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ZSI e-NEWS

February 2017

The Monthly Electronic Newsletter of Zoological Survey of India

*ZSI in the 101st year of Service to the Nation
(1916 to 2016)*

FROM THE DIRECTOR'S DESK



The impacts of human interventions on the natural world are on the rise. The global scientific community is in search of ways and means to address these issues. Apart from accelerating the rate of discovery and documentation of species, there also exists a high demand for rapid and ready access to digital databases, for, such data have a vital role for policy makers in decision making.

Like in all other fields, the advances in digital technology have revolutionized biodiversity science. But still there is an acute shortage of reliable and authentic digital databases or catalogues with regard to Indian fauna. Both

regional faunal lists and taxonomic databases are of very high priority. With this objective, a Faunal Information System, having a dedicated species page each for the approximately one lakh animal species in India is being developed by Zoological Survey of India. The species pages will be arranged according to the taxonomic hierarchy. Other than the valid scientific name, each species will be linked with diagnostic images, habitat image, GIS based spatial distribution and also taxonomic bibliographies. The facility would benefit the researchers a lot and also contribute to mainstreaming biodiversity for sustainable development.

Dr. Kailash Chandra
Director

Zoological Survey of India, Kolkata

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HEADQUARTERS, KOLKATA

During the month a survey tour was conducted at Chilka Lagoon and Satkosia Tiger Reserve from 10th to 20th by Dr. Maheswaran and his team. Three more surveys were undertaken at Chilka Lagoon by three different teams. From 4th to 19th of the month a survey tour was undertaken to Gujarat (Jamnagar, Dwarka and Porbandar). Extensive field survey was undertaken in the Gulf of Mannar, Tamil Nadu from 1st – 15th February. A survey in collaboration with WGRC, Calicut was conducted for 10 days to South Western Ghats in Trichur and Ernakulam districts of Kerala, from 30th January to 8th February.

During the month, the scientists of Headquarters identified 9 species of Platyhelminthes, 11 species of soil oribatid mites, 23 species of Orthoptera, 6 species of Isoptera, 14 species of Odonata, 8 species of Ephemeroptera 4 species of parasitic Hymenoptera, 35 species of Coleoptera, 11 species of Hymenoptera, 16 species of Hemiptera, 17 species of Nematelminthes, 17 species of Crustacea, 32 species of marine fishes and 2 species of mammals.

Amoebotaenia aveeki Banerjee, Manna and Sanyal (Platyhelminthes: Cestoidea) has been added as new to science. *Seriolina nigrofasciata* (Ruppell), a fish species has been recorded for the first time from Odisha state. During the month seven research papers were published, eight were accepted and eight communicated.

Identification and advisory services on hemipterans were rendered to Dr. Susmita Gupta, Dept. of Ecology and Environment Science, Assam University, Silchar, to Dr. M. Kanagappan, Dept. Zool., Scott Christian College, Nagercoil Tamil Nadu and Dr. Seema Keshrai, Assit. Professor, Department of Zoology, R.L.S.Y. College, Ranchi University, Ranchi. Dr Rizvi received 4 samples from Directorate of Plant Protection Quarantine & Storage, Kolkata for confirmation of nematode infection. The confiscated wildlife material of 1 tooth and 2 hooves received from the Divisional Forest officer, Jaldapara Wildlife Division, Cooch Behar, West Bengal were identified as those belonging to *Rhinoceros unicornis*. A piece of skin received from The Divisional Forest Officer, Jaldapara Wildlife Divn. Cooch Behar, West Bengal has been identified as that of *Panthera tigris*. A total of 18 vials of dipteran specimens (altogether 230 examples) were received by the section from different Universities and Institutes during this month, of which 207 were identified and reports sent.

On 6th February, 14 students along with a faculty member from S.S. College, Hailakandi, Assam, visited the Zoological Gallery and various other sections as part of their educational tour. A short lecture on the 'Diversity and Economical importance of Indian Crustaceans' was delivered by Dr. K. Valarmathi to the students during their visit

to the Crustacea Section. 6 students pursuing B.Sc. II year (Zoology Hons.) from Lady Braboune College, Kolkata also visited the Zoological Gallery and other sections on 6th February. 18 participants from 6 different states along with 2 faculty members of an NGO, Nature Mates-Nature Club from Kolkata visited different sections of headquarters and the Zoological Gallery on 17th February as part of a programme called Spider India Meet.

Ms. Jayita Sengupta, Jr. Zoological Assistant and Ms. Garima Hore, Research Fellow of the Diptera Section participated in the UGC sponsored National Seminar on "Recent Advance in Biological Sciences" held at Gurudas College, Kolkata on 17th and 18th of the month and presented a poster.

Dr. Kailash Chandra, Director, ZSI attended the award function of Kendriya Vidyalaya Sanghathan, Kolkata on 2nd February, as a Chief Guest. He attended the Eco-sensitive Zone (ESZ) expert committee meeting under the Chairmanship of Dr Amita Prasad, Additional Secretary, MoEF&CC, New Delhi on 27th and 28th February. Dr. Chandra visited the Northern Regional Centre, ZSI Dehradun and High Altitude Zoology Regional Centre, ZSI Solan to review the progress of the Centres and also the scientists' visiting hostel in Dehradun and the CCU work related to the repository on Fauna of Western Himalaya at Solan from 6th to 9th February. He also conducted the review meeting of 'Biodiversity Assessment of Indian Himalayan Landscape' on 10th February and

'Lepidoptera as Indicator Taxa' on 22nd February, at ZSI, Kolkata.

Shri K.C. Gopi, Sci.-F, was deputed by Director, ZSI to deliver a talk at the UGC-SAP sponsored National Conference on "Effect of Climate Change on Faunal Diversity" organized by Department of Zoology, University of Kalyani, West Bengal held on 27th February. Shri K.C. Gopi, Dr. Vikas Kumar, Dr. Kazmi, Dr. L.K. Singh and Dr. Rajmohana K served in the panel for the selection of researchers in the NMHS project.

The recreation Club ZSI, organized the Annual sports day at the ZSI, HQ premises on 10th of the month. The officers, staff members and their family members took part in various events organized on the occasion. Prizes were distributed by Director ZSI on the same day. In the 38th National Master Athletics Championship, 2017 held at Hyderabad from 21st to 25th February, Dipak Kr. Roy, Sr. Zoological Assistant of Bird Section participated and secured 3rd place in the Long Jump event 55+ category.

Publications

- Abesh Chakraborty, Garima Hora, Panchanan Parui, Goutam Kumar Saha and Dhriti Banerjee. 2017. A Biosystematic species inventory of Indian Sarcophagidae (Insecta: Diptera: Sarcophagidae). *Journal of Entomology and Zoology Studies*. 5(1):465-473.
- Das, S. K., Chakraborti, U., Roy, S., Biswas, O. and Mitra, B. 2016. A Consolidated list

of the Orthopteran fauna (Order: Orthoptera) from Sunderban Biosphere Reserve, West Bengal, India with two new records from West Bengal. *Rec. zool. Surv. India* : 116 (Part-3) : 217-231.

- Kailash Chandra and Sandeep Kushwaha. 2013. Diversity of Hemiptera from Kheoni Wildlife Sanctuary, Dewas, Madhya Pradesh, India. *Annals of Entomology*. 31(2): 263-265.
- Siddhartha Narayan Joardar, Arkendu Halder, Panchanan Parui, Vikas Kumar, Dhriti Banerjee and Chandan Lodh. 2016. Isolation of Bluetongue Virus from Midges of *Culicoides schultzei* Complex in West Bengal, India. *Journal of Dairy, Veterinary &*

Animal Research, 4(3):1-4.

- Suranjana Banerjee, Buddhadeb Manna and Ashok Kanti Sanyal. 2016. *Amoebotaenia aveeki* sp.n. (Platyhelminthes: Cestoidea) from a bird *Garrulax leucolophus* from Mizoram, India. *NBUJ. Anim. Sc.* 10:49–56 ISSN 0975-1424.
- Acharya, S. and Dutta, A. 2017. Occurrence of soil Cryptostigmatid mites (Acari: Cryptostigmata) in the states of Western India. *J. Exp. Zool. India*. 20(1):287-290.
- Acharya, S. and Basu, P. 2017. Distribution and composition of Oribatid Mites (Acari: Oribatida) among the districts of Maharashtra, India. *J. Exp. Zool. India*. 20(1):75-80.



RCZSI Annual Sports



Students from S.S. College, Hailakandi, Assam



Visit of Participants of Spider India Meet

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

Marine and terrestrial ecosystems of Neil Island of South Andaman were surveyed from 18th and 24th February and the terrestrial ecosystem of Bamboo Island Sanctuary, Brush Island Sanctuary and Diglipur of North Andaman from 18th and 27th February. Freshwater ecosystems of Chidiyatapu, Bambooflat, Wimberlygunj, Ferrergunj and Port Blair of South Andaman were surveyed from 6th to 10th February and from 7th to 17th February, 8 local surveys on terrestrial ecosystems of South Andaman were undertaken. A total of 421 species comprising of 116 species of scleractinian corals, 39 species of octocorals, 3 species of hydrozoans, 5 species of sea anemones, 13 species of sponges, 10 species of opisthobranchs, 29 species of molluscs, 8 species of polyclads, 6 species of bryozoans, 11 species of crabs, 3 species of shrimps, 1 species of mantis shrimp, 21 species of echinoderms, 14 species of ascidians and 45 species of fishes were identified from marine environment while 27 species of lepidopterans, 3 species of odonates, 1 species of diptera, and 66 species of birds were identified/observed from terrestrial environment. Among them, two species of polyclads *Pseudoceros vishnui* and *Prostheceraeus fuscolineatus* and one species of odonate, *Nososticta nicobarica* have been described as new to science. In addition, 2 species of scleractinian corals *Polyphyllia novaehiberniae* (Lesson, 1831) and *Mycedium steeni* Veron, 2000, 2 species of sea anemones

Heterodactyla hemprichii Ehrenberg, 1834 and *Dofleinia armata* Wassilieff, 1908, 1 species of octocoral *Lobophytum patulum* Tixier-Durivault, 1956 and 1 species of sponge *Dysidea etheria* de Laubenfels, 1936 were new records to Indian waters.

Twenty five M.Sc. students along with 2 faculty members from the Centre of Advanced Study in Marine Biology, Annamalai University, Tamil Nadu, visited the Centre from 1st to 5th February, to study the marine biodiversity of Andaman and Nicobar Islands. Logistic support for surveys and collection of freshwater plankton were rendered to Prof. B.K. Sharma, Department of Zoology, North Eastern Hill University from 6th to 10th February at South Andaman. On 8th February Prof. B.K. Sharma delivered a special lecture on Water: distribution, importance and concerns, at ZSI, Port Blair. Sixty scientific personnel from various scientific institutions including ZSI, Port Blair attended the lecture.

Detailed faunal lists on Dhanikhari, Ramakrishna Nagar and Kalpong Dam Reservoirs were provided to the Deputy conservator of Forest, Silviculture Division, South Andaman for the preparation of brief documents for wetlands and waterbodies of Andaman and Nicobar Islands on request. Pictures and video footages on the animal behaviour on faunal diversity, ecosystems, forest cover and landscape were provided to the Chief Conservator of Forests, Dept. of

Environment & Forests, Port Blair on request. Guidance and laboratory facility for identification of ascidians have been extended to an M.Sc. student of Department of Ocean Studies and Marine Biology, Pondicherry University, Port Blair on request. Data on fish catch and reef associated faunal diversity of Andaman and Nicobar Islands were provided to M.Sc. students, Department of Geography, Jawaharlal Nehru Rajkeeya Mahavidyalaya, Port Blair.

Dr. C. Raghunathan, Sci.-D & O/C served as a Guest of Honour in the National Conference on Climate Change, Biodiversity and Bioresources Management organized by Microbiological Society of India at JNRM, Port Blair on 1st February. On 5th February he delivered a lecture on Marine Faunal Diversity of India: Opportunities for marine biologists, to the M.Sc. students of Marine Biology and Oceanography from the Centre of Advanced Study in Marine Biology, Annamalai University during their visit to ZSI, Port Blair. Dr. Raghunathan served as a Chairman for technical committee in ICMR, Port Blair on 15th February and attended the Meeting cum Workshop on Biosphere Reserves/Lead Institutes and stakeholders held at Pachmari, Madhya Pradesh on 20th and 21st February. He delivered a lecture on Faunal Diversity of Andaman and Nicobar Islands in the IFS Officers Refreshment Training held at Department of Environment and Forests, Port Blair on 28th February.

Mr. P.T. Rajan, Senior Zoological Assistant, conducted a physical inspection of SCUBA

diving centres at North Bay, South Andaman to identify the carrying capacity of the area as per the requirement of Directorate of Tourism on 17th, 21st and 22nd February on request. Dr. Tamal Mondal, DST Young Scientist, presented the annual progress report of the DST Young Scientist project in Group Monitoring Workshop, DST-SERB annual review committee at KIIT University, Bhubaneswar, Odisha on 3rd February. Miss Jhimli Mondal, Senior Research Fellow, participated in the 34th Winter School on "Contemporary Ecological Issues" at Madurai Kamaraj University, Madurai from 15th to 28th February. Mr. Seepana Rajendra, JRF, visited WGRC, ZSI, Calicut from 30th January to 2nd February to study the soft coral specimens under Scanning Electron Microscope (SEM).

Publications

- Mondal, J., Raghunathan, C. and Venkataraman, K., 2017. New records of Aplousobranch ascidians to Indian waters from Andaman Islands. *Threatened Taxa*, 9 (2): 9874-9880.
- Rajendra, S. and Raghunathan, C. 2016. New record of two alcyonacean corals to Indian waters from Andaman Islands. *Rec. Zool. Surv. India*, 116(Part-3): 307-312.
- Patel, M.C., Rajeshkumar, S. and Raghunathan, C., 2017. New Record of a Lantern fly (Hemiptera: Fulgoridae) from Andaman and Nicobar Islands. *International Journal of Advanced Biological Research*, 7(1): 72-74.

Hydrozoa, *Porpita porpita* LinnaeusOpisthobranch, *Gymnodoris striata* EliotSea cucumber, *Thelenota ananas* JaegerSponge, *Neopetrosia exigua* Kirkpatrick

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE (CALICUT)

One survey tour to Athirappally/Vazhachal forests and Thattekkad Bird Sanctuary was conducted from 30th January to 3rd February (joint survey with HQ, Kolkata). One new species of parasitic wasp *Dipara tamila* Sureshan, Girish Kumar & Sheeja, 2017 (Hymenoptera: Pteromalidae) from Tamil Nadu, was published. A one day seminar on "Wetlands of Kerala-Biodiversity and Conservation" organized jointly by ZSI, WGRC and Kerala State Forests & Wildlife

Department (Extension Division) was conducted on 2nd February. A joint Hindi Workshop organized by the Town Official Language Implementation Committee (TOLIC), Kozhikode was held at WGRC, ZSI on 17th February to discuss about the Parliamentary Committee Questionnaire on Official Language. Mr. Rathnakaran, O.S and Mr. Sakthi, P.P, L.D.C. participated in the workshop. The Centre participated in the Third National Biodiversity conference

organized by Kerala State Biodiversity Board at Trivandrum on 22nd to 26th February and arranged a stall in science Expo "Vividha". Dr. K.G. Emiliyamma, Sci.-D, imparted training in odonates to Mr. Joshua Andrews, Ph.D. Scholar, Loyola College, Chennai from 16th-17th February. Dr. Md. Jafer Palot, Assistant Zoologist, identified 158 confiscated bird specimens of the Tricoloured Munia, *Lonchura malacca*, for the Kerala Forests & Wildlife Department, Thamarasserry Forest Range, Kozhikode to be submitted before the Honourable Magistrate, First Class Magistrate Court, Kozhikode. He assisted in identifying the confiscated exotic parrot specimens (based on photos) for the Wildlife Crime Control Bureau, Chennai on 8th February. He attended the Meeting of District Environmental Impact Assessment Committee (DEIAC) as an expert committee member at the Conference Hall of District Collector, Kozhikode on 1st February. He also identified a fish specimen (Snake Eel, *Monopterus albus*) for Shri Suresh Arackinar. Dr. P. Girish Kumar, Sr. Zool. Asstt., identified 9 species of wasps for B. Sc. Student's of Christ College, Irinjalakkuda for their project work. He reviewed a research manuscript on the taxonomy of Vespidae for the journal *Oriental Insects*.

Dr. P.M. Sureshan, Sci.-D & O/C delivered four lectures to students of various institutions. Dr. K.G. Emiliyamma attended the Wildlife Board meeting of Karnataka on 20th February. She also delivered a lecture on "aquatic insect diversity of Kerala" to the

B.Sc. students. Dr. Muhamed Jafer Palot delivered three lectures to students of various institutions. A talk by Dr. Palot on 'Wetland Conservation' was broadcasted on 17th February at All India Radio (AIR), Kozikhode.

During the month, 818 persons visited the ZSI museum.

Publications

- P.M. Sureshan, P. Girish Kumar and U.M. Sheeja (2017). Description of a new species of *Dipara* Walker from Tamil Nadu, India with a revised key to the Oriental species. *Oriental Insects*. <http://dx.doi.org/10.1080/00305316.2017.1283255>.
- Muhamed Jafer Palot. 2017. An Overview of the Protected Reptiles of India as per the Indian Wildlife (Protection) Act of 1972. In: Book of Abstracts. 3rd National Biodiversity Congress 2017. Page no.19. Kerala State Biodiversity Board. Thiruvananthapuram.



Dipara tamila Sureshan, Girish Kumar & Sheeja



Exhibition stall by WGRC at Vividha – the Science Expo, Kerala state Biodiversity Board, at Trivandrum



Faunal Survey at Thattekkad bird sanctuary



The participants of seminar on “Wetlands of Kerala” at Kottooli mangroves, Calicut.

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA

During the month, one local survey tour to Rushikulya estuary was conducted on 27th of the month in which a total of 71 specimens of different faunal groups have been collected from four different localities of the estuary. Physico-chemical parameters like temperature, pH and salinities of water have been noted. 28 examples of molluscs (gastropods and bivalves) belonging to 8 species under 6 genera and 5 families have been identified from backlog collections. 6 examples of crabs belonging to a single species and examples of fishes belonging to 5

species under 5 genera and 5 families have also been identified.

120 school students of Govt. high school Kanchudu, Ganjam District, with their teachers and 140 students along with faculty members of Govt. high school, Gopalpur, visited the Centre museum. Identification and advisory services were rendered by Mr. Arunendra Mohapatra, Sci.-B to a M.Sc (Zoology) final year student of Dept. of Zoology, Khallikote Autonomous College, Berhampur, Odisha.



Lutjanus johnii (Bloch, 1792)



Marcia pingui (Linnaeus)



Parreysia favidens deltae (Benson)



Uca lactea (de Haan, 1835)



Visit of Govt. high school students

SUNDERBANS REGIONAL CENTRE, CANNING

The Centre identified two specimens of reptiles belonging to 2 species under 2 genera and 8 specimens of Orthoptera belonging to 3 species under 2 genera and 2 families. Identification and advisory services were rendered to the Central Soil Salinity Research Institute, ICAR, Canning, West Bengal. Students of Bankim Sardar College, Tangrakhali, Canning, South 24 Parganas

visited the Museum of the Centre.



Oligodon arnensis

NORTHERN REGIONAL CENTRE, DEHRADUN

Scientists of the Centre identified and registered 319 specimens during the month. Dr Archana Bahuguna digitized Amphibia and Reptilia (31 metadata entries with 62 photographs, dorsal & ventral). To evaluate the construction work of Modern Scientific laboratory and visiting scientist hostel on 7th February, a meeting was organized with engineers of CCU which was chaired by Dr. Kailash Chandra, Director, ZSI and attended by Dr. G. Maheswaran, Head of office, and other scientists of NRC, ZSI.

Dr Archana Bahuguna reviewed one manuscript for *Journal of Threatened Taxa*. Supervision was provided to one Young Scientist (under DST/DISHA scheme) for project on Molecular study of Western Himalayan lizards by Dr. Archana Bahuguna. Dr. Anil Kumar reviewed two manuscripts

for the department. Dr. Narender Sharma, and Sh. Parmod Kumar guided three M.Sc. Students of D.A.V. College, Dehradun for M.Sc. dissertation. Dr. Anil Kumar, attended the administrative training at IIPA, New Delhi, from 30th January to 3rd February.

Dr. Archana Bahuguna and Dr. Anil Kumar delivered lectures, to 20 PG students and 3 faculty members of Indrapastha University, Delhi on 'Functioning of ZSI' and 'Bio-acoustics' respectively. Dr. Vinita Sharma, Sci. D. attended the DST sponsored Training Workshop on 'Biodiversity Conservation' for women scientists/ technologists from 13th-17th February in WII, Dehradun. Dr. Sharma delivered a talk on "Role of Nematodes as a friend and enemy in agriculture and impact on economy", in the 19th Indian Agricultural Scientists and Farmer's Congress on

“Prospects of Green Economy and Value Addition Technology for Attracting and Retaining Youth in Agriculture and Rural



Dr Kailash Chandra at NRC, ZSI

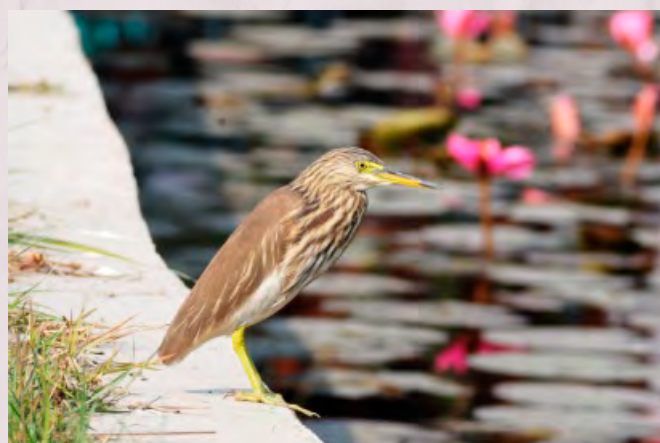


Lissemys punctata

Sector” held on 18th-19th February at Bioved Research Institute of Agriculture & Technology, Allahabad.



Inspection of construction work by the Director ZSI and Head of Office



Pond heron, *Ardeolla greyii*

MARINE AQUARIUM & REGIONAL CENTRE, DIGHA

During the month a total of 361 fish specimens belonging to 76 species were identified. Some interesting specimens like *Roa jayakari* (Norman, 1939), *Acanthurus xanthopterus* Valenciennes, 1835, *Lagocephalus guntheri* Ribeiro, 1915 were among the identified specimens. Around 141 examples

of live marine ornamental exhibits were collected for exhibition in aquarium galleries. Among the exhibits the yellow tail blue damsel fish, honey comb moray eels, groupers and hermit crabs were the major attraction for the tourists. The marine aquarium of the Centre received a total

number of 13371 tourists during the month. A scientific team from the Centre led by Dr. Mohapatra, participated in the Chilika Expedition.

Roa jayakari
(Norman, 1939)



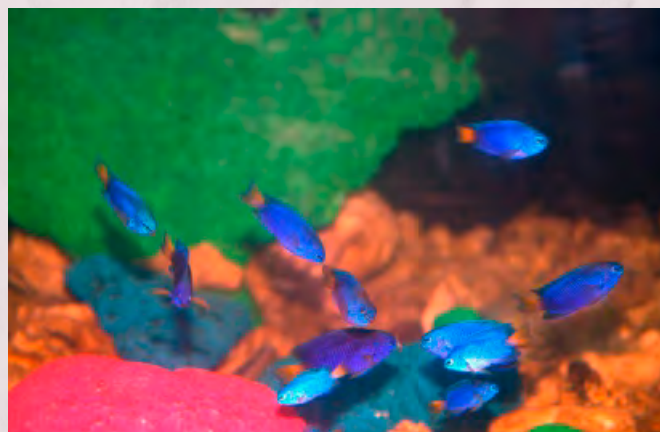
Honey comb moray eels *Gymnothorax favagineus* Bloch & Schneider 1801



Lagocephalus guntheri Ribeiro, 1915



Hermit crabs *Eupagurus* sp.



Yellow tail blue damselfish, *Chrysiptera parasema*
Swainson, 1839

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

The scientists of the Centre identified 15 species of fishes from a collection of 39 specimens from Bhoj lake, Bhopal. Local faunistic survey was conducted to Palair and Wyra lakes on 16th February and aquatic

faunal samples of fish, crustaceans and insects were collected. As part of digitization of the National Zoological Collections of the Centre, 15 species of fishes were digitized.

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

A local survey to Dollungmukh area of Lower Subansiri district, was undertaken by Dr. B. Sinha and party on 28th February and collected 23 examples of different faunal groups. Eleven plankton samples have been screened out and both phytoplankton and zooplankton have been sorted out.

Dr. B. Sinha attended a meeting of the committee for approval of management plan

of PAs of Arunachal Pradesh in the office of PCCF (WL/BD) on 3rd February. Dr. Sinha also attended the 6th training on Science, Technology and emerging trends of governance in IIPA, New Delhi from 13th-17th February.

More than 50 visitors including 6 research scholars visited the Centre during the month.



Dr. Bikramjit Sinha attending training on S&T governance



Garra lissorhyncus



Nasutixalus jerdonii



Sample collection in Dollung river

DESERT REGIONAL CENTRE, JODHPUR

During the month, 7 species of butterflies & 11 species of fishes were identified and registered. 42 specimens from NZC for RFD were digitized.

Dr. Sanjeev Kumar, Sci.-D delivered an invited lecture as a resource person in the National Seminar on Technical Terminology & Science Teaching in Higher Education organized by the CSTT, Ministry of HRD, New Delhi at Dr. A.P.J. Abdul Kalam Govt. College, Silvassa, Dadra & Nagar Haveli on 12th - 13th February. He also attended the Bird Race Function as Guest of Honour on 15th February, organized by E.E.S., Jodhpur.

Dr. Sanjeev Kumar delivered lectures on the Faunal Resources of the Desert Ecosystem to a group of college and university teachers of

Zoology, Botany and Microbiology attending Refresher Course at P.G. Deptt. Home Science, J.N.V. University, Jodhpur, during their visit to the Centre on 16th February and on Faunal Diversity of Rajasthan and Gujarat to a group of M.Sc. (Zoology) students of L.M.C.S & T, under J.N.V. University, Jodhpur during their visit on 17th February. Dr. H. S. Banyal, Sci. D also delivered lectures on the mandate of DRC, ZSI, Jodhpur & also provided scientific information on the fauna displayed in the museum of the Center to the aforesaid groups.

The quarterly meeting on Official Language Hindi was conducted by Dr. Sanjeev Kumar on 22nd February, at the Centre.



Dr. Sanjeev Kumar, delivering a lecture at Dr. APJ Abdul Kalam Govt. College, Silvassa, Dadra & Nagar Haveli.



Visit of M. Sc. (Zoology) students of L.M.C.S & T, Jodhpur

CENTRAL ZONE REGIONAL CENTRE, JABALPUR

During the month, the scientists of the Centre identified and registered 16 species of

Lepidoptera from Bhopal district, Madhya Pradesh. As a part of identification and

advisory services, one rat specimen was identified as *Mus booduga* (Gray, 1837), for the Officer-in-Charge, All India Network Project on Agricultural Ornithology, College of Horticulture, Kerala Agricultural University, Thrissur. During the month, two *Conservation Area Series* namely, Faunal Diversity of Veerangana Durgawati Wildlife Sanctuary, District Damoh and Faunal Diversity of Singhori Wildlife Sanctuary, District Raisen, Madhya Pradesh were published. On 6th March at Tropical Forest Research Institute (TFRI), Jabalpur, Dr. S. Sambath, Sci-D attended the DPC meeting of TFRI for consideration of the promotion of Technical and Ministerial staff (R.A.Gr.II and UDC).

Publications:

- Sambath, S. 2017. A report on the moths of Ghatigaon Wildlife Sanctuary, Madhya Pradesh. *Bionotes*, 19(1): 21-23.

The following chapters were published *In* : Faunal Diversity of Veerangana Durgawati Wildlife Sanctuary, District Damoh, Madhya Pradesh, *Conservation Area Series*, 56 : (Published by the Director, *Zool. Surv. India*, Kolkata).

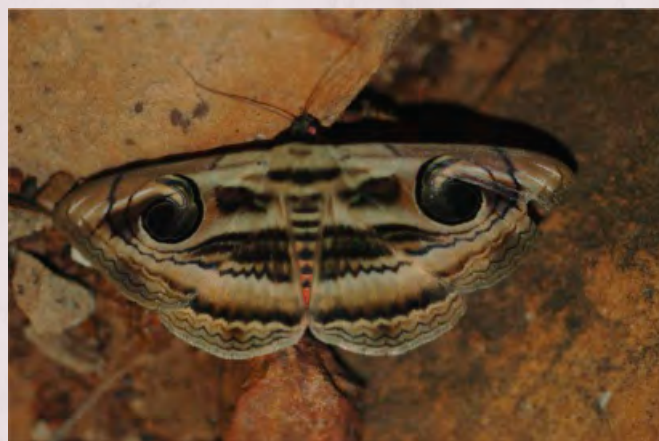
- Patil, S. R., Talmale, S. S. and Sambath, S. 2016. Arachnida: Scorpionida, Solifugae and Uropygi, pp 55-60.
- Talmale, S. S. 2016. Insecta : Odonata, pp 61-84.
- Talmale, S. S., Sambath, S. and Chandra, K. 2016. Amphibia, pp 241-247.
- Talmale, S. S., Sambath, S. and Chandra, K.

2016. Reptilia, pp 249-269.

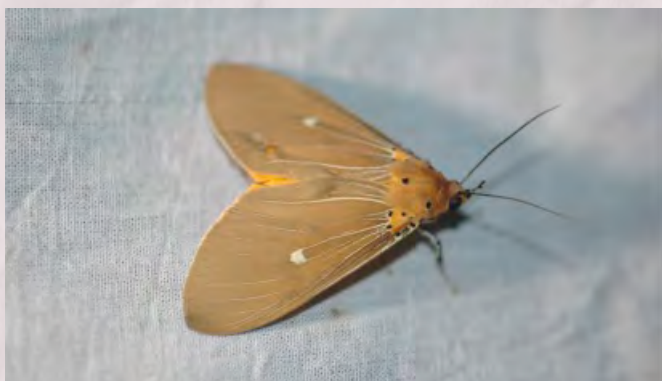
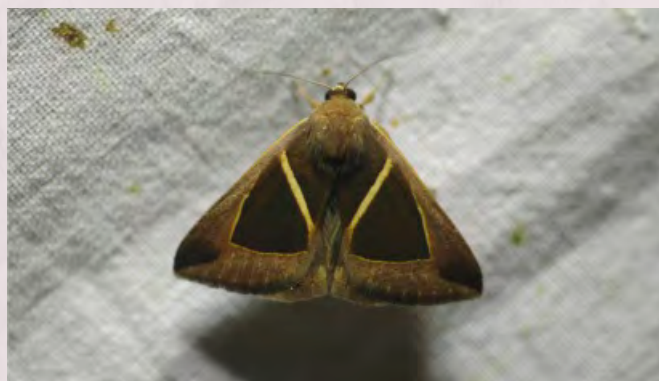
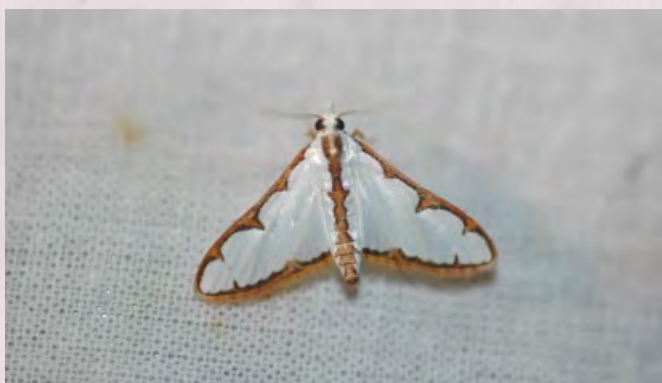
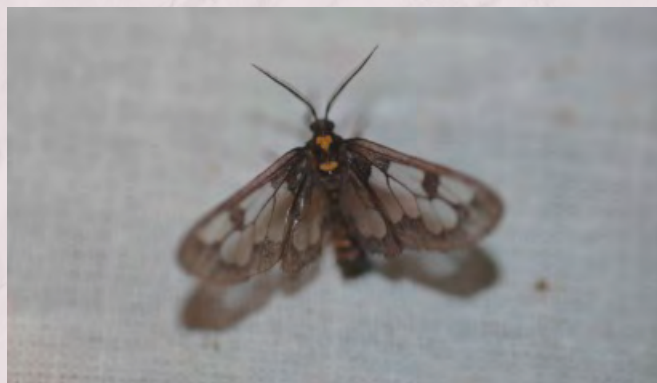
- Chandra, K., Talmale, S. S. and Sambath, S. 2016. Aves, pp 271-332.
- Harshey, D. K. and Talmale, S. S. 2016. Mammalia, pp 333-352.

The following chapters were published *In* : Faunal Diversity of Singhori Wildlife Sanctuary, District Raisen, Madhya Pradesh, *Conservation Area Series*, 57 (Published by the Director, *Zool. Surv. India*, Kolkata).

- Patil, S. R., Talmale, S. S. and Sambath, S. 2016. Arachnida: Scorpionida and Solifugae, 59-52
- Talmale, S. S. 2016. Insecta : Odonata, 63-86.
- Talmale, S. S., Sambath, S. and Chandra, K. 2016. Amphibia, 245-251.
- Talmale, S. S., Sambath, S. and Chandra, K. 2016. Reptilia, 253-269.
- Talmale, S. S., Sambath, S. and Limje, M. E. 2016. Aves, 271-328.
- Harshey, D. K. and Talmale, S. S. 2016. Mammalia, 329-350.



Spirama retorta, Clerck, 1759

*Asota caricae* Fabricius, 1775*Chalciopie mygdon*, Cramer, 1777*Cirrhocrista brizoalis* Walker, 1859*Digama hearseyana similis* Moore, 1878*Eressa musa* (Swinhoe)

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

A rapid survey was undertaken on 2nd February to assess the impact of oil spill on marine fauna in the Chennai Coasts after the disaster of two colliding oil vessels off Kamarajar Port on 29th January. Sampling

was carried out on the intertidal zones, at five selected sampling locations from Ennore Creek to Kovalam beach. Besides the observations of the direct impact of the oil spill on the marine macrofauna, water

column and on beaches, samples were also collected for studies on meiofauna.

Survey to Gulf of Mannar Marine Biosphere Reserve was undertaken from 15th-23rd February by Shri Anand Kumar, A. and Dr P. Padmanaban, Assistant Zoologists, and a team of seven members, under the annual programme of research 'Polychaeta and Polyclad fauna of Gulf of Mannar Marine Biosphere Reserve. Sampling of fauna was carried out at the Mandapam group of

Islands on 11 locations in the intertidal and subtidal zones, where subtidal zones were covered using snorkelling and skin-diving. A total of 410 examples of fauna collected include 14 exs. of Crustacea, 29 exs. of Echinodermata, 1 ex. of Pisces, 4 exs. of Balanoglossus, 198 exs of Mollusca, 3 exs. of Nematodes, 92 exs. of Polychaeta, 3 exs. of Porifera, 1 ex. of Sipuncula, 1 ex. Polyclada, and 64 exs. of marine insects.



Culcita schmideliana (Ritzius, 1806)



Oil-spill that reached the shore near Ennore Port, Chennai

GANGETIC PLAINS REGIONAL CENTRE, PATNA

A tour was conducted from 26th January to 6th February under the programme 'Fauna of Jharkhand' which covered areas of Lawalong WLS, Hazaribagh WLS, Koderma WLS, Betla National Park and Ranchi. During the month 5 species of zooplankton and 5 species of mollusca under 59 examples were identified.

A seminar on "Biodiversity and its relevance to Mankind" was organized on 14th February for the students of Akal Academy Cheema, Sangarur, Punjab. The students were on a educational excursion trip to Bihar. Dr. Gopal Sharma, Sci.-D, participated in a meeting on 15th February for finalization of inputs for the interpretation Centre in Patna Zoo. On

National Science Day, 2017 at Magadh Mahila College, Patna, Dr. Sharma delivered a popular lecture on “National Aquatic Animal of India (Gangetic Dolphin) - A National Heritage”.



Students of Akal Academy Cheema, Sangarur, Punjab

Publications:

- Kirti, J. S., Singh, N. & Singh, H. (2016). Inventory of subfamily Pyraustinae (Crambidae: Lepidoptera) from Sikkim. *Journal of Entomology & Zoology Studies*, 4(6): 700-705.



WESTERN REGIONAL CENTRE, PUNE

During the month 30 species of Coleoptera (Scarabaeidae), 9 species of Coleoptera (Tenebrionidae), 3 species of aquatic Coleoptera, 3 species of Lepidoptera (Moth) and 7 species of Pisces were identified. Identification and Advisory services were rendered to the Jai Research Foundation, Vapi, Gujarat for freshwater fish and K.V.N. Naik College, Nashik, for Coleoptera and Lepidoptera.

The following surveys were conducted during this month. Survey to Ahmednagar, Nashik, Nandurbar and Dhule districts of Maharashtra to collect Tenebrionidae

(Coleoptera) and Noctuidae (Lepidoptera) from 16th January to 3rd February was undertaken. Besides, a local survey to Maval and Khed talukas of Pune district was undertaken on 10th of the month.

Dr. P.S. Bhatnagar, Sci.-D & O/C attended the second meeting of the sub-committee of experts to review the list of threatened plants and animals in the state conducted by Maharashtra State Biodiversity Board, Pune on 2nd February and 5th BoG meeting of Kundal Academy of Development, Administration & Management (Forests) at Mantralaya, Mumbai (Maharashtra Forest

Department) on 22nd February. He also presented a paper "Managing Change: Animal dissection in higher education" in National Conference on Animal Dissection-Need and Alternatives at Dr. B.N. Purandare College of Arts and Smt. S.G. Gupta Commerce and Science College, Lonavala on 4th of the month.

During the month 80 visitors from various schools and colleges visited the Centre museum.

Publications:

- Patil, S. R. and Talukdar S. (2016). Arachnida: Araneae: in Faunal Diversity of Veerangana Durgawati Wildlife Sanctuary, District Damoh, Madhya Pradesh, Conservation Area Series, Zoological

Survey of India, Kolkata, 56:35-54.

- Patil, S. R., Talmale S. S. and Sambath S. (2016). Arachnida: Scorpionida, Solifugae and Uropygi: in Faunal Diversity of Veerangana Durgawati Wildlife Sanctuary, District Damoh, Madhya Pradesh, Conservation Area Series, Zoological Survey of India, Kolkata, 56:55-60.
- Patil, S. R. (2016). Freshwater and Land Mollusca: in Faunal Diversity of Veerangana Durgawati Wildlife Sanctuary, District Damoh, Madhya Pradesh, Conservation Area Series, Zoological Survey of India, Kolkata, 56:215-226.
- Kalawate, A. & R.M. Sharma (2017). Moths (Lepidoptera: Heterocera) from Pench National Park. Bugs R All #154. In: *Zoo's Print* 32(2): 29-40.

NORTH EASTERN REGIONAL CENTRE, SHILLONG

A field survey was conducted in Assam from 31st January to 10th February. A total of 2489 examples of various faunal elements were collected and these are being studied. 4 species of amphibians, 8 species of fish, 3 species of crustacea (Decapods), 2 species of Hemiptera and 5 species of bats were identified from the backlog collections. The identified bats and fish species were digitized and databased.

The Centre participated and showcased its museum exhibits at the Science Exhibition

during the National Science Day cum Regional Innovators Conclave held from 28th February – 2nd March at the State Central Library, Shillong. The programme was conducted by the State Council of Science, Technology and Environment, Meghalaya in collaboration with NEC, NIF-India, NCSTC, MBDA, DRDC and Shillong Science Centre.

Dr. D. Khyntiam, Sci.-B, attended the 16th Foundation Training Programme for scientists and Technologists at Indian

Institute of Public Administration, New Delhi from 19th December - 10th February. The programme was sponsored by the Department of Science and Technology, Government of India.



Erosion on the bank of River Brahmaputra Tezpur, Assam

On 21st February, 12 B.Sc. students and faculty members from the Department of Zoology, Jagiroad College, Assam visited the Centre as part of educational tour.



Fishing net in Dibru river, Tinsukia, Assam

HIGH ALTITUDE REGIONAL CENTRE, SOLAN

The local surveys of the Eco-sensitive zone of the City Bird Sanctuary and Sukhna Wildlife sanctuary, Chandigarh have been undertaken on 10th and 17th of the month under the leadership of Dr. Gaurav Sharma, Sci.-D and Dr. Kamal Saini, Assistant Zoologist respectively. Faunistic identification from the Centre includes 6 species of butterflies, 4 species of Orthoptera from Sangla valley, district Kinnaur; 4 species of butterflies from Sainj WLS, district Kullu and 4 species of Pisces from GovindSagar Wetland. Dr. Avtar Kaur Sidhu, Sci.-D registered, digitized & photographed 53 examples of Lepidoptera

from North-West Himalaya.

Dr. Sidhu guided an M.Sc. Student and a M.Phil Student from Shoolini University, Solan and Department of Zoology & Environmental Studies of Punjabi University, Patiala respectively. Dr. Indu Sharma, Sci.-D identified 7 species of fishes, 1 species of Amphibia and 1 species of Reptilia received from Dept. of Biosciences, H.P. University, Shimla.

Dr. Avtar Kaur Sidhu and Dr Indu Sharma, attended the 1st Meeting of the Committee for "Threatened Animals" to review the list of "Threatened animals of Himachal Pradesh"

as a member of committee and a special invitee respectively on 1st February at Himachal Pradesh Forest Department, Talland, Shimla. The programme was organized by the Himachal Pradesh State Biodiversity Board and the State Council for Science, Technology and Environment.

The Director and the HOO, Zoological Survey of India, Kolkata visited the Centre on 8th of the month to monitor the progress regarding the construction of the Himalayan Faunal repository and Hindi progress of HARC, ZSI, Solan. Dr. Sidhu participated in the meeting held with the Director and HOO, ZSI, Kolkata and the CPWD (Civil

and Electrical) officers & officials.

Publications:

- Avtar Kaur Sidhu and Akhil Nair (2016) Taxonomic studies of the species *Deilephila rivularis* (Boisduval, 1875) (Lepidoptera: Sphingidae) with additional distribution records from India. *Journal of Entomology and Zoology Studies* 5(1): 328-332(2017).
- Sharma, G. 2017. Studies on the Reproductive Behaviour of Dragonfly, *Pantala flavescens* (Fabricius, 1798) (Odonata: Insecta: Arthropoda) in Aravalli Range and Desert Ecosystem of Rajasthan, India. *Bio Bulletin*. 3(1): 67-73.



Director, ZSI and Head of Office, ZSI with HARC, ZSI, Solan Staff



Inspection visit of Director, ZSI and HOO, ZSI with S.E. & Officers of CPWD in upcoming Faunal Repository

SOUTHERN REGIONAL CENTRE, CHENNAI

A faunal survey to Cauvery Estuary and Point Calimere from 1st - 14th February was conducted. One new species of *Ephemeroptera* from Western Ghat has been described and the approval of AICOPTAX Project on

Ephemeroptera was also obtained. Scientists of the Centre, identified Ephemeroptera, Odonata & Crustacea.

Dr. K. A. Subramanian & Dr. Babu carried out the preliminary faunal survey of granite

mining areas of Melur Taluk, Madurai district, Tamil Nadu from 31st January to 2nd February and identified butterflies, dragonflies, birds, reptiles and mammals. Dr. K. A. Subramanian attended the 41st Access and Benefit Sharing (ABS) meeting of NBA on 6th and 7th February. On 15th February he delivered a lecture on "Job opportunities in Government sector in seminar cum workshop on job related upskilling in Advanced Zoology and Biotechnology (SWJUZB 2017) at Loyola College, Chennai. He also participated in "Prof. T. N. Anathakrishnan Memorial Lecture" on 23rd February at Madras Christian College, Chennai, organized by Entomological Society of India, New Delhi. He conducted a one day workshop on "Life in Freshwater" to students and faculty of IIT, Chennai on 25th February. Dr. Subramanian also attended Trust Board Meeting of Chennai Snake Park on 7th February.

Dr. Jayasree Thilak, Sci.-D, attended a training & workshop for women scientists on

Biodiversity Conservation from 13th - 17th February at WII, Dehradun. Dr. V.M. Sathish Kumar, delivered a lecture on Molecular Taxonomy to graduate students from Scott Christian College, Nagercoil, Tamil Nadu on 15th February. Vimala, D, JRF, attended a National Workshop & Training on "Collection, preservation and identification of insects and mites of Economic importance" held at H.Q ZSI Kolkata, on 30th & 31st January. Vimala, D., and Prabakaran S, also presented a poster on 'Emerging whitefly (Hemiptera: Aleyrodidae) pests on some medicinal plants in Karnataka' at a National Conference On "Neo-Classical Approaches in Zoological Sciences" & Zoological Society Initiative II National Young Scientists' Meet held at University of Madras, Guindy Campus, Chennai, on 16th & 17th February. Dr. K. A. Subramanian reviewed a paper for a leading journal and he was also selected as Member of IUCN SSC Odonata Specialist Group. Three identification & advisory services were rendered during the month.



Pheasant Tailed Jacana (*Hydrophasianus chirurgus*)



Median Egret (*Ardea intermedia*)



Blue Tailed Beeeater (*Merops philippinus*)



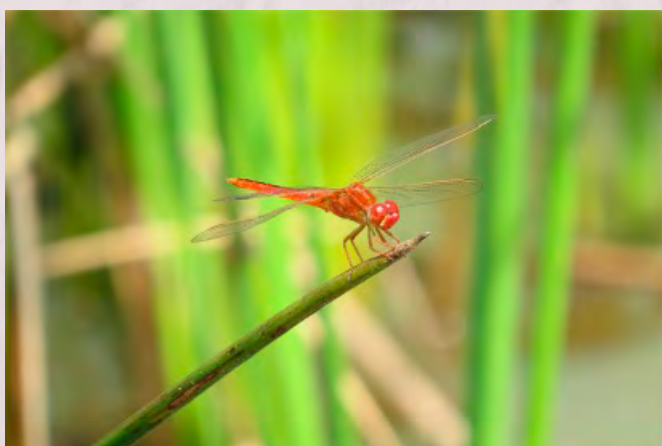
Brahmini Starling (*Sturnia pagadorum*)



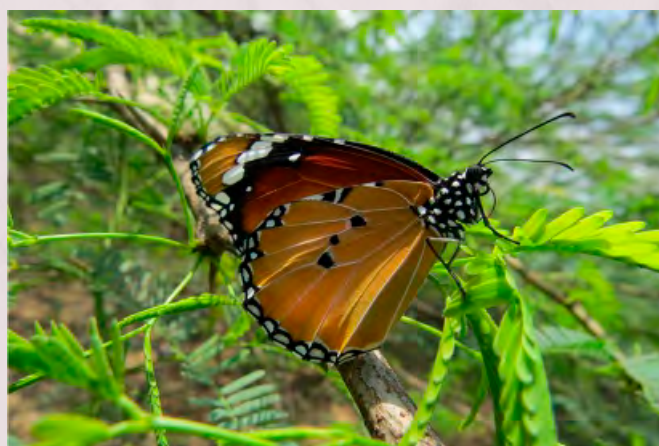
Little Grebe (*Tachybaptus ruficollis*)



Spot Bill Duck (*Anas poecilorhyncha*)



Crocothemis servilia



Danus chrusippus

ANIMAL DISCOVERIES

SPECIES DESCRIBED NEW TO SCIENCE

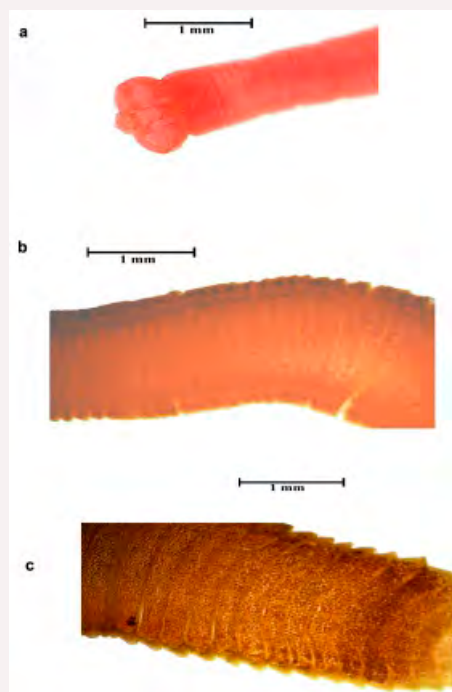


Dipara tamila Sureshan, Girish Kumar & Sheeja

P.M. Sureshan, P. Girish Kumar and U.M. Sheeja (2017). Description of a new species of *Dipara* Walker from Tamil Nadu, India with a revised key to the Oriental species. *Oriental Insects*. <http://dx.doi.org/10.1080/00305316.2017.1283255>.

Amoebataenia aveeki Suranjana, Manna & Sanyal

Suranjana Banerjee, Buddhadeb Manna and Ashok Kanti Sanyal. 2016. *Amoebataenia aveeki* sp.n. (Platyhelminthes: Cestoidea) from a bird *Garrulax leucolophus* from Mizoram, India. *NBUJ. Anim. Sc.* 10:49–56 ISSN 0975-1424.



ANIMAL OF THE MONTH

The NILGAI: *Boselaphus tragocamelus* (Pallas, 1766)

The Nilgai or the blue bull is a bovine, like cattle, bison, buffalo and antelope coming under the even toed ungulates, the order Artiodactyla. Nilgai is the largest Asian antelope. They generally occur in arid areas, grassy plains, scrub, dry deciduous open forests and agricultural areas, and are not seen in dense forests and deserts. They are endemic to the Indian subcontinent and are native to India, Nepal and Pakistan. During the first half of the twentieth century, they were introduced to the United States and Mexico.

The males weigh a little less than 300 kilograms, the females are much lighter. They stand up to 1.5m. The animal is thin legged, has a deep neck with a white patch on the throat, a short but prominent tuft of hair along the dewlap ridge below the white patch, white facial spots, distinctive dark spots at the inner part of the ear and a sloping back. Sexual dimorphism is distinct.



Male

Females and juveniles have orange to tawny colouration, while adult males have a bluish-grey coat. Only males possess horns, the horns are small, just 15–24 cm long. They generally have no rutting season and males fight among themselves for dominance during mating season. The female gestation period lasts for eight to nine months. The lifespan of nilgai is around ten years.

Nilgais are herbivorous and prefer to eat grasses, herbs and sometimes woody plants. The Indian population of nilgais could exceed 100,000, that they cause significant damage to agriculture. Their populations in some states like Bihar, Chhattisgarh, Haryana, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh were so large that, in the recent, farmers had pleaded to the government to cull them. In 2016, the Government of India declared nilgai as a vermin for one year, in some states. They are categorised as Least Concern by the IUCN.



Female with calf

(Contributed by Sri. Tridip Datta, Program Officer, ENVIS Centre on Faunal Diversity, ZSI, Kolkata)