



# ZSI enews



सत्यमेव जयते



Ministry of Environment,  
Forest and Climate Change



## From the Director's Desk



I am delighted to present the September 2022 issue of ZSI E News which portrays the series of information about the activities of the organization during the month. After entering MoU with Natural History Museum, London, I paid a visit to the museum during my brief stay at London and explored the areas for collaborative studies with ZSI in order to strengthen the taxonomic research. The month witnessed the identification of 14094 specimens comprising 1959 species, of which 13 species were turned out as new to science while five species are new addition to Indian fauna. World Ocean Day was celebrated in the Regional Centres as well as Headquarters by organizing lectures, different competition for students and researchers. Surveys covered Deccan Peninsular Biogeographic Zone, Odisha, West Bengal, Andaman and Nicobar Islands, Rajasthan, Assam and Andhra Pradesh during the month to assess the faunal diversity in different protected areas. Altogether 203 DNA barcodes have been generated and uploaded in GenBank while publishing 4 books, 26 papers in different journals of scientific merit and 158 book chapters.

I congratulate all the Officers and Staff of ZSI for making significant progress during September 2022.

Jai Hind

Dr. DHRITI BANERJEE  
Director  
October 6, 2022  
Kolkata

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Cover photo: Nicobar  
Black naped Monarch  
Fly catcher: *Hyoithymis  
azurea* (Boddaert, 1783)  
Courtesy: ZSI, ANRC.

# HEADQUARTERS, KOLKATA

Dr. Dhriti Banerjee, Director, ZSI visited the National History Museum, London on 7.9.2022 and interacted with Scientists of various sections and museum curators for collaborative research. Surveys conducted to Andaman and Nicobar Islands for Dipteran and Hemipteran faunal

studies, Odisha for Dermaptera, West Bengal for Hymenoptera and Deccan Peninsular Biogeographic Zone to study the vertebrate faunal diversity. Celebrated 'World Ozone Day' by organizing workshops for research scholars on 16th September 2022 and celebrated 'World Rhino Day,

2022' with Indian Museum and Indian Oil Corporation Ltd., at Mammal gallery, Indian Museum on 22.9.2022. Altogether 6678 specimens comprising 688 species have been identified which includes five newly described species. Thirty one species were augmented to the National Zoological

Collections from different faunal groups including protozoans, nematodes, lepidopterans, coleopterans, orthopterans etc. As a part of DNA studies, 132 barcodes have been generated. Identification and advisory services rendered to 21 cases which includes the confiscated material too.

Dr. Dhriti Banerjee with Dr. Douglas Gurr, Director, Natural History Museum, London





## NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

A survey was undertaken under the project “Studies on the diversity & taxonomy of edible Amphibians of North East India, Phase I: Assam, Manipur, Meghalaya & Nagaland” between 13-22<sup>nd</sup> September 2022. Identified 51 species containing Hemiptera- 10 spp., Amphibia –09 spp., Pisces –29 spp., Crustacea –02 spp. and Aves - 1sp. Identification and advisory services provided to institutional research scholars (IIT Roorkee and Gauhati University). Hindi Pakhwada organized from 14-29<sup>th</sup> September at the Centre with in-house activities.



Aquatic animals sold for consumption in a market in Nagaland (recorded during the edible amphibian survey)

## WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA

Surveys conducted to Important Bird Areas of Goa on 20<sup>th</sup> to 30<sup>th</sup> September 2022 and Assam on 25<sup>th</sup> August to 8<sup>th</sup> September 2022 to study the aquatic ecology of Gangetic Dolphin. Altogether 216 species comprising Coleoptera, Montodea, Arachnida, Mollusca and Amphibia were identified. Identification services rendered to RFO, Nashik for confiscated paint brushes with mongoose hairs; Assistant Conservator of Forests, Solapur for sea fan and organ pipe corals; RFO, Solapur for nails of wild animals, Kasturi, Hathjodi, Bear hairs; Police Sub Inspector, Sindhudurg for confiscated Leopard skin and jaw. Students (435 nos.) from various educational institutions have visited museum during the month.

Hind Diwas celebration  
at WRC, Pune





## CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH

Survey conducted to Kuno-Palpur National Park, Madhya Pradesh from 5.09.2022 to 16.09.2022. Seventy three species identified containing Orthoptera 11 species, Lepidoptera 36 species, Amphibia 07 species, Hemiptera 12 species and Mollusca 07 species. In connection with the Hindi pakhwara celebration from 1<sup>st</sup> to 14<sup>th</sup> September 2022, lecture was organized on 8<sup>th</sup> September 2022 through virtual mode where Prof. Laxmi Aiyar, Central University for Hindi, Ajmer, Rajasthan gave delivered a topic on Rajyabhasha Hindi.

Palpur-Kuno National Park, Sheore, MP



## DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

Hindi Diwas & Hindi Pakhwara organized at DRC, Jodhpur from 14<sup>th</sup> to 30<sup>th</sup> September, 2022.



Campaign 2.0 - Preparatory phase at DRC, Jodhpur

Special Campaign 2.0- Preparatory Phase at DRC, Jodhpur



Hindi Diwas & Hindi Pakhwada organized at DRC, Jodhpur from 14<sup>th</sup> to 30<sup>th</sup> September, 2022

Conducted faunal survey to Todgarh-Raoli Wildlife Sanctuary, Rajasthan from 20<sup>th</sup> - 28<sup>th</sup> September 2022. Fifty two species (10 species of Arachnida, 4 species of Gastropoda, 35 species of insects and 3 species of Pisces) have been identified by the scientists of the Centre. Celebrated "Hindi Pakhwada" from 14<sup>th</sup> to 30<sup>th</sup> September, 2022 at Centre. Various competitions organized among the staff.



## NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND

Faunistic Survey conducted at Itanagar Wildlife Sanctuary, under Management Effectiveness Evaluation of National Park & WLS. Scientists of the Centre identified 60 species belonging to eight faunal groups *i.e.*, Protozoa, Phthiraptera, Odonata, Lepidoptera, Orthoptera, Pisces, Amphibia and Reptilia. A seminar was organized to celebrate the Himalayan Day" on 9<sup>th</sup> September, 2022. The Ozone Day on 16<sup>th</sup> September 2022 was also celebrated at the Centre. Hindi Pakhwara Divas was celebrated w.e.f. 14<sup>th</sup> September, 2022 to 30<sup>th</sup> September, 2022. Organized Nibandh Pratiyogita on 19<sup>th</sup> September, Patra Lekhan on 21<sup>st</sup> September, 2022, Bhasan Pratiyogita on 22<sup>nd</sup> September, 2022, Kavi Sammelan on 23<sup>rd</sup> September.

Celebration of Himalayan Day on 9<sup>th</sup> September, 2022



*Dicurus bracteatus*  
Gould, 1843



## SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU

Six new species of Ephemeroptera were described in a review of the subgenus *Euthraululus* (Ephemeroptera: Leptophlebiidae: *Choroterpes*) from the Western Ghats of India. The scientists of the centre collected samples of different faunal groups during field studies in Telangana and Maharashtra, as well as from the Gangetic River Dolphin survey of the Brahmaputra River in Assam. A field survey on the phylogeography and colonisation history of Indian Rhesus macaques (*Macaca mulatta*) was conducted. A total of 111 species from Ephemeroptera, Odonata, Lepidoptera, Plecoptera, Hemiptera, Mollusca, Amphibia and Reptiles were identified during the month. Identification service was provided to the Sehgal Foundation Centre for Biodiversity and Conservation in Bangalore on pictures of reptilian species from the genus *Cnemaspis*. Ph.D. thesis were evaluated for University of Madras, Chennai and University of Calicut. Centre celebrated Hindi Diwas; participated in international coastal clean-up event on 17<sup>th</sup> September, 2022 at Elliot Beach, Besant nagar, Chennai organised by NIOT in collaboration with MOEFCC.

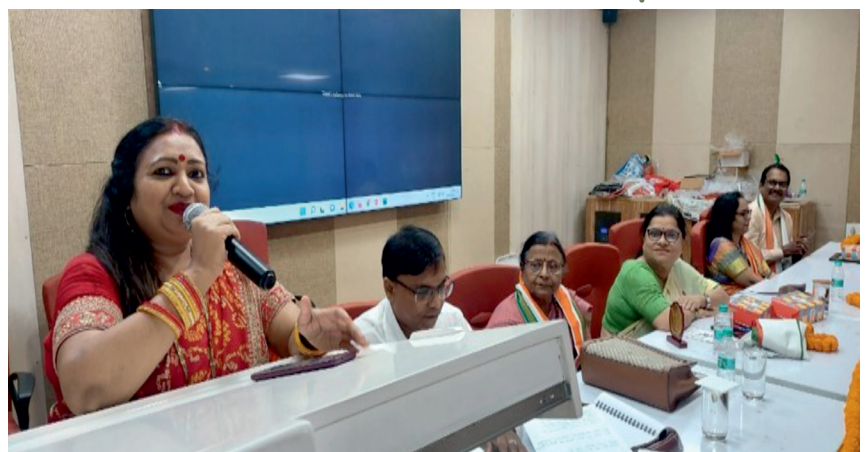
## GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

One day local survey was conducted to Barailla Bird Sanctuary, Vaishali, Bihar on 23.09.2022. Identified 37 species. Identification services rendered to Patna Science College Patna, Bihar. An in-house seminar was organized on the occasion of World Ozone Day 2022 on 16.09.202 and Hindi pakhwara celebrated with various activities.



*Lanius cristatus*  
Linnaeus 1758

Hindi Diwas organised in GPRC





## HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH



Total 54 species comprising Lepidoptera (36spp.), Trichoptera (6spp.), Orthoptera (7spp.) and Pisces (5spp.) were identified. As a part of Identification & Advisory Services, identified Lepidoptera for Punjabi University, Patiala; Punjab Agricultural University, Ludhiana; Govt. PG College, Sarkaghat, Mandi, HP. and evaluated and submitted the report on 27.09.2022 on the internal project of HFRI, Shimla titled, "Evaluate Green synthesized nanoparticles to develop eco-friendly management techniques against insect pests of Deodar nursery". Reviewed two manuscripts for the *Records of Zoological Survey of India* and one research paper for *Asian Journal of Research*. The cleanliness and beautification of office done on 23.09.2022 and 27-09-2022. Hindi Pakhwara has been organized at the Centre from 14.09.2022 to 30.09.2022. It includes organizing various events and competitions (easy writing, story writing, noting and drafting etc) in collaboration with NARAKAS, Solan.



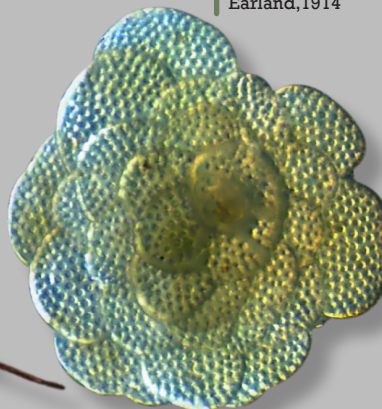
Staff and Officers of ZSI, Solan on cleanliness drive

## MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU

*Orbiraja powelli*  
(Alcock, 1898)



*Millettiana millettii*  
Heron-Allen & Earland, 1914



A survey tour to Palk Bay and the Gulf of Mannar was organized from 21 to 28 September to study the 'Integrative taxonomy, distribution and current status of Batoids of India'. Another survey undertaken along the coast of Pondicherry and Marakkanam on 30.08.2022. A total of 65 species were identified in this Centre, which include Marine Sponges 12 species, Jelly Fish 01 species, Scleractinian Corals 05 species, Bryozoa 05 species, Nematode 09 species, Foraminifera 07 species, Mollusca 19 species, Decapods 03 species and Fishes 4 species. Three identification services were rendered, of which two were identification of confiscated wildlife material and one identification assistance to faculty of Madras University.



## ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR



Hooded Pitta *Pitta sordida abbotti*  
Richmond 1903



Nicobar Black-naped Oriole *Oriolus chinensis macrourus* Blyth  
1846

Two long term surveys were conducted to Great Nicobar Island during 1<sup>st</sup> to 30<sup>th</sup> September 2022; North & Middle Andaman group of islands during 15<sup>th</sup> to 27<sup>th</sup> September 2022 to study the terrestrial and marine ecosystem; local field surveys were conducted in South Andaman to study the terrestrial faunal diversity during 1<sup>st</sup> to 26<sup>th</sup> September 2022. A total of 329 species were identified comprised of Coral 99 species; Helioporacea 1 species; Zoantharia 1 species; Alcyonacea 1 species; Porifera 6 species;

Fishes 30 species; Crustacea 15 species from the marine environment; Arachnida 21 species; Lepidoptera 73 species; Birds 55 species; Reptiles 19 species; Amphibians 8 species were identified from the terrestrial environment. Identified one species of Freshwater Turtle and 15 species of Echinoderms to the Department of Environment & Forests, Andaman & Nicobar Islands. Organized coastal cleanup on 5<sup>th</sup> September 2022 and conducted online drawing/ painting competition and one day workshop on 6<sup>th</sup> September 2022 in collaboration with the Vigyan Prasar (VP). One day workshop organized as a part of the celebration of World Ozone Day on 16<sup>th</sup> September 2022.

## SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL



Coastal clean up

Hindi Diwas



Survey was undertaken in Pulicat Lake Wildlife Sanctuary, Andhra Pradesh from 5<sup>th</sup> to 12<sup>th</sup> September 2022. One day local survey conducted to Jharkhali and Godkhali. During the month total 142 spp. were identified containing 80 spp. of fish, 55 spp. of mollusca, 4 spp. of crustaceans, 2 spp. of reptiles and one species of amphibian. Celebrated Hindi Diwas on 14<sup>th</sup> September 2022 and organized International Coastal Clean-up day "Swachh Sagar Surakshit Sagar" in Bakkhali Beach on 17<sup>th</sup> September 2022.



## FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

Ozone Day celebration on  
16<sup>th</sup> September 2022



*Harpactes fasciatus* (Pennant, 1769) Malabar trogon

The scientists, staff and research scholars of the Centre identified 17 species of Aquatic Coleoptera, 12 species of Aquatic Hemiptera, 4 species of Ostracoda, 1 species of Maxillopoda, 7 species of Branchiopoda, 15 species of Mollusca, 9 species of Lepidoptera and 15 species of fishes. 9 DNA sequences have been submitted to NCBI. Hindi diwas was celebrated on 14<sup>th</sup> September and Ozone day was celebrated on 16<sup>th</sup> September 2022. Organized Capacity Building and Training Programme on 2<sup>nd</sup> September 2022 in collaboration with Andhra Pradesh State Biodiversity Board (APSBB), Botanical Survey of India (BSI) and National Bureau of Plant Genetic Resources (NBPGR) at Mareduilli, Alluri Seetharamaraju district, Andhra Pradesh.

## WESTERN GHAT REGIONAL CENTRE, KOZHIKODE, KERALA

A new species of wasp *Taeniogonalos ayyari* Binoy, van Achterberg & Girish Kumar, 2022 (Hymenoptera: Trigonalidae) is discovered from Ambasamudram range, Tirunelveli district, Tamil Nadu, India. Total 370 examples of 103 species belonging to 14 different faunal groups have been identified during this month.

As requested by the Forest Department, Kozhikode, washed ashore carcass of Indo-Pacific Finless Porpoise (*Neophocaena phocaenoides*) and a *Baleonoptera* sp. were identified through photographs. WGRC-ZSI, Kozhikode has been invited for the Vallikkunnu Fest and participated by setting up an exhibition stall at Athanikkal Panchayat ground from 31 August-07 September, 2022. Hindi Diwas celebrated in the Centre.

Cleaning of Office premises



Hindi Fortnight





## ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA, ODISHA

Training on  
Crustacean  
collection  
preservation and  
identification  
for students of  
Dept of Marine  
Science, BU  
Beach cleaning  
at Gopalpur  
beach



One survey on the Taxonomic review of the suborder Pleuronectoidei along the East Coast of India from 19.09.2022 to 26.09.2022, one day local survey to Bahuda estuary and a survey for 8 days conducted in the NIV-ZSI collaborated project "Climate influence on Mosquito demographics, dengue and chikungunya in metropolitan cities of India to Kolkata during this month. During this month 93 species were identified. Ten DNA barcodes were uploaded in the NCBI data base. Staffs of the Centre had participated in the "Swachh Sagar Surakshit Sagar Campaign" and beach cleanup at Gopalpur and Dhabaleswar Beach, Ganjam on 17<sup>th</sup> September, 2022. Students of Marine Science Berhampur University had trained on collection preservation and identification of Crustacean and Ichthyofauna fauna. Hindi Pakhwada was celebrated during this month.

## ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

A total of 69 species : Diplopoda 01sp., Hymenoptera 01 sp., Lepidoptera 52 spp., Orthoptera 05 spp., Pisces 07 spp., Amphibia 01 sp. and Reptilia 02 spp. were identified by the scientists of the Centre.

| *Erebus gemmans* (Guenée, 1852)



| *Eucoptacra binghami* Uvarov, 1921.





## MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

Scientists of this Centre identified 70 species belonging to Fishes (33 spp.), Mollusca (32 spp.), Polychaete (03 spp.) and Cnidaria (02 spp.). Conducted 10 days survey [05<sup>th</sup> to 14<sup>th</sup> September 2022] in connection with Faunal diversity of Mudflats; 05 days [18<sup>th</sup> – 22<sup>nd</sup> September 2022] at Khadibil Mangroves, Subarnarekha Estuary, Odisha and 03 days [05<sup>th</sup>, 07<sup>th</sup> & 22<sup>nd</sup> September 2022] at Odisha & West Bengal. Scientists of the Centre reviewed two manuscripts and evaluated one Ph.D. thesis during the month. Conducted a beach cleaning activity as a part of the celebration of Swachh Sagar Surakhit Sagar Campaign on 17<sup>th</sup> September 2022.



Beach cleaning at Digha





# NEW DISCOVERIES AND NEW RECORDS

## NEW SPECIES



*Taeniogonalos ayyari* Binoy van Achterberg & Girish, sp. nov.



*Ghatiana divivarna* Pati, Thackeray, Bajantri & Hegde, 2022



## PUBLICATIONS

### BOOKS

1. Chandra, K. Sharma, G. and Singh, N. 2022. Faunal Diversity of Damla Wildlife Sanctuary and Saranda Forest Division (Jharkhand) India, pp-1-194 (published by Director, ZSI, Kolkata).
2. Fauna of Navegaon National Park, Maharashtra. 2022. Conservation Area Series, 68:1-210 (published by the DZSI, Kolkata).
3. Dinesh, K.P., Shabnam, A. and Sreekumar, S. 2022. A Catalogue of Amphibia in the collection of the Zoological Survey of India, Western Regional Centre, Pune. Occasional Paper No., 408: 1-201. (Published by the Director, Zoological Survey of India, Kolkata).
4. Koyna Wild life Sanctuary, Maharashtra. 2021. Conservation Area Series, No. 66:1-247 (published by the DZSI, Kolkata).

### PAPERS

1. Bhowal , A., Siddique, A., Purushothaman, J., Francis, S.V. and Raghunathan, C. 2022. First report of an epibiontic diatom *Protoraphis hustediana* R. Simonsen, 1970 (Protoraphidaceae) in association with copepod *Pontella andersoni* Sewell, 1912 from northern coastal waters of Bay of Bengal, Indian Ocean. Marine Biology Research <https://doi.org/10.1080/17451000.2022.2119250> (IF: 1.609).
2. Binoy, C., Achterberg, C. van, Polaszek, A., Girish Kumar, P. and Santhosh, S. 2022. A review of *Taeniogonalos* (Hymenoptera: Trigonalysidae) from India with the description of two new species. *Journal of Natural History*, 56: 21-24, 1153-1158. DOI: 10.1080/00222933.2022.2088311
3. Das, M. K., Rajendar, R., Surendar, C. and Padmanaban, P. 2022. Length-weight relationships for five fish species from Gulf



- of Mannar, southeast coast of India. *Indian Journal of Geo-Marine Sciences* (IJMS), 51(06), 573-575.
4. Gole, S., Mohammed, P.I., Apte, D. and Marimuthu, N. 2022. Holothurian spatial variability and substratum preference in the intertidal habitats of the Andaman Sea. *Regional Studies in Marine Science* . 56. 102633.
  5. Hasan, M.N., Reynolds, J.W., Deuti, K , Mandal, C.K and Misra, A. 2022. Studies on the polychaetous annelids from Digha Coast, West Bengal, India. *Megadrilogica*. 27(5): 42-55.
  6. Jadhav, S. S., Karuthapandi, M., Shangningan, B., Deepa Jaiswal and Shiva Shankar, C. 2021. *Garra deccanensis*, a new labeonine fish from Peninsular India. *Ichthyological Explorations of Freshwaters*, IEF 1182: 1-14.
  7. Khan, I. A., Kumar, A. and Bhatt, D. 2022. Seasonal variations in the flocking behaviour of Eurasian Magpie *Pica pica* in Ladakh, India. *J. Exp. Zool. India*, 25, 2509-2514. Doc ID: <https://connectjournals.com/03895.2022.25.2509>.
  8. Kluge, N.J., Srinivasan, P., Vasanth, M., Sivaruban, T., Barathy, S. and Isack, I. 2022 Review of the subgenus *Euthraulius* (Ephemeroptera, Leptophlebiidae, genus *Choroterpes*) from the Western Ghats (India) *Zootaxa* 5181 (1): 001-085. DOI: <https://doi.org/10.11646/zootaxa.5181.1.1>
  9. Kumar V., Tyagi I., Patidar A., Singha D., and Tyagi K. 2022. Gut bacterial diversity on the basis of feeding behaviour in different species of thrips (Thysanoptera), *Journal of Taibah University for Science*, 16:1, 863-873. DOI: 10.1080/16583655.2022.2123208
  10. Kundu, S., Shibananda, R. A. T. H., Shangningam, B., Tyagi, K., Laishram, K., Kumar, V., and Banerjee, D. 2022. Genetic investigation of freshwater fishes from Indo-Nepal trans-boundary River. *Fish Taxa*, 25, 1-8.
  11. Mandal, C.K., Reynolds, J.W., Hasan. M.N., Deuti, K, Sinha, B., Ghosh, S and Banerjee, D. 2022. A second new leech *Haemadipsa zelanica dimapurensis* (Annelida: Hirudinida, Haemadipsidae) from Nagaland, India. *Megadrilogica*. 27(6): 57-61.
  12. Mohapatra, S.K., Sura, S. and Seth, J.K. 2022. Overlapping and partitioning of niche among different life stages of the parasitic isopod *Cymothoa indica* in the host *Glossogobius guiris* collected from the Chilika lagoon, India. *Parasitol Res*. <https://doi.org/10.1007/s00436-022-07641-1>.
  13. Prasad, P., Goutam, K., Saha, Kumar, V. and Tyagi, K. 2022. First Report of The Wolf Spider *Pardosa Parathompsoni* (Araneidae: Lycosidae) From India. *Munis Ent Zool*.
  14. Rameshkumar, A., Sardar, S. Majumder, B., Dey, S. and Kazmi, S. I. 2022. Observation of bee pollinators (Apoidea) on a medicinal plant, *Lippia alba* (Mill.) (Verbenaceae). *Current Science*, 123 (5): 703-707. doi: 10.18520/cs/v123/i5/703-707.
  15. Ranjana, B., Sharon, E.A., Chandika, R.G and Ganesh, S.R. 2022. Genetic documentation of snake species using non-invasive sampling and non-toxic DNA isolation method: Genetic documentation of snake. *Journal of Wildlife and Biodiversity*.
  16. Ravinesh, R., Bineesh, K.K., Subramanian, M. and Hashim, M. 2022. New distributional record of deep-water *Phos gemmulifer* Kilburn, 2000 (Buccinoidea: Nassariidae) from the Andaman Sea. *Strombus* 28(1-2): 6-11.
  17. Pati, S.K., Thackeray, T., Bajantri, P.P. and Hegde, G.D. 2022. A new species of the freshwater crab genus *Ghatiana* Pati and Sharma, 2014 (Brachyura: Gecarcinucidae) from the Central Western Ghats, India. *Nauplius*, 30: e2022019. DOI: <https://doi.org/10.1590/2358-2936e2022019>
  18. Sreeraj, C.R., Arya Sen and Raghunathan, C. 2022. Report of three crypto-benthic reef fishes from Lakshadweep islands. *India. Journal of Asia-Pacific Biodiversity*. <https://doi.org/10.1016/j.japb.2022.08.004>
  19. Surya, K.S., Binoy, C. and Sureshan, P.M. 2022. A synopsis of the Oriental species of *Thaumasura* Westwood (Hym., Pteromalidae, Cleonyminae). *Journal of Insect Biodiversity and Systematics*. 8 (4).
  20. Sunita, P., Rajmoahana, K., Manoj, K. and Anjana, M 2022. Two new species of the rare genus *Gastrotypes* Brues (Hymenoptera: Platygasteridae) from India. *Acta Zoologica Academic Scientiarum Hungaricae*, 68(3): 239-246. DOI: 0.17109/AZH.68.3.239.2022.
  21. Raj, C.P, Siddique, A., Bhowal, A., Prasad, H. and Purushothaman, J. 2022. Report of *Chrysaora caliparea* (Reynaud, 1830) Swarm from the Coastal Waters of Odisha, Western Bay of Bengal. *National Academy of Science Letters* <https://doi.org/10.1007/s40009-022-01140-8>.
  22. Saikia, U. and Meetei, B. 2022. Diversity, distribution and abundance status of small mammalian fauna (Chiroptera: Rodentia: Eulipotyphla) of Manipur, northeastern India. *Journal of Threatened Taxa* 14 (9): 21751-21768
  23. Sharma, G., De, S., Mandal, U., Bhattacharjee, R. and Suman, D. S. 2022. Ecological variations in adult life table attributes of *Aedes aegypti* (L.) from the



desert and coastal regions of India. *Med. Vet. Ent.* <https://doi.org/10.1111/mve.12609>.

24. Sudhin, P. P., Sen, S. and Caleb, J. T. D. 2022. Taxonomic notes on the placement of *Tibellus elongatus* Tikader, 1960 and *Apollophanes bangalores* Tikader, 1963 (Araneae: Philodromidae). *Zootaxa*, 5182(3): 288-296.
25. Thunnisa, A.M., Arbea, J.I., Sumithra, N., Mandal, G.P., and Sanil, R., 2022. Two new species and two new records of Onychiurinae (Collembola, Onychiuridae) from the Nilgiris, India. *Zootaxa*, 5182(5): 448-464.
26. Takawane, P., Deb, R., Morey, R., Khandagle, S. & Pokale, S., 2022. Diversity of Aquatic Beetles (Insecta: Coleoptera) with respect to physico-chemical parameters of Pawana River, Pune, Maharashtra. *Journal MSU of Baroda*, Volume 56, No. 1(VIII): 116-120

## BOOK CHAPTERS

1. Babu, R. and Subramanian, K.A. 2022. Insecta: Plecoptera, In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula* (Eds. Banerjee, D., Chandra, K., Raghunathan, C., Singh, N. and Gupta, D.), pp. 267-269. Published by the Director, Zool. Surv. India, Kolkata.
2. Das, P., Shah, S.K., Singh, N., Rai, P. and Gupta, D. 2022. Insecta: Lepidoptera (Butterflies). In: *Faunal Diversity of Biogeographic Zones of India: Gangetic Plains: 285-294* (Published by the Director, Zool. Surv. India, Kolkata).
3. Hassan, M. E, Gopal, S. and Saha, P. C. 2022. Insecta: Hemiptera (Terrestrial Bugs), in: *Fauna of Purna Wildlife Sanctuary, Gujarat*.
4. Joshi, R., Ghosh, J., Farooqui, S. A. and Singh, N. 2022. Insecta: Lepidoptera (Moth). In: *Faunal Diversity of Biogeographic Zones of India: Gangetic Plains: 295-311* (Published by the Director, Zool. Surv. India, Kolkata).
5. Kamalakannan, M. & Venkatraman, C. 2022. Mammalia- Pp. 637-643. In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula: 637-643*. (Published by the Director, Zool. Surv. India, Kolkata).
6. Laskar, B. A. and Kosygin, L. (2021). Pisces (Freshwater Fishes). In: Banerjee, D., Chandra, K., Raghunathan, C., Singh, N., and Gupta, D., (eds.) *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula, 1-657*. (Published by the Director, Zool. Surv. India, Kolkata).
7. Mandal, G.P., Suman, K. K. and Bhattacharya, K. K. 2022. Collembola. In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula: 215-219*. (Published by Director, Zoological Survey of India, Kolkata).
8. Mandal, G.P. 2022. Insecta: Archaeognatha. In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula: 215-219*. (Published by Director, Zoological Survey of India, Kolkata).
9. Mandal, G.P., Suman, K. K. and Bhattacharya, K. K. 2022. Insecta: Zygentoma. In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula: 215-219*. (Published by Director, Zoological Survey of India, Kolkata).
10. Palot, M. and Mishra, P. 2022. Insecta: Lepidoptera (Butterflies): 473-485. In: Banerjee et al., 2022. *Faunal Diversity of Biogeographic Zones of Deccan Peninsula: 1-657* (Published by the Director, Zool. Surv. India, Kolkata).
11. Ramesh, G., Babu, R. and Subramanian, K.A. 2022. Insecta: Psocoptera: Psocoptera, In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula* (Eds. Banerjee, D., Chandra, K., Raghunathan, C., Singh, N. and Gupta, D.), pp. 297-300. Published by the Director, Zool. Surv. India, Kolkata.
12. Ranjana, B & Sharon, E. A. 2022. Molecular Genetic Approaches in Wildlife Conservation. In M. Çalik, & S. Aydin (Eds.), *Genetic Diversity - Recent Advances and Applications*. Intech Open. DOI: <https://doi.org/10.5772/intechopen.106648>.
13. Subramanian, K.A. and Babu, R. 2022. Insecta: Odonata, In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula* (Eds. Banerjee, D., Chandra, K., Raghunathan, C., Singh, N. and Gupta, D.), pp. 235-242. Published by the Director, Zool. Surv. India, Kolkata.
14. Vasanth. M. and Subramanian, K.A. 2022. Insecta: Ephemeroptera, In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula* (Eds. Banerjee, D., Chandra, K., Raghunathan, C., Singh, N. and Gupta, D.). Published by the Director, Zool. Surv. India, Kolkata.
15. Singh, N., Pathania, P.C., Joshi, R., Kalawate, A., Shah, S.K., Ahmad, J., Raha, A, Das, A. and Mazumder, A. 2022. Insecta: Lepidoptera (Moths): 478-514. In: Banerjee et al., 2022. *Faunal Diversity of Biogeographic Zones of Deccan Peninsula: 1-657* (Published by the Director, Zool. Surv. India, Kolkata).
16. Palot, M. J. & Mishra, P. 2022. Insecta: Lepidoptera (Butterflies). In: *Faunal diversity of Biogeographic Zones of India: Deccan Peninsula. 473-485* (Published by the Director, Zoological Survey of India, Kolkata).



17. Pati, S.K. 2022. Crustacea: Decapoda: Brachyura. In: D. Banerjee, K. Chandra, C. Raghunathan, N. Singh and D. Gupta (Eds.), *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula*: 191–197 (Published by the Director, Zoological Survey of India, Kolkata).
18. Dinesh, K.P and Mohapatra, P.P. 2022. Amphibia, In: *Faunal Diversity of Biogeographic Zones of India: Deccan Peninsula*: 589–597. Published by Zoological Survey of India (ISBN 978-81-8171-595-1).

## POPULAR ARTICLES

Saikia, U. "Celebrating World Rhino Day: a thought for the five" Shillong Times, 18<sup>th</sup> \ September

## MEETINGS ATTENDED

1. Dr. Dhriti Banerjee, Scientist- G & the Director, ZSI visited the National History Museum, London on 7.9.2022 and interacted with Scientists of various sections and museum curators of Zoological Collections (including the Tank Room), Sackler Lab, Entomological Collections, Herbarium and galleries; discussed to access Indian type specimens for study through visits, loans, or collaborative projects; student exchange programme career advancement; International workshop/ webinars/trainings on Arachnids attended the National Conference of all Ministers of MoEFCC at Ekta Nagar, Gujarat on 23-24<sup>th</sup> Sept. 2022 focusing on current environment and climate change challenges under six agenda viz., Updating State Action Plans, on Climate Change (SAPCC); PARIVESH, Forestry Management, Prevention and Control of Pollution; Wildlife Management and Plastics and Waste Management ; attended 1<sup>st</sup> meeting of the Project Advisory Committee (PAC) on Organismal and Evolutionary Biology (OEB) on 28-30 September, 2022 at University of Hyderabad.
2. Dr. C. Raghunathan, Scientist- F, Provided the comments of ZSI for Service Sector Commitments in Free Trade Agreements to MoEFCC on 2nd September 2022; Attended the meeting of Special Campaign 2.0 disposal of Pending Matters from 2<sup>nd</sup> October, 2022 to 31<sup>st</sup> October, 2022 chaired by the Additional Secretary, MoEFCC on 3<sup>rd</sup> September 2022; Chaired the preparatory meeting with Regional Centres for Special Campaign 2.0 disposal of Pending Matters from 2<sup>nd</sup> October, 2022 to 31<sup>st</sup> October, 2022 on 5<sup>th</sup> September 2022; Chaired the meeting to evaluate the FTRs of ZSI on 6<sup>th</sup> and 7<sup>th</sup> September 2022; Attended the meeting with Additional Secretary, MoEFCC for Special Campaign 2.0 disposal of Pending Matters from 2<sup>nd</sup> October, 2022 to 31<sup>st</sup> October, 2022 held on 10<sup>th</sup> September 2022; Attended the meeting with Additional Secretary, MoEFCC for action taken to fill-up the vacant posts held on 8<sup>th</sup> September 2022; Requisite information in respect ZSI for Sectoral Review has been submitted to MoEFCC on 13<sup>th</sup> September 2022; Organized the interactive meeting with Chief Controller of Accounts, MoEFCC, Mr. Arvind Kumar at ZSI headquarters on 15<sup>th</sup> September 2022; Attended the "National Conference of Ministers of Environment, Forest and Climate Change" held on 23<sup>rd</sup> & 24<sup>th</sup> September 2022 at Ekta Nagar, District Narmada, Gujarat; Attended the 12<sup>th</sup> meeting of the State Board for Wildlife, West Bengal chaired by Hon'ble Minister-in-Charge, Forests, Government of West Bengal held on 26<sup>th</sup> September 2022 at Kolkata; edited the draft chapter of Biodiversity and Wildlife for National State of Environment Report and submitted to MoEFCC on 27<sup>th</sup> September 2022
3. Dr. C. Sivaperuman, Scientist-E attended 43<sup>rd</sup> Annual General Body Meeting of the Andaman & Nicobar Islands Plantation Development Corporation Ltd. Port Blair on 7<sup>th</sup> September 2022 as nominated by the Secretary, Ministry of Environment & Forests, Government of India; attended meeting with Inspector General B. Sharma, Commander Indian Coast Guard, A & N Region on 26<sup>th</sup> September 2022 and discussed about the proposed activities in the unexplored areas in A & N Islands.
4. Dr. V. D. Hegde, Scientist-E attended the NAAC committee meeting at University of Calicut on 15 September 2022 on Vice Chancellor's invitation.
5. Dr. Indu Sharma, Scientist-E attended the Rajasthan State Biodiversity Board meeting through Video-conferencing on 13<sup>th</sup> September, 2022 under the chairmanship of Honorable Chief Minister, Sh. Ashok Gehlot, Sh. Hemaram Choudhary Minister of Environment, Forest & Climate Change, Sh. Arindam Tomar, PCCF and Chief Wild life Warden at the Centre.
6. Smt Ilona J Kharkongor attended the 3<sup>rd</sup> Meeting of the XXIII Board for Wildlife, Arunachal Pradesh, held in the Chief Minister's Conference Hall on the 17<sup>th</sup> September, 2022; Smt Ilona J Kharkongor & Dr G Srinivasan attended the Meeting with delegates deputed by MoEFCC for Evaluation of Itanagar WLS & Eaglenest WLS, in the Office of the DFO, Itanagar Biological Park, on the 12<sup>th</sup> September, 2022; attended the Meeting of the State Research Advisory



Committee, in the O/o The PCCF, Govt. of Arunachal Pradesh, on the 13<sup>th</sup> September, 2022.

7. Smt J. Lyngdoh, Sci- E attended the 30<sup>th</sup> meeting of the Governing Body of the Meghalaya Zoo Project Implementation Society held on the 27<sup>th</sup> September, 2022 at the Conference Room of the O/o the PCCF & HoFF, Sylvan house, Shillong.
8. Dr. Gaurav Sharma, Scientist-E as External Subject Expert Member attended meeting on selection of Ph.D. Research Scholars for Forest Entomology Discipline conducted by The Registrar, Forest Research Institute (Deemed University), Dehradun on 20<sup>th</sup> September, 2022.
9. Dr Deepa Jaiswal, Scientist E attended meeting with Mr. Vinay Yadav IAS, Commissioner, AMRDA, Vijayawada, regarding the NOC for the building constructions at Amravati on 13<sup>th</sup> September 2022.
10. Dr U. Saikia, Sci- D took part in a meeting of the screening committee of Meghalaya Biodiversity Board for short listing of candidates for the posts of field project associate on the 8<sup>th</sup> September
11. Dr B. Tripathy, Sci-E & HOO served as an expert for conducting interview for the selection of the Post Doctorate fellow at ZSI, SRC, Chennai in online mode.
12. Dr B. Tripathy, Sci-E & HOO, Dr A.S. Kalawate, Sci-E and Dr K.P. Dinesh, Sci-E attended an online meeting with Secretary, MoEF&CC on 10.09.2022 regarding special campaign.
13. Dr A.S. Kalawate, Sci-E attended a meeting of Wildlife Board of Maharashtra on 21.09.2022 with the Honorable CM of Maharashtra and PCCF at Mantralaya, Mumbai.
14. Dr A.S. Kalawate, Sci-E attended a meeting at Bhimashankar Wildlife Sanctuary with local people, foresters and other technical committee members regarding declaring the critical habitat in the sanctuary on 24.09.2022.
15. Dr A.S. Kalawate, Sci-E attended one day workshop on Biopesticides and Bioregulators: Role in Sustainable Agriculture (BBRSA-2022) at BARC, Mumbai on 11.09.2022.
16. Dr A.S. Kalawate, Sci-E has delivered an online talk in the International Conference Ento22 held from 14-16, September, 2022 on the topic "Diversity of forensic important Trogid beetle in India" organised by Royal Society of Entomology and University of Lincoln, UK.

17. Dr K.P. Dinesh, Sci-E undertook four lectures to the PhD course work students of Zoology Department, Pune University from 21/09/2022 to 22/09/2022 on 'Tools and techniques in Integrated Taxonomy' with case studies.
18. Scientists of the centre attended the online meetings of the Cataloguing works on State-wise data of on Vertebrates & Invertebrates of the country convened by the Director, Zoological Survey of India, Kolkata on 2.09.2022, 07.09.2022 and 21.09.2022.
19. Dr A.S. Kalawate, Sci-E and Dr K.P. Dinesh, Sci-E attended an online meeting with the Additional Director related Special campaign and revised head of budget on 05.09.2022.
20. Scientists of the Centre: Dr. S.S. Talmale and Dr. S.R. Patil delivered lectures to MSc students of SPPU, University on their visit to WRC.
21. Dr M.J. Palot, Sci-B delivered an online lecture on "Butterfly diversity of Western Ghats" for the UGC Refresher Course for teachers in Life Sciences on 15<sup>th</sup> September 2022 organised by the UGC- Human Resource Development Centre (HRDC), University of Kerala, Thiruvananthapuram.

## TRAININGS ATTENDED

1. Dr. Gaurav Sharma, Scientist-E attended "Training Programme on Conservation and Management of Coastal Ecosystems" organized by The Director, Forest Research Institute, Dehradun, Uttarakhand in the Conference Hall of Scientist Guest House, FRI, Dehradun on 19<sup>th</sup> to 23<sup>rd</sup> September, 2022.
2. Dr. Anil Mohapatra, Scientist-E participated in the "National Conference on Sustainable Coastal Management in India" organized by UNDP from 10<sup>th</sup> – 11<sup>th</sup> September, 2022 at Bhubaneswar, Odisha.
3. Dr. Jasmine P., Sci.E, participated in the online training course on Fundamentals of Remote Sensing and its Oceanographic Applications" conducted by INCOIS during 05 - 09 September, 2022.
4. Dr. K. A. Subramanian participated in the Science Leadership Training Programme organized by Office of the Principal Scientific Advisor, Govt. of India, Capacity Building Commission, ISRO, Ahmedabad University and CTIER.



5. Dr A.S. Kalawate, Sci-E attended two days online training programme on Building Science Leadership Program-Capacity Building organized by Ahmedabad University and CTIER, Pune .....
6. Dr. T. Kubendran provided training for Taxonomic identification of the order – Ephemeroptera (Mayflies) to the officials of CPCB on 13.09.2022 & 14.09.2022 at Central Pollution Control Board, New Delhi. ....

Coimbatore, on 19th September, 2022 (through on-line mode).  
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5. Dr Sreeraj C.R., Scientist-C delivered a lecture on the topic *Marine Biodiversity* during the programme of “International clean-coast, safe sea day” organized at the National Institute of Technology, Kozhikode organized by DST and Vigyan Prasar on 14 September 2022. ....
6. Dr. Kamalakannan M. Senior Zoological Assistant has delivered three invited lectures on ‘*Morphological identification of wildlife seizures*’, ‘*Tricho-taxonomy of Indian mammals*’ and ‘*Detention based identification of Indian mammals*’ to the Tamil Nadu Forest Range Officers at the Advanced Institute for Wildlife Conservation, Tamil Nadu Forest Department, Chennai on 26-27 September 2022. Further, Dr. Kamalakannan was awarded with the memento by the Addl. PCCF & Director of AIWC for his lectures. ....

## LECTURES DELIVERED

1. Dr. Gopal Sharma, Scientist E delivered online lecture on “Capacity Building for animal research in teaching and research Institutions” organized by Science For Society at Patna Science Centre, Patna; delivered a lecture on Reshaping the City with special reference to Smart City on 14.09.2022 at Dayanand Girls High School Patna; delivered a lecture on “e-Waste and Management” at Shri Arvind Mahila Mahavidhyalay, Patna on 15.09.2022. delivered lecture on “Key Stone Species of River Ganga” on 25th September, 2022 at the Ganga Research Centre, Patna on the Occasion of “World River Day 2022” organised by Asian Development Research Institute, Patna( ADRI). ....
2. Dr. Gaurav Sharma, Scientist-E delivered lecture on the topic entitled “Studies on Faunal Diversity with special reference to Coastal region of India” to trainees of Coastal Guard Officers from different States & Union Territories of India organized by The Director, Forest Research Institute, Dehradun, Uttarakhand in the Conference Hall of Scientist Guest House, FRI, Dehradun on 21 September, 2022. ....
3. Dr. C. Sivaperuman, Scientist-E delivered a talk on Avifauna of Andaman and Nicobar Islands on 1<sup>st</sup> September 2022 in the National webinar series organised by *Government Model Science College Rewa, Madhya Pradesh*; delivered a talk on Coastal and Marine Biodiversity and its importance on 9<sup>th</sup> September 2022 at Government Engineering College, Puducherry as a part of celebration of Swachh Sagar, Surakshit Sagar organized by Vigyan Prasar, Department of Science and Technology; delivered a talk on Coastal and Marine Biodiversity and its importance on 10<sup>th</sup> September 2022 at Department of Zoology, Poompuhar College, Poompuhar, Tamil Nadu. ....
4. Dr. R. Babu, Scientist-E, delivered lecture on “Insect Fauna of India with special reference to Odonata” in “Refresher Course in Zoology for the University and College Teachers” organized by UGC Human Resource Development Centre, Bharathiar University,



## GLIMPSES OF DIRECTOR'S VISIT TO NATURAL HISTORY MUSEUM, LONDON



Interacting with Dr. Miranda, Principal, Curator, NHM



With Dr. John Jackson and Dr. Ranee Prakash

With scientists at NHM, London

