tourists per day. In total 68 live specimens have been liberated in the aquarium during July 2014. A total of 4237 specimens have been identified, which includes 4011 (12 species) mollusk specimens, 216 (86 species) fish specimens and 10 specimens (5 species) of crabs. The identified specimens include *Pempheris malabarica* Cuvier in Cuvier and Valenciennes, 1831 which is a

first record for Odisha and *Siganus corallinus* (Valenciennes, 1835).

Publications

- Mohapatra, A., Ray, D., Tudu, P. (2013) New record of convict surgeonfish *Acanthurus triostegus* (Linnaeus, 1758) from Chilika Lake. *Records of Zool. Surv. India* 113(4): 75-77.
- Ray, D., Mohapatra, A. (2013) First report of brassy chub, *Kyphosus vaigiensis* (Quoy and Gaimard, 1825) from northern east coast of India. *Records of Zool. Surv. India* 113(4): 71-73.



Pempheris malabarica Cuvier in Cuvier & Valenciennes, 1831



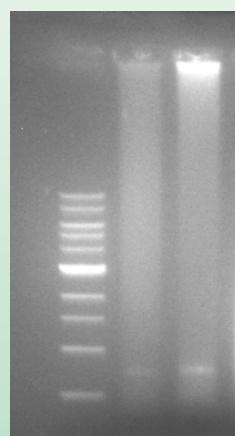
Siganus corallinus (Valenciennes, 1835)

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

Scientists of the Centre have examined recent freshwater zooplankton samples collected from various wetlands of Andhra Pradesh and identified (Ostracods) as 4 species of Cyprididae (Crustaceans) such as *Stenocypris hislopi*, *Stenocypris derupta*, *Cypris subglobosa*, *Cyprinotous cingalensis*, and another one as (Family: Candonidae) *Fabaeformiscandona subacuta*

The DNA barcode laboratory of this Centre has isolated the DNA from 2 species of Dytiscidae insects i.e. *Sandrocottus mixtus* and

Sandrocottus dejeanii using Nucleospin kit Method.



Lane 1 - 1Kb Ladder

Lane2- *Sandrocottus mixtus* PCR (very low amplification was observed)

Lane3-*Sandrocottus dejeanii* PCR

Gel image of insects

As part of the digitisation of the freshwater fauna, 4 specimens belonging to 3 species of zooplankton (Ostracod) viz. *Stenocypris*



Fabaeformiscandona subacuta (Yang, 1982)

derupta, *Cyprinotous cingalensis* and *Fabaeformiscandona subacuta* digitized during the month.



Cyprinotous cingalensis (Brady, 1886)



Stenocypris durputa Vavra, 1906

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

During the month 121 examples of recently collected fishes during recent surveys of Arunachal Pradesh have been studied and identified; all belong to 2 orders, 4 families, 6 genera and 9 species. The identified specimens have been registered under 17 registration numbers and the data have been

computerized and digitized. The identified fishes include 1 new species, *Creteuchiloglanis arunachalensis* sp. nov. Dr. S. D. Gurumayum has identified 10 mollusca species under 8 families from 35 examples collected from Basnapati station, 4th Tapi Estuary Survey, Surat, Gujarat.



*Chalcophaps
indica*



Creteuchiloglanis arunachalensis sp. nov.



Oligodon albocinctus



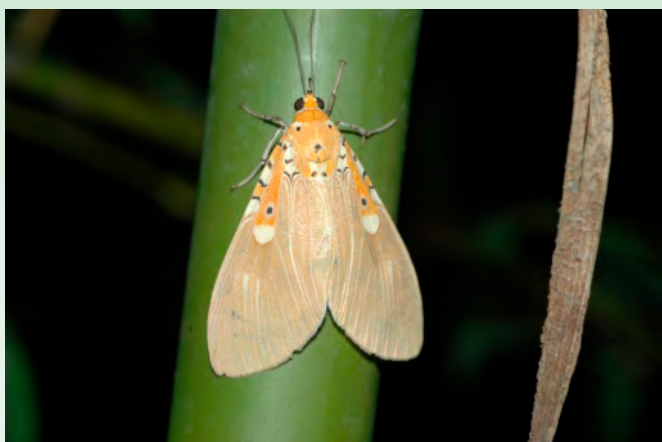
Vanellus indicus

CENTRAL ZONE REGIONAL CENTRE, JABALPUR

During the month, scientists of this Centre have identified and registered 17 species of moths (Lepidoptera), 06 species of Odonata, 11 species of Hemiptera, 5 species of Coleoptera and 03 species of Pisces from Betul, Chhindwara, Hoshangabad, Indore, Khandwa, Seoni and Rajgarh districts of Madhya Pradesh. Identification and advisory services have been rendered to (i) Dr. Murali Jadesh, Chairman, Department of Post Graduate Studies and Research in Zoology, Gulbarga University, Gulbarga towards identification of Odonata (Dragonflies) samples and photographs collected from Gulbarga area, Karnataka. All have been identified as belonging to 10 species and 10 genera (ii) Ms. Ridhi Chndarana, Research

Fellow from Wildlife Research & Conservation Society, Pune visited the Centre from 12-25 July, 2014 for identification of bone samples (298 exs.) isolated from Forest Owlet pellets which have been collected from Khandwa district, Madhya Pradesh and have been identified into 5 species and 5 genera. The identification reports have been sent to the respective university/institution. Dr. S. Sambath, Scientist-C & Officer-in-Charge of the Centre has attended the Departmental Promotion Committee meeting of Tropical Forest Research Institute (TFRI), Jabalpur for promotion of various technical and ministerial staffs on 03 July, 2014 and Board of Studies Meeting of Govt. Model Science College, Jabalpur on 19 July, 2014.

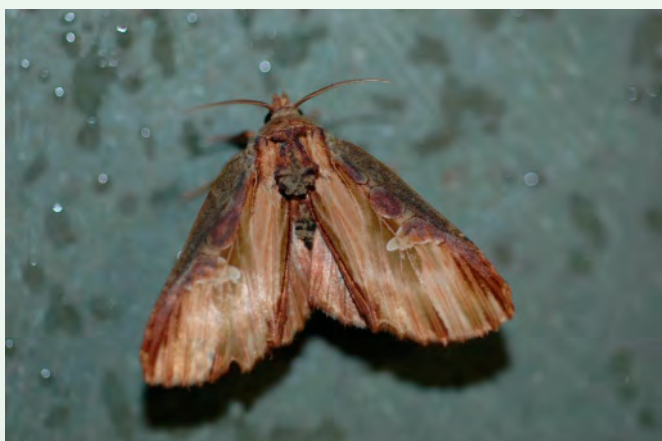
Moths recorded from Lakhnadon, Seoni district, Madhya Pradesh



Asota ficus Fabricius



Callyna jugaria Walker



Cetola dentata Walker



Euproctis lunata Walker



Miresa albipuncta Herr.-Schaffer



Spirama retorta Cramer

DESERT REGIONAL CENTRE, JODHPUR

During the month, scientific staff of the Centre have identified and registered 7 species of fish from the jurisdiction area. They also digitized 27 specimens of NZC for Research Framework Document. Dr. Sanjeev Kumar, Scientist-D & Officer-in-Charge has attended the XXII Prof. D. S. Kothari Memorial oration on Need for Knowledge Economy: For Development & for security delivered by Dr. R. Chidambaram, Principal Scientific Advisor to the Govt. of India & Chairman, Scientific Advisory Committee to the cabinet at Defence Laboratory (DRDO), Jodhpur on 6 July, 2014. Dr. Sanjeev Kumar, also has a delivered lecture on faunal diversity of Rajasthan and its importance to

200 students of Career Point, Jodhpur on 21 July, 2014. Dr. H. S. Banyal, Scientist-C has provided scientific information on the fauna displayed in the museum.

Publications

- Tak, N., and Sanyal, A.K. (2013) First Record of ant (Insecta: Hymenoptera: Formicidae) from Lakshadweep Islands, India. *Rec. zool. Surv. India*: 113(Part-4): 13-15.
- Basu, P., Tak, N., and Sanyal, A.K. (2013) Ants (Insecta: Hymenoptera: Formicidae) of Bethuadahari Wildlife Sanctuary Nadia, West Bengal, India. *Rec. zool. Surv. India*: 113(Part-4): 17-22.



Dr. Sanjeev Kumar, Scientist-D & Officer-in-charge delivering lecture to students of Career Point, Jodhpur on 21st July, 2014 at the centre.



Students of Career Point, Jodhpur visited the centre on 21st July, 2014.



Oreochromis mossambicus (Peters, 1852)



Pterocles exustus Temminck, 1825

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

The Internal Science Forum (ISF) of MBRC formed with objective of creating an atmosphere of scientific interaction between scientific staff of the Centre has organized its first meeting on 7 July, 2014 at the Museum Hall of MBRC. To initiate discussions on a topic, a presentation was made. Shri. Shrinivaasu, SRF of this Centre has been asked to speak on his research topic 'Coral reef faunal diversity and ecology with special reference to cryptofauna' which in turn has received useful comments from the participants. Scientific staff of MBRC and SRC have attended the interaction meeting held at MBRC, Chennai.

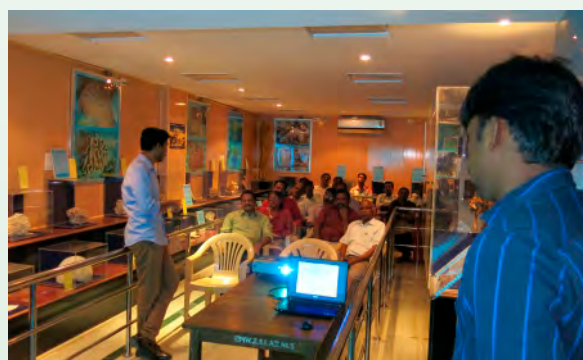
A species of deep sea marine crab has been collected and identified from the fish landing centre in Chennai. The crab species *Parilia alcocki* Wood-Mason and Alcock, 1891, has been reported after a gap of nearly 100 years after Alcock, 1895. Incidentally, an unnamed

specimen at the MBRC Collection (collection date: 30/3/1995; Locality: Off Tuticorin) has also been identified as that of the same species.

A survey has been carried out in the southern coasts of Tamilnadu from 16-21 July, 2014 under the project 'Studies on the free-living protozoan fauna of estuaries in various coastal zones of Tamil Nadu' lead by Dr. L. Bindu. Seventy-one lots of water samples have been collected during the survey.

Publications

- Lekshmi, M.S., Bindu, L., and Jayaprakas, V. (2014) Records of some testate amoebae (Rhizopoda : Protozoa) from Vellayani Lake, Kerala, India. *Global Journal of Bioscience and Biotechnology* 3(3): 250-254.
- Sivaleela, G., and Venkataraman, K. (2013) Diversity and distribution of benthic Foraminifera from Tamilnadu Coast, India. *Rec. Zool. Surv. India*: 113 (part-4): 01-12.



At the Internal Science Forum in MBRC, Chennai.



Deep water crab species *Parilia alcocki* Wood-Mason and Alcock, 1891



A mollusc species *Stellaria solaris* (Linnaeus, 1764, collected during the month from Chennai waters.

GANGETIC PLAINS REGIONAL CENTRE, PATNA

A faunistic survey has been conducted during 1st quarter by Dr. Gopal Sharma, Scientist-C & Officer-in-Charge of the Centre as per the annual plan of research-2014 on fauna of Jharkhand (aquatic fauna) from 27 June, 2014 to 07 July, 2014. Samples have been collected and sorted out group-wise: Gastropoda-1148exs., Pelecypoda-30exs., Insecta-105exs., Malacostraca-323exs., and Zooplanktons 22tubes. Also during the month we have identified 10 species of Zooplankton (Rotifera) such as *Brachionus caudatus*, *Brachionus rubes*, *Brachionus calyciflorus*, *Asplanchna brightwelli*, *Brachionus calyciflorus.*, *Brachionus forficula*, *Brachionus patulus*, *Brachionus plicatilis*, *Filinia terminalis*, *Lecane lateralis*.

Also identified 8species of Noctuidae such as *Spodoptera mauritia*, *Ophiusa cuprea* Moore, *Achaea janata* Linnaeus, *Pericyma cruegeri*

(Butler), *Beana terminigera* Walker, *Thyas coromata* (Fabricius), *Asota caricae* Fabricius, *Agrotis spinifera* Hübners.

Dr. Gopal Sharma has participated in a UGC-sponsored National Seminar on Agro biodiversity: Erosion and conservation from 21-22 July, 2014 being organized by P. G. Department of Zoology, Jagdam College, Chhapra, Jaiprakash University, Chapra, Bihar and Dr. Navneet Singh has presented a paper on Agro-biodiversity: Conservation challenges and insect diversity and agriculture-An inextricable linkage in the same seminar. Plantation work has been carried out by the Department of Environment and Forests, Govt. of Bihar in the new office campus of GPRC, ZSI, Patna on 27 July, 2014.

WESTERN REGIONAL CENTRE, PUNE

During the month, 11 species of Odonata, 4 species of Acrididae, 2 species of Scarabaeidae, 9 species of wasps, 2 species of freshwater crabs, 24 species of freshwater and terrestrial molluscs, and 30 species of freshwater Pisces have been identified by the researchers of WRC, Pune. Besides these, identification and advisory services have been rendered on Hymenoptera to Jai Research Foundation, Valvada, District Valsad, Gujarat; on freshwater crab specimens received from Department of Zoology & Biotechnology, H.N.B. Garhwal Central University, Srinagar; and on the freshwater and land mollusca specimens received from the Principal, C.H.C.

Arts, S.G.P. Commerce & B.B.J.P. Science College, Taloda, District Nandurbar, Maharashtra and also on fish specimens received from Prof. D. V. Mule, Dept. of Zoology, Shivaji University, Kolhapur. Shri. Sachin R. Patil., Assistant Zoologist has attended a meeting of Board of Governors of Kundal Academy of Development, Administration and Management (Forests), Maharashtra State Forest Department held on 08 July, 2014 at the O/o the Principal Secretary, Forests, (Maharashtra) and President of the Board of Governors, Mantralaya, Mumbai.

Publications

- Bhatnagar, P.S. (2013) Identification of unnamed collection of Acrididae (Insecta : Orthoptera) from Karnataka present in WRC, Pune. *Rec. zool. Surv. India*. 113 (Part-4): 79-91.



Large-scaled Shieldtail, *Uropeltis macrolepis* (Peters, 1862)

- Bhatnagar, P.S. (2013) A classified list of Megachiroptera in South-East Asia. *Malayan Nature Journal*. 65(2 & 3): 22-29.



Indian Peafowl, *Pavo cristatus* Linnaeus, 1758

NORTH EASTERN REGIONAL CENTRE, SHILLONG

During the month, 21 specimens of fishes from the backlog collections have been identified into 5 species as *Danio rerio* (Ham); *Schistura reticulofasciata* (Singh & Banareescu); *Pillaia indica* Yazdani, *Badis badis* (Ham) and *Channa gauchua* (Ham).

Identification service has been rendered to Mr. Nitin Walmiki, Ecologist at Mumbai Metropolitan region on the identity of 2 species of bats *Megaderma lyra* and *Taphozous longimanus*. Identification service has also been rendered to Guwahati University, Assam, on the identity of 7 species of fishes such as *Pethia phutunio*, *Garra gotyla*, *Schizothorax richardsonii*, *Schistura multifasciata*, *Amblyceps apangi*, *Glyptothorax trilineatus* and *Nangra assamensis*. A compilation on the Amphibia of East Khasi Hills, Meghalaya has

been provided to the Govt. of Meghalaya. Around, 3233 books kept in the library have been physically verified. During the month, we have digitized 21 specimens of fishes and 6 bat specimens and their metadata entered. During the month, 31 B.Sc., (Hon.) students and 2 teachers of St. Mary's College Shillong visited the Centre on 25 July, 2014. Shri. A. Bhattacharjee an officer of the Centre narrated the students and teachers on Biodiversity and also gave a demonstration on the Collections and Preservations of zoological specimens. Mrs. I.J. Kharkongor, Scientist-C has attended a five-day outreach programme on DDO functions being conducted by the Institute of Government Accounts and Finance, RTC, Kolkata from 21-25 July, 2014 at Assam Riffle's HQ office at Shillong.



B.Sc., (Hons.) students of St. Mary's College, Shillong with Shri. A. Bhattacharjee of the Centre during their visit to NERC/ZSI, Shillong.

HIGH ALTITUDE REGIONAL CENTRE, SOLAN

Faunistic identifications from the Centre include 3 species of butterflies (out of 10 examples), 1 species of fish (out of 02 examples) from the Cold desert of Spiti Valley and Chandertal Lake, Lahaul and Spiti, (HP); 04 species of butterflies (out of 13 examples), 03 species of Orthoptera (out of 07 examples), 01 species of Pisces (out of 02 examples) from Chail WLS, Solan; 02 species of Pisces (out of 03 examples) from Sukhna lake, Chandigarh. A scientist of the Centre has identified Lepidoptera lot received from SRC, Chennai. Two Scientists have reviewed three research papers for well reputed Journals. Chief architect Er. Parbakar Verma, Sr. Architect Mr. Ane Parsi of CPWD from Chandigarh and

Ex. Engg. & SDO of CPWD Shimla, visited the Centre on 15 July, 2014 for renovation of National Zoological Museum. Three year training course proposal on taxonomy under AICOPTAX has been prepared and sent to DZSI, Kolkata on 16 July, 2014. The information on Conservation of Himalayan Ecology has been sent to DZSI, Kolkata. One scientist has supervised the research work of two Ph.D. scholars and one research scholar went to Ladakh for survey tour. A team comprises of three scientific staff was on tour to Cold Desert of Spiti Valley & Chandertal Lake, district Lahaul & Spiti, H.P from 17 July, 2014.



Neuroptera from Spiti Valley



Oxyrrhypes obtusa (Hann, 1842)



Landscape of Spiti valley.

SOUTHERN REGIONAL CENTRE, CHENNAI

During July, scientists of the Centre have focused largely towards identification of various faunal groups from both the ongoing surveys as well as National Zoological Collection deposited in SRC. Dr. R. Venkitesan, Scientist-D has identified 301 specimens of Land and freshwater molluscs into 16 species under 11 genera, 8 families from the recent surveys of southern Western Ghats and the existing collection of SRC Chennai. He also extended identification services to Mr. J. Ganesh and Mr Suresh, both from the Department of Zoology, Loyala

College Chennai on 61 samples and 22 examples of marine molluscs with 20 species, 13 genera, 10 families and 10 species, 8 genera, 8 families, respectively.

Dr. Jayasree Thilak, Scientist-D has identified 168 specimens of fishes belonging to 14 species, 4 Orders, 8 families under 12 genera from the samples collected from middle Eastern Ghats of Andhra Pradesh. In addition to these, she also identified 113 specimens of Rotifera belonging to 15 species, 8 genera, 1 order, 5 families; 265 specimens of Cladocera belonging to 13 species, 10 genera, 2 orders, 6

families and 101 specimens of Ostracoda belonging to 9 species, 6 genera, 1 order, 1 family from the zooplankton samples collected from the different localities of Trichy, Villupuram and Thiruvannamalai districts of Tamil Nadu. She also rendered identification services to Miss. Raja Reegam, M.Phil Student, Loyola College, Chennai on fish, *Hyphessobrycon anisitsi* (Eigenmann, 1907).

Dr. R. Babu, Scientist-C has identified 47 specimens of Odonata belonging to 10 species, 9 genera under 6 families from the recent survey of Western Ghats of Tamil Nadu. Dr. R. Aengals, Scientist-C has identified 8 reptile specimens into 5 species under 5 genera belonging to 4 families, collected from the Andhra Pradesh. Dr. S. Prabakaran, Scientist-C has identified 11 species of 31 Cockroaches accommodated under 7 genera, 2 families under 3 sub-families from southern Eastern Ghats of Tamil Nadu.

Shri. D. Prabakar, Scientist-B has identified 159 specimens of Acridomorpha

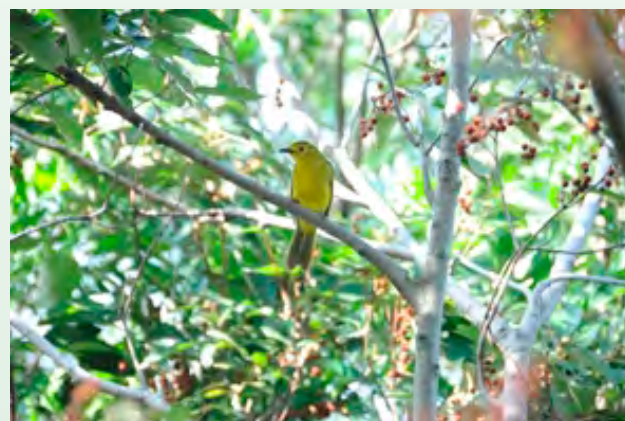
(grasshoppers) belonging to 27 species under 22 genera, 11 subfamilies and 3 families collected from the southern Eastern Ghats of Tamil Nadu. Dr. V. M. Sathish Kumar, Assistant Zoologist has generated DNA barcode for 2 species viz. *Chamaeleo zeylanicus* and *Puntius dorsalis* based on mitochondrial cytochrome c-oxidase subunit I (COI) gene. Dr. K. Ilango, Scientist-D and Officer-in-Charge has been nominated by the Vice Chancellor of Madras University as an expert committee member in connection with the selection of 'UGC BSR Fellowship in science for meritorious students held on 14 July, 2014. Dr. Ganesh Kumar M.V.Sc., I.F.S., DFO joined as full-time Ph.D., degree student under the guidance of Dr Ilango.

Publication

- Prabakaran, S., Chezhian. Y., Evangelin. G., and William, J. S. (2014) Diversity of Butterflies (Lepidoptera: Rhopalocera) in Tiruvallur District, Tamil Nadu, India. *Biolife* 2(3): 769-778.



Lizard, *Psammophilus* sp.



Iole indica (Jerdon)



Collared Scops-Owl
Otus bakkamoena
Pennant

ANIMAL OF THE MONTH

White-bellied Heron *Ardea insignis* (Hume, 1878)

White-bellied Heron *Ardea insignis* is Critically Endangered. The worldwide population could be between 50 and 249 individuals. In Bhutan, a small population of 30 known individuals (with six juveniles) were recorded as of July 2007,

with the overall total population unlikely to exceed 50 individuals in this Himalayan kingdom. In India, Arunachal Pradesh and Assam are the main states where one can see this species. In Arunachal Pradesh, it has been reported from Namdapha Tiger Reserve especially from its fast-flowing rivers namely Noa-Dihing, Namdapha and Debannalla. In Bhutan, in 2007, six active nests have been recorded and by 26 July, 2007 those nests had six chicks. Unfortunately, due to natural forest



Text and Photo by Gopinathan Maheswaran
Zoological Survey of India, HQ Office, Kolkata

fires, three nests were abandoned by the parent herons. The Kingdom of Bhutan is the only country known to have the breeding population of WBH in the entire world until ZSI team has recorded an active nest at Namdapha in March

2014 making it a first nesting record for India. The confluence of Noa-Dehing and Namdapha rivers supports a few individuals of White-bellied Heron by providing them with required fresh water fishes-the main known food items of this species in India. Along with these main rivers there are numerous perennial rivers and rivulets and seasonal streams which drain out waters from both Dapha Bum and Patkai ranges to the river Noa-Dehing.

OUT OF THE BOX

New study shows vulture-killing drug kills eagles too

<http://www.birdlife.org/worldwide/news/new-study-shows-vulture-killing-drug-kills-eagles-too>

Zoologists hail UGC ban on dissection of animals

<http://www.thehindu.com/features/education/college-and-university/zoologists-hail-ugc-ban-on-dissection-of-animals/article6303694.ece?homepage=true>

Study suggests southwest monsoon shifting North, South getting drier

<http://www.thehindubusinessline.com/news/global-warming-study-suggests-southwest-monsoon-shifting-north-leaving-south-drier/article6307901.ece>

Ancient microbe colonies found living under 800 metres of ice in Antarctic

<http://timesofindia.indiatimes.com/home/environment/the-good-earth/Ancient-microbe-colonies-found-living-under-800-metres-of-ice-in-Antarctic/articleshow/40575296.cms>

Recently Discovered: A Small Lake in Gujarat is the first to host upside-down Jellyfish in India

<http://www.thebetterindia.com/13740/rare-upside-jelly-fish-found-small-town-gujarat/>