



From the Director's Desk



I am glad to release the December 2022 issue of E-News to the readers. The ZSI launched Mission LiFE on 09th December, 2022 and promoted 3Rs 'Reduce, Reuse and Recycle' to save the environment. Surveys have been conducted in Baraila Bird Sanctuary and Bhimbandh WLS in Bihar, Mookambika WLS in Karnataka and in the state of Andhra Pradesh, Goa and Odisha to assess the faunal wealth. Seven species under fishes, spiders and collembola were described as new to science, while identifying 7164 specimens comprising 1274 species. Twenty nine sequences (mt 16S rRNA) have been generated and uploaded in GenBank. The workshop on Coastal and Marine Biodiversity of Island Ecosystem under the "Training of Personnel of Other Stakeholders" sponsored by MoEFCC was organized by ZSI, Port Blair. As a result of recruitment in mission mode, the appointment order for 94 Senior Zoological Assistants have been issued and most of them have joined in ZSI Headquarters as well as Regional Centres.

Happy and Prosperous New Year 2023 wishes.

Jai Hind

Dr. DHRITI BANERJEE
Director
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Kolkata

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Edited by
Dr. Dhriti Banerjee
Dr. C. Raghunathan
Dr. S. Sheela

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Email: director@zsi.gov.in
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Cover photo: *Amandava*
amandava (Linnaeus, 1758)
Red avadavat; Courtesy:
FBRC, Hyderabad.

HEADQUARTERS, KOLKATA

Seven species including, spiders *Cocalus shendurneyensis* Sudhin, Sen, Caleb and Hegde, 2022, *Habrocestum mookambikaensis* Sudhin, Sen, Caleb and Hegde, 2022; freshwater fishes *Exostoma dhritiae* Singh, Kosygin, Gurumayum & Rath, 2022, *Glyptothorax waikhomi* Shangningam & Kosygin, 2002 and *Pethia chakpiensis* Shangningam & Kosygin, 2022; and two species of Collmebola were described as new to science. Faunistic survey was conducted to Subarnarekha estuary in Odisha. Altogether 3954

specimens comprising 391 species under different invertebrate and vertebrate faunal groups have been identified, of which a species of Platyhelminthes and two species of Hemipteran insects were augmented to National Zoological Collections. DNA Barcodes were generated for 16 Dipteran insects. As a part of outreach activities ZSI participated in 31st Damoder Mela 2022, Sunderban Kristi O Loko Sanskriti Utsab and Khardaha Sanskritik Utsav-2022 conducted in West Bengal and displayed the exhibits. Reply for the Rajya Sabha Unstarred Question No. 1793 due for

reply on 22-12-2022 prepared and sent the Ministry. Comments on “Biodiversity of Marine Ecosystems and / or Coastal Areas” under the *target SDG 14.2: sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans*’ provided to the Ministry on 20th December 2022. Provided inputs to the Ministry for Online Survey- Policy responses, legislation and resourcing to manage invasive alien species for the purpose of Sustainable

Development Goal (SDG) Target 15.8 that calls for the establishment by 2020 of “measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species”; and the assigned Global Indicator 15.8.1; Comments for ‘Noise abatement services (CPC 94050)’ on the draft market access offer on environmental services under India-UK FTA negotiations sent to MoEFCC on 26th December 2022. As a part of advisory services, identified four species of white flies to the Netherlands Food and

Consumer Product Safety Authority (NVWA), Ministry of Agriculture, The Netherlands, validated the keys of Ephemeroptera and Odonata to Central Pollution Control Board, New Delhi, identified 4 species of crustaceans to Singur Government College, Hooghly and 3 species of Demaptera to Government College, Jukhala, Bilaspur, Himachal Pradesh.



Launched Mission LIFE (Lifestyle for Environment) at ZSI, Kolkata on 09th December, 2022 and promoted 3Rs 'Reduce, Reuse and Recycle'

NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

The pledge on
"Save Energy
& Conserve
Energy"

Exhibition at St
Anthony's College,
Shillong



Scientists have identified 64 species of Cladocera, Amphibia, Pisces, Crustacea and Hemiptera. A survey tour was undertaken to Manas National Park, Assam from 5th to 11th December 2022. Identification & Advisory services provided to Nagaland University on plankton and to Pandu College, Guwahati, Assam on species of bat.



CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH

A flock of Brown
headed Gull,
*Chroicocephalus
brunnicephalus*
(Jerdon, 1840)



Scientists have identified 86 species of amphibians, molluscs, scorpions and insect orders, viz. Orthoptera, Lepidoptera and Hemiptera. The centre received two well preserved heads of Chital, *Axis axis* (Erxleben, 1777) from Mr. Ramesh Kumar, Channi as donation to the museum.

Poster prepared
under Mission
LiFE campaign

DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

*Himantopus
mexicanus*
(Muller, 1776)
Black-necked stilt

A survey was conducted from 15th to 25th December 2022 at Mount Abu Wildlife Sanctuary, Rajasthan. Scientists have identified 58 species of Gastropoda, Coleoptera, Hymenoptera, Lepidoptera (Insecta) and Decapoda. Celebrated Mission Life Programme" on 9th December and Hindi Karyasala on 19th December, 2022.

Mission life activities celebrated at DRC, Jodhpur



NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND

*Carpodacus
sipahi*
(Hodgson,
1836)



Scientists of the Centre identified 73 species belongs to different faunal groups i.e., Phthiraptera, Odonata, Orthoptera, Lepidoptera, Hymenoptera, Pisces, Amphibia and Reptilia. Celebrated Mission Life Programme" on 9th December, 2022.

Celebration
of Mission
Life

GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

Predatory stink bug, *Cazira
montandoni* Breddin, 1903

Scientists of the Centre identified 42 species. Conducted a survey tour to the Baraila Bird Sanctuary and Bhimbandh Wildlife Sanctuary from 15th - 25th December, 2022. Identification & Advisory service provided to Patna University on Sericulture practices. Cleanliness drive was carried out at ZSI GPRC Patna during December, 2022.

HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH

Students undergoing
training in HARC
museum



Scientists have identified 64 species of invertebrates (Insects) and vertebrates (Pisces). Identification & Advisory services provided to Nagaland University on Hemiptera and to Punjab Agricultural University on Hemiptera. Scientists have reviewed two research papers. DNA sequences of 06 samples of Lepidoptera submitted to NCBI. Centre organized programme launched by the Government, MISSION OF LIFE, the Life Style for Environment, during the month.

ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

One survey has been conducted to North & Middle Andaman during 15th - 29th December 2022 to study the terrestrial and marine faunal diversity; 29 days local field surveys were conducted to South Andaman to study the terrestrial faunal diversity. A total of 243 species comprised of Freshwater Fishes (12 species); Mollusca (7 species); Echinoderms (11 species) were identified from the marine environment; Arachnida (42 species); Lepidoptera (68 species); Birds (103 species) were identified from the terrestrial environment.



*Heteropoda
venatoria*
Linnaeus 1767



Five day training on
Para-taxonomy

SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL



Paratapes textilis (Gmelin, 1791)

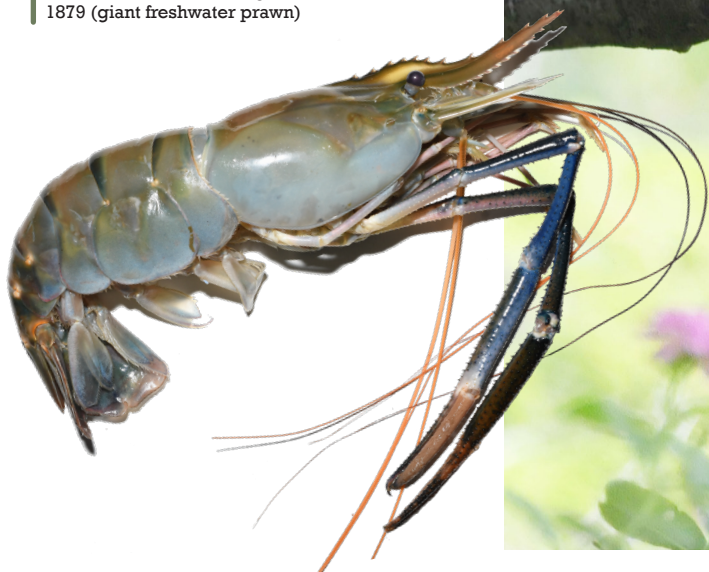


Mission
Life -Rally

One day local survey was conducted on 18th December 2022 in Namkhana fish landing centre. During the month total 94 species of mollusca, fishes and crustaceans were identified. Celebrated MISSION LIFE on 9th & 16th December 2022.

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

Macrobrachium rosenbergii De Man,
1879 (giant freshwater prawn)



Taccocua leschenaultii (Lesson,
1830) Sirkeer malkoha

The scientists, staff and research scholars of the Centre identified 77 species including 19 species of aquatic Coleoptera, 17 species of aquatic Hemiptera, 3 species of Ostracoda, 9 species of Branchiopoda, 10 species of Mollusca, 1 species of crab and 18 species of fishes. Conducted field survey to Godavari River from 1st to 20th December 2022. 27 DNA sequences have been submitted to NCBI.

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE, KERALA



Collyris subtileculpta
Horn

The scientists of the Centre identified 88 species viz. 44 species of Protozoa, Decapoda, Coleoptera, Dermaptera, Hymenoptera and Mantodea from surveys conducted and 44 species of Arachnida, Coleoptera, Dermaptera, Hymenoptera and Mantodea from backlog collection. Faunistic survey of Mookambika Wildlife Sanctuary, Karnataka was conducted from 28 November-09 December, 2022 and a local survey of Poonoor River, Kozhikode was conducted on 17 December, 2022. Identification and advisory services rendered to ZSI-WRC, Pune for darkling beetle samples. Scientists reviewed one manuscript on Hymenoptera for the journal *Zootaxa*.



Save Energy and
Choose Life

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



Crocodylus palustris
Lesson, 1831

Phalacrocorax carbo
(Linnaeus, 1758)



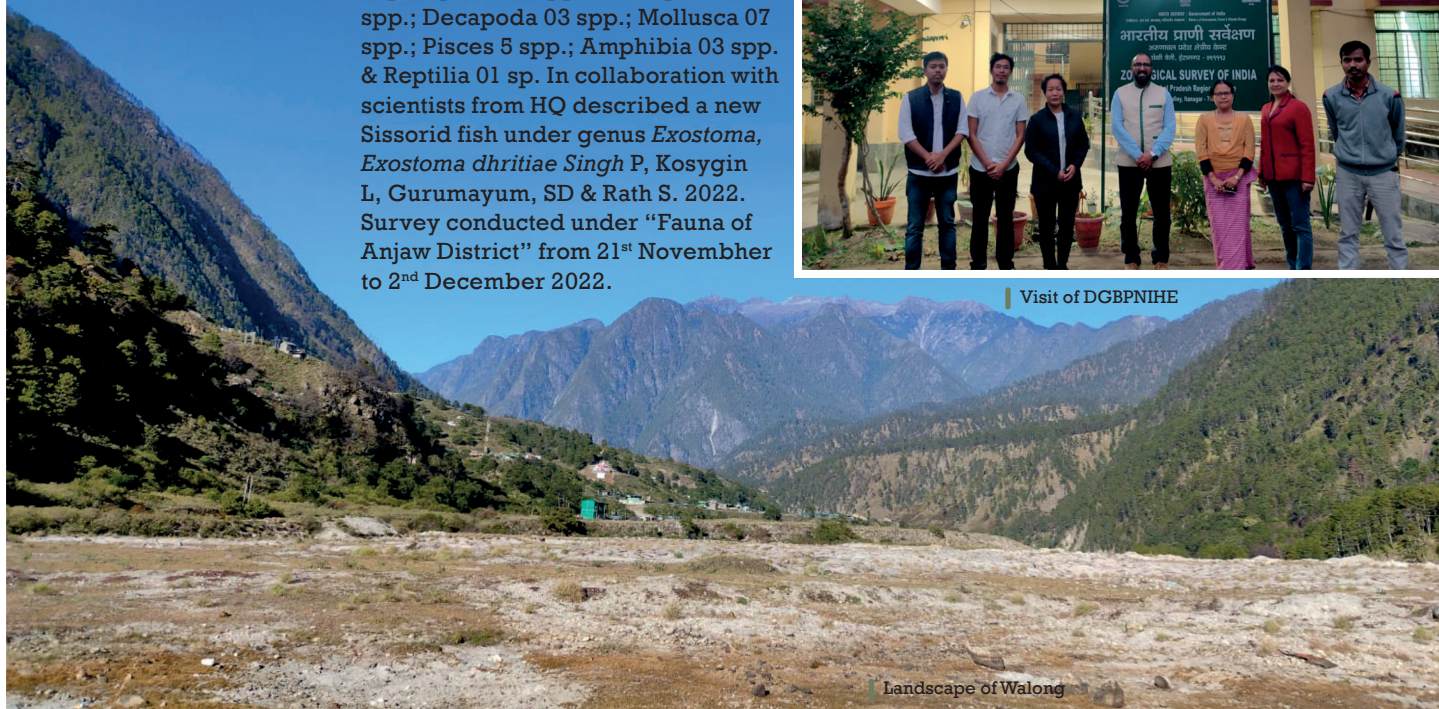
Seven days survey conducted to Lakhari Valley Wildlife Sanctuary from 12th to 18th December 2022. One day local survey to Bahuda estuary has also been conducted. During this month 148 species were identified. Fourteen DNA barcodes belonging to 12 species were uploaded in the NCBI data base. Participated in the Dolphin census in Chilika lagoon.

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Scientists have identified a total of 43 species during the month containing Lepidoptera 10 spp.; Orthoptera 14 spp.; Decapoda 03 spp.; Mollusca 07 spp.; Pisces 5 spp.; Amphibia 03 spp. & Reptilia 01 sp. In collaboration with scientists from HQ described a new Sisorid fish under genus *Exostoma*, *Exostoma dhritiae* Singh P, Kosygin L, Gurumayum, SD & Rath S. 2022. Survey conducted under "Fauna of Anjaw District" from 21st November to 2nd December 2022.



Visit of DGBPNH



Landscape of Walong

MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

*Chaetodon
decussatus*
Cuvier, 1829

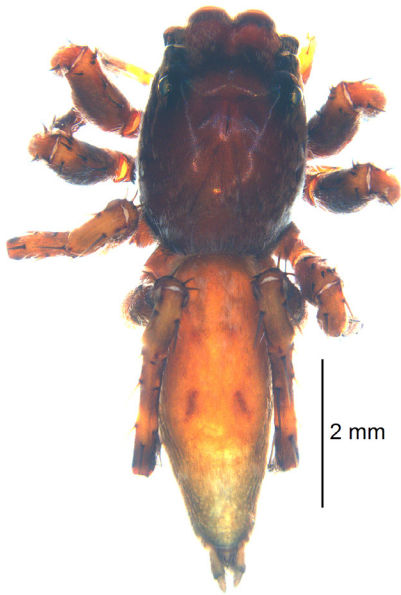


Scientists have identified 55 species containing 21 spp. of Mollusca, 15 spp. of Fishes, 10 spp. of Polychaete, 6 spp. of Reptilia and 3 spp. of Cnidaria. Evaluated one DST, SERB, CRG Project and reviewed two manuscripts. One local survey for 10 days at Digha, West Bengal and Talsari and Udaypur, Odisha was conducted. 5 samples of gDNA and 6 samples of PCR product amplified.

Zooxanthellae at
Diu beach

NEW DISCOVERIES

NEW SPECIES



Cocalus shendurneyensis Sudhin,
Sen, Caleb and Hegde, 2022



Habrocestum mookambikaensis Sudhin,
Sen, Caleb and Hegde, 2022



Exostoma dhritiae Singh, Kosygin,
Gurumayum & Rath, 2022



Glyptothorax waikhomi
Shangningam & Kosygin, 2022



Pethia
chakpiensis
Shangningam
& Kosygin,
2022

PUBLICATIONS

PAPERS

1. Rajendra, S and Raghunathan, C. 2022. New distributional record of marine bivalve, *Hiatula diphos* (Linnaeus, 1771) (Bivalvia: Cardiida: Psammobiidae) from the Andaman Islands, India' *Rec. Zool. Surv. India*: 122(2):203–206
2. Balakrishnan, S. and Sivaleela, G. 2022. Distribution and diversity of intertidal marine faunal species along with Maharashtra and Goa coast, India. *Rec. zool. Surv. India*, 122(2): 225–235, DOI: 10.26515/rzsi/v122/i2/2022/164782.
3. Bindu L. and Sathish Kumar V.M. 2022. Novel reports of moss inhabitant testate amoebae (Protozoa: Amoebozoa) from Jim Corbett National park, Uttarakhand, *Int. J. Glob. Sci. Res.*, 9 (2): 1884-1891
4. Hazra, Jana, Mandal & Baltanas, 2022. On two new species of the genus *Ctenolepisma* (Zygentoma:Lepismatidae) from India. *Zootaxa*, 5222(1): 059-068.
5. Hegde, V.D. and Viswanath, T.K. 2022. New records of Darkling Beetles (Coleoptera: Tenebrionidae) from Kerala State, India. *International journal of Entomology research* 7(11): 69-71.
6. Kamalakannan, Palot, M., J. & Banerjee, D.2022. Occurrence of White Wagtail in the Suheli Par Island of Lakshadweep Archipelago, India. Bird-o- soar #187, In: *Zoo's Print* 37(12): 1–3.
7. Kar, O., Naskar, A., Pramanik, D., Mukherjee, K., Sarkar, S., Mukherjee, A., Ghosh, D., Sengupta, J. & Banerjee, D. 2022. An Inventory Of Necrophagous Flies From India. *Uttar Pradesh Journal of Zoology*, 43(23):79-108.
8. Pandey N., Randhawa H.S. and Sharma N. 2022. Butterflies (Insecta: Lepidoptera) diversity in Maldevta region of Uttarakhand. *Journal of Entomology and Zoology Studies* 10 (6): 219-228.
9. Paunekar, S.D. and Sharma, G. 2022. Butterfly species diversity and distribution in protected forest areas of North-West Himalaya of India. *Biological Forum – An International Journal*, 14(4): 1004-1015.
10. Saikia B., Sengupta S. & Saikia U. 2022. *Xenophrys megacephala* Habitat. Natural History Notes, *Herpetological Review*, 53: 304.
11. Sen, S., Sudhin, P. P., Bera, C., Jwala, R., Subramanian, K. A. & Sureshan, P. M. 2022. Spiders (Arachnida: Araneae) of

Kanyakumari Wildlife Sanctuary, Tamil Nadu, India. *Records of the Zoological Survey of India*, 122 (2): 187-197.

12. Shangningam BD & Kosygin L. 2022. A new catfish of the genus *Glyptothorax* (Teleostei: Sisoridae) from the Chindwin drainage, northeast India. *Ichthyological Exploration of Freshwaters* , IEF-1185/pp 1-9. <http://doi.org/10.23788/IEF-1185>
13. Shangningam BD & Kosygin L. 2022. *Pethia chakpiensis* (Cyprinidae), a new species of cyprinid fish from the Chindwin-Irrawaddy drainage of Manipur, India, *Journal of Ichthyology*. <https://doi.org/10.1134/S0032945223010125>
14. Singh, P., Kosygin, L., Gurumayum, SD & Rath, S. 2022. *Exostoma dhritiae*, a new sisorid catfish (Teleostei: Sisoridae) from the Brahmaputra River drainage, Arunachal Pradesh, India, *Zootaxa*, 5219 (2): 165–174. <https://doi.org/10.11646/zootaxa.5219.2.5>
15. Sudhin, P.P., Souvik Sen, John T.D. Caleb and Hegde, V.D. 2022. New species of *Cocalus* C.L. Koch, 1846 and *Habrocestum* Simon, 1876 (Araneae: Salticidae) from the South Western Ghats of India. *Arthropoda Selecta* 31(4): 486–492.
16. Veenakumari, K., Rajmohana, K., Sreedevi, K., Girish Kumar, P. and Prashanth, M. 2022. Replacement name for the homonym of subgenus *Trimorus* (*Neotrimorus*) (Hymenoptera: Platygastroidea: Scelionidae) with description of two new species from India. *Journal of Natural History*, 56 (41-44): 1709-1725. DOI: 10.1080/00222933.2022.2134060

MEETINGS ATTENDED

1. Dr. Dhriti Banerjee, Director, Zoological Survey of India, inaugurated 21 days long National Online Workshop of Zoological Society, Kolkata as a Guest of Honour for faculty members of UG and PG colleges and the Research scholars around India on 01st December, 2022; launched Mission LIFE at ZSI, Kolkata on 09th December, 2022 and promoted 3Rs 'Reduce, Reuse and Recycle'; chaired the Annual General Meeting 2022 of Recreational Club of Zoological Survey of India (RCZSI) on 09th December, 2022; addressed a workshop on Coastal and Marine Biodiversity of Island Ecosystem under the "Training of Personnel of Other Stakeholders" sponsored by the Ministry of Environment, Forest and Climate Change, Government of India from 8th – 10th December, 2022; invited as Chief Guest in Sammilani Mahavidyalaya to its

Silver Jubilee Celebration Ceremony on 12th December, 2022 venue at Dr. Triguna Sen Auditorium, Jadavpur University; attended an online meeting under MoEFCC of Monitoring of Action Plan for filling-up vacancies and GLIS on 13th December, 2022; virtually addressed Inaugural Session of International Conference on Biodiversity and Conservation, 2022 (ICBC-2022) cum Workshop on Traditional Medicine organised in St. Anthony's College, Shillong on 14th December, 2022; addressed a webinar themed Role of Biodiversity Conservation in Ecosystem Functioning on 14th December, 2022; chaired the Screening Committee for the purpose of screening of 27 nos. of applications received against Advt. no. 06/2022 for recruitment of Curator E (Lateral Entry) on contract basis for a period of 5 years in NCSM (National Council of Science Museums), Science City on 15th December, 2022; delivered a lecture as a Resource Person on a topic of "Beyond Taxonomy: A Dipterian Perspective" on 20th December, 2022 through online mode in the programme of the Interdisciplinary Refresher Course in Modern Biology, FY 2022-23 organised by UGC Human Resource Development Centre (HRDC), University of Calcutta for college and university teachers during 07-20 December 2022; Action Taken Report on Mission Life (Lifestyle for Environment) JANBHAGIDARI EVENTS 2022

2. Dr. C. Raghunathan, Scientist- F, attended the meeting to discuss conservation plans for Leatherback Turtle, Nicobar Megapode, Saltwater Crocodile, Corals, etc. for Great Nicobar Island organized by ANIIDCO on 6th December 2022; Served as a Witness in the wildlife cases at Chief Judicial Magistrate Court at Port Blair, Andaman and Nicobar Islands on 9th December 2022; Submitted the revised proposals for conservation and management of coral reefs and intertidal fauna of Great Nicobar Island to ANIIDCO on 19th December 2022; delivered a lecture on Marine Biodiversity of India-status and conservation to the newly recruited Sr. Zoological Assistants on 30th December 2022
3. Dr Bikramjit Sinha, Sci- E, participated as an invitee in the stakeholder's workshop on *Development of Training Needs Assessment Package including Development of Selected Training Modules aiming at Climate-Resilient Management of Aquatic Resources in the North Eastern Region of India* organized by IORA Ecological Solutions Pvt. Ltd. at Guwahati on 8th December 2022.
4. Dr U. Saikia, Sci- D, acted as chairman in one of the sessions of "International Conference on Biodiversity and Conservation" organized by St. Anthony's College, Shillong.

5. Dr. P. S. Bhatnagar, Scientist-E attended online training for GeM for purchase of goods, services and for payment process on 13th, 20th and 27th December 2022; attended meeting called by Addl Secretary MOEFCC Shri Tanmoy Kumar reg GLIS and Vacant positions; attended Nagriya Rajbhasha Vikas Samiti meeting of Jabalpur on 16.12.22; attended virtual meeting of Chattisgarh Wildlife Board chaired by Hon'ble Chief Minister on 19.12.22; attended webinar on Challenges & Strategies for Conservation of Natural resources Organized by Department of applied sciences, University of Tech & applied sciences (Muscut) Oman 06.12.2022.
6. Dr. Gaurav Sharma, Scientist-E and Officer-in-Charge participated as member in the meeting conducted with The CCF & Senior Forest Officials, Arunachal Pradesh Forest Department for discussion on evaluation reports of 08 Wildlife Sanctuaries of Arunachal Pradesh at Arunachal Pradesh Forest Department Headquarter on 10 December, 2022; participated in the meeting conducted with The Chairman, MEE Team 16 for finalization of reports of 03 reports of Wildlife Sanctuary of Arunachal Pradesh at ZSI, NRC, Dehradun on 20 December, 2022.; participated in "Young Women Scientist Conclave 2022-23" organized by Uttarakhand Science Education and Research Centre, Dehradun in the IRDT Conference Hall Dehradun on 14 December, 2022.
7. Dr. Narender Sharma, Scientist-E attended 18th meeting of Uttarakhand State Wildlife Board chaired by Chief Minister, Uttarakhand at Secretariat Dehradun on 10th December, 2022.
8. Dr. Gopal Sharma, Scientist E attended meeting in connection with Compliance report about the uploading of the land and building details on the GLIS portal.
9. Dr. Avtar Kaur Sidhu, Scientist-E attended the virtual meeting on 13.12.2022 on Monitoring of Action Plan for filling up of vacancies and GLIS under the Chairmanship of Shri Tanmay Kumar, Additional Secretary, MOEF&CC.
10. Dr. Kamal Saini, attended the virtual meeting of Govt Land Information System under the Chairmanship of Shri Tanmay Kumar, Additional Secretary on 13.12.2022
11. Dr. C. Sivaperuman, Scientist-E & Officer-in-Charge attended meeting with Chief Secretary, Andaman and Nicobar Islands, and presented a book on "History of Zoology and Present status in India", authored by Ramakrishna and C. Sivaperuman on 19th December 2022.

12. Dr. S. S. Jadhav, Scientist D attended virtual meeting regarding monitoring of Action plan for filling up of vacancies and GLIS organized by MoEF&CC on 13th December 2022.
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13. Dr. V.D. Hegde, Scientist-E attended online meeting on 13.12.2022 relating to Government Land Information System (GLIS) and filling up of vacant posts.
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14. Smt. Ilona J Kharkongor, SD Gurumayum and research scholars of the Centre participated in the Brainstorming cum State-Level Consultative Workshop on “Sustainable Himalayan Ecosystems” and the 2nd Meeting of the ‘State Level Coordination Committee (SLCC) on “Landscape Initiative for Far-Eastern Himalayas (HI-LIFE) - India” organized by the North-East Regional Centre, GB Pant Institute of Himalayan Environment, Itanagar on the 16th December, 2022 at the DK Convention Hall, Itanagar, and Smt. Ilona J Kharkongor presented the R&D Activities of APRC, ZSI, Itanagar.
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15. Dr. S. Balakrishnan, Scientist – E, attended as Guest of Honor for Inaugural programme of the “District Science Fair 2022” organised by Digha Science Centre, Digha on 23rd December 2022; attended as Chief Guest of “Shiksha Ratna Samman 2022 jointly organised by Centre for Research Studies and Development and Navya Foundation” organised by Digha Science Centre, Digha on 22nd December 2022; attended as Chief Guest of the Inauguration of New Biology Gallery on 02.12.2022 at Digha Science Centre, Digha.
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16. Mr. Jitendra Kumar, Sr. Zoological Assistant participated in the conference entitled “International Conference on Environment, Sustainable Development and Human Health” held at Seth Ranglal Kothari Government PG College Rajsamand, Rajasthan on 16th -17th December, 2022.
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17. Dr. Tamal Mondal, attended a meeting under the Chairmanship of JS(CSII) for the discussion of ZSI & BSI related issues on 2nd December 2022; attended a meeting with the ANIIDCO related to Holistic Development of Great Nicobar Island on 6th December 2022 and 22nd December 2022; attended a meeting with MOEF&CC on NIRANTAR on 12th December 2022 and Marine Conservation Committee on 16th December 2022.
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TRAININGS ORGANIZED

1. Headquarter, ZSI organized ‘Orientation Programme for Newly Joined Senior Zoological Assistants’ from 20th December to 30th December, 2022.
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2. HARC, Solan organized the hands on training to 77 students of B.Sc. final year of government degree college, Solan on insect and vertebrate collections.
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3. ANRC, Port Blair organized three day workshop on Coastal and marine biodiversity of island ecosystems under the “Training of Personnel of Other Stakeholders” sponsored by the Ministry of Environment, Forest and Climate Change, Government of India on 8th – 10th December 2022 (102 students/teachers participated); Organized five day training course on Para-taxonomy including Preparation of People's Biodiversity Register (PBR) to the frontline staff of the Department of Environment and Forests, A & N Islands, sponsored by Department of Environment and Forests during 13th – 17th December 2022; Organized one workshop on Biodiversity and Conservation of Andaman and Nicobar Islands to the IFS Probationers, Indira Gandhi National Forests Academy, Dehra Dun on 4th December 2022;
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4. NERC, ZSI, participated and assisted St. Anthony's College, Shillong in organizing the *International conference on Biodiversity and Conservation cum workshop on Traditional Medicine* held on 14th & 15th December, 2022.
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5. Shri Ashis Kumar Das, Senior Project Fellow had imparted training to the Forest Department staffs of Berhampur and Paralakhemundi divisions for the waterfowl census to be held in next month.
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6. A taxonomic training on collection, preservation and Identification was provided on collembolan fauna from 20.12.2022 to 28.12.2022 to Kumari Monica, Research Scholar, University Department of Zoology, Ranchi University.
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TRAININGS ATTENDED

1. Dr Kamal Saini Asstt Zoologist, Dr. Prabhakar Rai Scientist C, attended the GeM online training session organised by the MOEF&CC on Dec 13, 20, 27, 2022.
2. Mrs. Anindita Ghosh, Asst. Zool., attended training programme on "Science and Technology for Rural Societies for Women Scientist & Technologist organised by Indian Institute of Public Administration, New Delhi w.e.f. 19.12.2022 to 23.12.2022.

LECTURES DELIVERED

1. Dr. Indu Sharma Scientist- E and Dr. R. Bano, Scientist-E delivered lecture on "Activities of ZSI and Biodiversity Conservation" and "Invertebrate fauna of Rajasthan" respectively to the students of Higher secondary class from Army Public School, Banar Road, Jodhpur, Rajasthan on 2nd December, 2022 and scientists explained them about exhibits of Fauna of Desert Ecosystem; delivered a lecture on "Fauna of Desert Ecosystem" and "Entomofauna of Gujarat and Rajasthan" to the M.Sc. students of Shri Sumer Mahila Mahavidhyalaya, Mahamandir, Jodhpur, Rajasthan on 19th Dec, 2022 at DRC, ZSI, Jodhpur.
2. Dr. Gaurav Sharma, Scientist-E delivered lecture on topic entitled "*Status and Conservation of Faunal Diversity in India*" to 27 B.Sc. Forestry students and 02 Faculty members of North Eastern Regional Institute of Science & Technology, Itanagar, Arunachal Pradesh in the conference hall of ZSI, NRC, Dehradun on 19 December, 2022; delivered lecture on topic entitled "*Status of Faunal Diversity and on Schedule animals of India*" to 37 B.Sc. Forestry students and 03 Faculty members of College of Forestry, Navsari Agricultural University, Gujarat in the conference hall of ZSI, NRC, Dehradun on 27 December, 2022.
3. Dr. Anil Kumar, Scientist-E gave oral presentation on ZSI research programme, on the fauna of Abohar WLS, Punjab, at PCCF Office, Forest Complex, Mohali, on 21-12-2022.
4. Dr. Gopal Sharma, Scientist E, delivered an online invited lecture on Faunal Diversity of Bihar-Threats and Conservation in the 4th Faculty Induction Programme on 01.12.2022 organized by UGC-HRDC Patna University; delivered a lecture on The ecosystem of Ganga River and significance on 27.12.2022 organised by NYK at Magadha Mahila College, Patna University Patna.
5. Dr. C. Sivaperuman, Scientist-E delivered different lectures in three day workshop on Coastal and marine biodiversity of island ecosystems, and five day training course on Para-taxonomy; delivered a talk on an overview of Biodiversity of A & N Islands at Jawahar Navodaya Vidyalaya, Panchavatti, Rangat, North & Middle Andaman on 21st December 2022; delivered a talk on Biodiversity Rich Islands of Andaman and Nicobar organised by Aranyakam Nature Foundation, Kerala on 29th December 2022.
6. Dr. SD Gurumayum delivered two lectures on "International Mountain day" on 11th Nov. 2022 at GB Pant Institute National Institute of Himalayan Environment on Women move Mountains and an online lecture on "Benthos in Inland Fisheries" at ICAR -CIFRI Barrack pore" on 28 December, 2022.
7. Dr. P.C. Tudu, Scientist – D, delivered lecture "Marine Biodiversity and Conservation" to B.Sc. students of J.K. College, Purulia, West Bengal on 23.12.2022.
8. Dr. T. Kubendran delivered a lecture titled "Integrative Taxonomy and importance of Mayflies" to Central Calcutta Science & Culture Organization for youth on Vigyan Sera Pratibha and Young Scientist Award 2022 at Kolkata on 4th December 2022.
9. Dr. Tamal Mondal, delivered an invited talk on Methodologies for Marine Ecosystem for Zoological Society of Kolkata on 13th December 2022.
10. Dr. Amit Mukhopadhyay, Assistant Zoologist, delivered lecture at CIFRI, Barrackpore "Biodiversity, status, taxonomy of Freshwater Mollusca in India" on 28th December 2022.
11. Dr. N. Marimuthu delivered keynote address on "Methodologies for study and analysis of Coral Reef Ecosystem" in the Executive Council of The Zoological Society, Kolkata.
12. Dr. Kamalakannan M. Senior Zoological Assistant delivered lecture on 'Mammal diversity' to the B.Sc. /M.Sc., Zoology students from St. Joseph's College, Irinjalakuda, Thrissur district, Kerala at WGRC, ZSI on 06.12.2022; delivered an invited lecture on 'Role of mammals in ecosystem functioning' to Dr. Harisingh Gour University, Sagar, Madhya Pradesh on 14.12.2022.
13. Dr. P.M. Sureshan, Emeritus Scientist has delivered lecture on Indian Insect diversity in training course on Para-taxonomy including Preparation of People's Biodiversity Register (PBR) sponsored by the Department of Environment and Forests organized by Andaman Nicobar Regional Centre, Port Blair on 14.12.2022.

14. Dr. C.R. Sreeraj, Scientist-D delivered a lecture at Nehru Arts and Science College, Kanhangad, Kasaragod district, Kerala on 20.12.2022 as part of the program “Talk with a scientist” organized by the Department of Zoology.
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Chaired the Annual General Meeting (AGM) 2022 of Recreational Club of Zoological Survey of India (RCZSI) on 09th December, 2022



In Sammilani Mahavidyalaya Silver Jubilee Celebration on 12th December, 2022



Interaction with the newly joined Senior Zoological Assistants



Inaugural Session of International Conference on Biodiversity and Conservation, 2022