



From the Director's Desk



Indeed, it gives me an immense pleasure to dedicate yet another DNA molecular laboratory to the Nation housed at Marine Aquarium cum Regional Centre of ZSI, Digha, West Bengal. Creation of this facility for studying molecular systematic is the seventh of its series in ZSI. And also I am glad to note that, Andaman and Nicobar Regional Centre of ZSI, Port Blair organized a weeklong festival on Science & Technology- Vigyan Sarvatra Pujiyate during 22nd to 28th February 2022 with the support of Ministry of Culture for the benefit of student folk. Like every month, February 2022 also witnessed with the identification of huge collections i.e. 16203 faunal specimens comprising 1316 species from the different animal groups under Protozoa to Mammalia. It is noteworthy to mention that 15 species have been newly described while nine species reported as new addition to Indian fauna during the month. Faunistic surveys were conducted in selected pockets covering all the 10 bio-geographic zones of India to understand the diversity of various faunal communities. Altogether, 166 species have been augmented to National Zoological Collections and 193 barcodes have been generated and uploaded in BOLD/NCBI. As a regular monitoring of endangered turtles in Indian coast, 70 Olive Ridley turtles in Odisha coast and 142 Leatherback turtles in Great Nicobar Island were tagged. Almost 35 advisory services have been rendered on various institutions which includes confiscated and seized wildlife material too. Publications of 32 papers, mostly in SCI/NAAS rated journals and a book on Avian Foraging made during the month is a significant contribution to the contemporary society.

I congratulate all my colleagues of ZSI for making February 2022 as a significant one in terms of scientific contribution.

Jai Hind

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Cover photo: Malabar pied
hornbill, *Anthracoceros
coronatus* (Boddaert, 1783)

HEADQUARTERS, KOLKATA

Lakshadweep Archipelago and selected regions of Bihar state have been surveyed during 3rd to 18th and 15th to 25th February 2022 respectively. Baseline data on the faunal diversity of freshwater ecosystems in the north eastern states viz. Assam, Manipur, Nagaland and Meghalaya were compiled and the data have been geo-referenced for identifying gap areas to conduct further surveys. On the occasion of World Wetlands Day – 2022 an international webinar on 'Bee Pollinators' was organized in which about 90 students

benefitted by the lectures delivered by experts. Provided the inputs to IFGTB, Coimbatore for preparation of National Policy and Action Plan on Management of Alien Invasive Species; expert comments for import of wild type and mutant zebra fish from Germany and import of eyed ova rainbow trout from United States of America sought by Ministry of Fisheries, Animal Husbandry and Dairying, Government of India; comments on import of live animals of *Macaca fascicularis* from Indonesia sought by MoEFCC were offered. In addition, necessary inputs provided

to MoEFCC on the documents related to FTA sustainability negotiations under India-UK FTA - Chapter 22 Environment for different articles and Trade and Sustainable Development. Further, action taken by the Government on the recommendations/ Observations contained in 324th Report of the Department related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change on 'Status of Forests in India', in which ZSI part on Conservation of Biodiversity has been updated with additional inputs and

submitted to MoEFCC. As a part of faunal species identification, 623 species under different groups from 6087 specimens were identified and registered. Among them description of new genus *Rinacapritermes* Amina and Rajmohana and two new species *Rinacapritermes silvius* Amina and Rajmohana and *Rinacapritermes abundans* Amina and Rajmohana are worth mentioning. Altogether 91 DNA barcodes have been submitted to GenBank for different species of insects and 24 species augmented to National Zoological Collections under different insect orders. Identification

and advisory services rendered to Detective Department, Kolkata on pangolin scales; Forest Range Officer, Kolkata-II for shatoosh shawls; Deputy Superintendent of Police, Panipat, Haryana for molluscs; ICAR-Indian Institute of Vegetable Research, Varanasi and Department of Agricultural Entomology, College of Agriculture, Shimoga, Karnataka on coleoptera; Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal on hemiptera; and Wright State University, USA on Bryozoans.

Dr. Dhriti Banerjee, Director, ZSI addressing in a festival on Science and Technology at ANRC, Port Blair



NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

Keibul Lamjao
National Park,
Manipur

A total of 52 species containing 4 species of mammalia, 2 species of Reptilia, 10 species of Amphibia, 18 species of Pisces, 01 species of Crustacea, 13 species of Hemiptera and 4 species of Dermaptera have been identified for the month. Evaluated 5 PBRs of Meghalaya as required by the State Biodiversity Board, Meghalaya and report submitted. Reviewed a manuscript for *Records of ZSI*.



Slaty-legged Crake
Rallina eurizonoides
(Lafresnaye, 1845)



Mugger crocodile,
Crocodylus palustris
(Lesson, 1831)

Kerala Agricultural University, Kerala for two rodent specimens; Shri Shivaji Science College, Amravati, Maharashtra for small mammal remains collected from nest of Malabar pied hornbill. A checklist of butterflies of Ranni Forest Division was provided to the Deputy Conservator of Forests as part of the preparation of management plan for the Ranni Forest Division, Kerala.

WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA

Survey conducted to Kali Tiger Reserve, Karnataka from 7th to 16th February 2022. A total of 2013 zoological specimens comprising 193 species under Decapoda, Coleoptera, Lepidoptera, Odonata, Mollusca have been identified. 20 mt DNA barcodes for 10 species of amphibians were submitted to the GenBank. Identification services rendered to, Western Ghats Regional Centre, ZSI, for amphibian specimens; Freshwater Biology Regional Centre, ZSI, Hyderabad, for odonata specimens; Southern Regional Centre, ZSI for aquatic beetle specimens. Identification services rendered to Department of Zoology, Holy Cross College, Nagercoil, Tamil Nadu for freshwater crab specimens; College of Horticulture,



Kali Tiger Reserve

CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH

Identified and registered 86 species comprising Lepidoptera, Hemiptera, Arachnida and Amphibia. Scientists of the centre reviewed five manuscripts for various journals. A new species *Gerania mizoramia* Kumar *et al* under Orthoptera has been described.

Calidris pugnax
(Linnaeus, 1758)



Ophisops jerdonii
(Blyth, 1853)



Lemon Pansy *Junonia lemonias* (Linnaeus/1758)

DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

Total 405 specimens referable to 63 species (7 species of Gastropoda from Purna WLS, Gujarat, 50 species of insects from Purna WLS and Desert Ecosystem and 6 species of Pisces) have been identified by the Scientists of the Centre.

Streptopilia decaocto
(Frisch, 1838)



NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND



Waterbirds in Asan Conservation Reserve, Uttarakhand

centre reviewed two papers for National Journal. *World Wetland Day* was celebrated at Asan Conservation Reserve- a RAMSAR Site, Uttarakhand and recorded 34 species of Waterbirds on 02 February, 2022.



Ruddy Shelduck, *Tadorna ferruginea* (Pallas, 1764)

Scientists of the centre examined 517 specimens and identified 72 species (i.e. 7 spp. of Protozoa: Testate amoebae; 8 spp. of Phthiraptera; 26 spp. of Lepidoptera; 17 spp. of Annelida; 12 spp. of Pisces and 2 spp. of Amphibia. One DNA barcode generated belonging to Lepidoptera. Scientists of the

SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU



Epithemis mariae
(Laidlaw, 1915)

The scientists of the centre identified and registered 910 specimens into 150 species of various faunal groups, viz., Zooplankton, Lepidoptera, Odonata, Hemiptera, Blattodea, Psocoptera, Mollusca, Pisces, and Reptiles. Surveys were conducted in the Eastern Ghats of Andhra Pradesh and Telangana, West Bengal, Bellary and Chitradurga districts, Karnataka. A total of 3059 specimens of diverse faunal groups were collected. Identification and advisory services were rendered on Odonata to the University of Kashmir, Srinagar, Jammu & Kashmir and Mollusca to the Department of Zoology, Govt. Women's College, Tirupur, Tamil Nadu. The scientists reviewed manuscripts for three journals.



Vanellus cinereus (Blyth 1842)

GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

Survey has been conducted to different regions of Bihar from 15th to 25th February 2022 and collected various faunal groups. Altogether 48 species have been identified from 966 specimens.

HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH

Scientists of the Centre registered and digitised 368 specimens of different faunal groups and identified 112 species from Reptiles, Amphibia, Lepidoptera, Orthoptera and EPT complex. Identification and advisory services rendered to Indraprastha University, New Delhi, Punjab University, Chandigarh, Himalayan Forest Research Institute, Panthaghatti, Shimla and Department of Animal Husbandry, Shimla, Himachal Pradesh on Lepidoptera and Aves. Reviewed a manuscript for *Record of Zool Surv of India*.



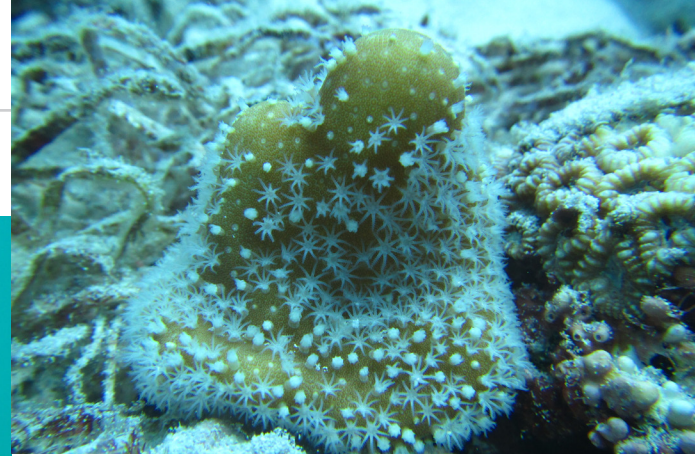
High brown fritillary, *Argynnis addipe*
([Denis and Schiffermüller], 1775)



Yellow billed chough, *Pyrrhocorax graculus* (Linnaeus 1756)

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU

A gorgonian species in Gulf of Mannar



Soft coral (*Lobophytum* sp.) at the reef slope in Gulf of Mannar

Scientists of the centre identified a total of 120 species from 229 examples, comprising 19 species of testate amoebae from 61 examples, 09 species of Mollusca from 23 examples, 15 species of scleractinian corals from 16 examples, 05 species of echinoderms from 05 examples, and 72 species of fishes from 124 examples. Five confiscated wildlife samples (sea cucumber) were identified, for the Range Forest Officer Gulf of Mannar National Park, Thoothukudi, and for Range Forest Officer, U.T. of Lakshadweep Administration, Department of Environment and Forest, Kavaratti Island. Information concerning coral reefs in particular and marine ecosystems, in general, was given to the organizers of the exhibition on the theme 'Marine Ecosystem: Life Under the Sea' scheduled to be inaugurated on 01.03.2022 on the occasion of the 8th Anniversary of RGRMNH, Sawai Madhopur, Rajasthan. A B. Arch. Student from R. V. S. Padmavathy School of Architecture, Chennai, was provided information on marine aquariums for the final year thesis. Reviewed and offered comments on the application from a private firm requesting to import eyed ova of rainbow trout (1200,000 eggs per year) from the USA.

ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

Long term surveys were conducted at Great Nicobar Island from 1st to 28th February 2022 to study the terrestrial and marine faunal diversity; Local field survey were conducted at South Andaman to study the terrestrial and marine biodiversity. A total of 359 species comprised of Fishes 29 species; Coral 88 species; Zoanthid 1 species, Echinodermata 1 species, Molluscs 13 species were identified from the marine environment; Coleoptera 1 species; Diptera 1 species; Hemiptera 19 species; Hymenoptera 2 species; Odonata 5 species; Lepidoptera 89 species; Birds 110 species were identified from the terrestrial environment. Conducted Asian Water bird Census in association with Wetland International South Asia and Bombay Natural History Society from 12th February 2022. Six new species of Hemiptera (Whitefly) published. A weeklong festival of Science & Technology- Vigyan Sarvatra Pujyate organized during 22nd to 28th February 2022, sponsored by PSA, Ministry of Culture and Vigyan Prasara, Government of India; organized one month certificate course on Bird identification and basic Ornithology from 3rd January 2022 under the Green Skill Development Programme; three months certificate course on Para-taxonomy including preparation of people's biodiversity register from 3rd January 2022 under the Green Skill Development Programme. Identified 3 specimens of Ray fishes for the Department of Environment & Forests, Andaman & Nicobar Islands.



Vigyan Sarvatra Pujyate celebrations



Orange headed Thrush *Geokichla citrina andamanensis* Walden 1874

SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL



Chaetodon andamanensis
Kuitert & Debelius, 1999



Cypraea tigris
Linnaeus, 1758

19/10/2015 1

Surveys conducted along Visakhapatnam coast, Andhra Pradesh from 17th to 26th January 2022 and samples of mollusca, cnidarians, sponges, fishes, echinoderms, crustaceans, ascidians, flat worms and annelid were collected. During the survey, documented sea turtle copulation in Chinthapalli reef region, Visakhapatnam coast. A total 1456 examples (83 spp.) were identified and 215 examples were digitized in ZSI-SbRC, Canning. One manuscript published in SCI journal and one manuscript reviewed.

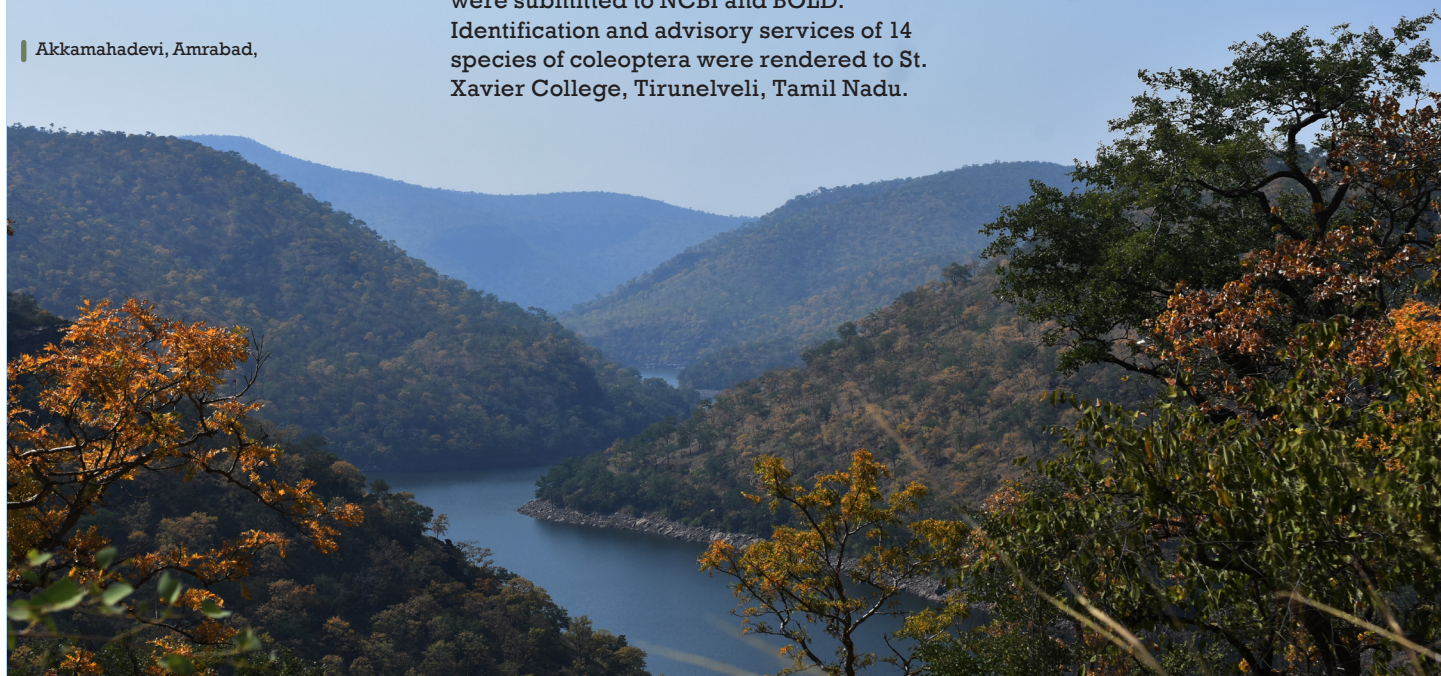
FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

Akkamahadevi, Amrabad,

An extensive faunal survey conducted to Deccan Peninsular India from 2nd to 28th February 2022. The scientists, staff and research scholars of the centre identified 638 specimens from Telangana, Andhra Pradesh; (Rollapadu Wildlife Sanctuary; Papikonda National Park, Amrabad and Kawal Tiger Reserves) to 15 species of Aquatic Coleoptera from 141 exs., 13 species of Aquatic Hemiptera from 33 exs., 4 species of Ostracoda from 28 exs., 5 species of Branchiopoda from 73 exs., 15 species of Mollusca from 117 exs., and 39 species of fishes from 245 exs. Thirteen DNA barcodes of 11 species were submitted to NCBI and BOLD. Identification and advisory services of 14 species of coleoptera were rendered to St. Xavier College, Tirunelveli, Tamil Nadu.



Copelatus deccanensis Sheth,
Ghate and Hájek, 2018.



WESTERN GHAT REGIONAL CENTRE, KOZHIKODE, KERALA

Bison, *Bos gaurus*
(Smith, 1827)



Olive Ridley Turtle
from Calicut Sea coast



A local survey conducted to Malabar Wildlife Sanctuary, Kerala on 16.2.2022 and various faunal groups were collected. Scientists have identified 81 species (Coleoptera 16 spp.; Dermaptera 6 spp.; Hymenoptera 31 spp.; Mantodea 08 spp.; and Lepidoptera 20 spp.) from 196 exs. Reviewed a manuscript for the Journal of Entomological Research Society. Collected one dead Olive Ridley Sea Turtle on 05.02.2022 from the sea shore of Calicut and kept in WRGC museum for display with the permission of the forest officials.

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

A new species *Ariosoma maurostigma* Kodeeswaran *et al.* has been described on the basis of 24 specimens collected from the deep-sea trawl by-catch, off Kerala, Arabian Sea. *Nerocila orbignyi* (Guérin-Méneville, 1832), a parasitic isopod, reported for the first time from India with its molecular characterisation. One rare cusk eel species, *Ophidion smithi* (Fowler), reported for the first time from the Indian coastal water, West Bengal. A total of 464 specimens were identified which includes Isopods, crabs, molluscs, fishes and reptiles belonging to 80 species and from surveys, 46 specimens were added to the collection of this centre. Seventy turtles were tagged onshore. Two DNA barcodes was uploaded in the NCBI database. Identification services rendered to Berhampur University on crabs. Two manuscripts reviewed.

Nerocila orbignyi
(Guérin-Méneville,
1832)



Ophidion smithi (Fowler 1934)

View of Eagle Nest WLS,
Arunachal Pradesh



Conducted one extensive survey to Western Arunachal Pradesh w.e.f. 18 -28 February, 2022 and 2 local surveys to Ganga Lake, Itanagar WLS and Gomtu, Papum Pare district; collected samples of 3 faunal groups (Diplopoda, Mollusca and Lepidoptera). Identified 46 species of 252 examples (27 exs. Diplopoda, 62 exs. Lepidoptera, 14 exs. Orthoptera, 41 exs. Crustacea and 108 exs. Pisces).

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR



Zephronia disparipora Attems



MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

*DNA Molecular
Systematics Laboratory
inauguration*

Survey conducted to Gulf of Mannar, group of Islands, Tamil Nadu in association with the study on seaweed and seagrass associated marine faunal diversity along the east coast of India, from 08th to 18th February 2022 and collected sample specimens of Mollusca, Fishes, Crustacean, Polychaete, Nudibranch, Shrimp, Arthropoda, Amphipod, Earthworm, Sea Urchin, Star fish, Sponge, Squilla, Sea anemone and Jellyfish. Conducted five days local survey to West Bengal and Odisha and collected samples of Fishes and Mollusca. 87 species containing 670 examples ranging from 474 ex. of Mollusca (50 spp.), 190 ex. of fishes (36 spp.) and 06 ex. of Cnidaria (01 sp.) have been identified for the month. DNA Molecular Systematics Laboratory inaugurated on 03rd February 2022. Scientists of the centre reviewed one manuscript for the *Records of Zoological*



Survey of India and guided a student of Bachelor Architecture, Sri Sri University, Cuttack, Odisha, regarding the Establishment, Maintenance and Functioning of Marine Aquarium for his project.

NEW DISCOVERIES AND NEW RECORDS

NEW RECORDS



Ariosoma maurostigma
Kodeeswaran,
Mohapatra, Dhinakaran,
Kumar, Lal, 2022



Barytelphusa choprai
Mandal et al.



Notanisus malabaricus
Surya and Sureshan 2022



Hemidactylus easai Das,
et al.



Microhyla nakkavaram
Garg et al.

PUBLICATIONS

BOOKS

Dubey, S. and Kushwaha, S. 2022. Avian Forging. Published Shai graphics Jabalpur. ISBN:-978-81-942195-4-5.

PAPERS

1. Amina, P., Rajmohana, K., Dinesh, K.P. and Asha, G. 2022. Integrative taxonomic studies on *Rinacapritermes* Amina & Rajmohana, n. gen. (Blattodea: Isoptera: Termitidae) with two new species from India. *Zoosystema* 44(3): 109-124. <https://doi.org/10.5252/zoosystema2022v44a3>.
2. Choo, S.W., Chong, J.L., Gaubert, P., Hughes, A.C, O'Brien, S., Chaber, A-L., Antunes, A., Platto, S., Sun, N.C-M, Yu, L., Koepfli, K-P, Suwal, T.L., Thakur, M. et al. 2022. A collective statement in support of saving pangolins, *Science of The Total Environment*, 824, 153666, <https://doi.org/10.1016/j.scitotenv.2022.153666>
3. Das, S., Pal, S., Siddharth, S., Palot, M.J., Deepak, V. and Narayanan, S. 2022. A new species of large-bodied *Hemidactylus* Goldfuss, 1820 (Squamata: Gekkonidae) from the Western Ghats of India. *Vertebrate Zoology*, 72: 81–94. DOI: <https://doi.org/10.3897/vz.72.e76046>
4. Dubey, A. K. & Brown, P. A. 2021. Six new species of *Aleuromarginatus* Corbett, 1935 and *Paramarginatus sarawakensis* Dubey gen. and sp. nov. (Hemiptera: Aleyrodidae) from South-East Asia *Journal of Natural History*, 55(41–42): 2605–2649.
5. Dubey, S., Kushwaha, S., Sambath, S. and Khurana, S. 2021. Malnutrition among masses. *J Nutr Metab Health Sci* 2021; 4(4):137-142.
6. Dubey, S., Kushwaha, S., Sambath, S. and Khurana, S. 2021. An overview on *Salmonella* infection. *J Nutr Metab Health Sci* 2021; 4(4):143-146.
7. Garg, S., Sivaperuman, C., Gokulakrishnan, G., Chandramouli, S.R. and Biju, S. D. 2022. Hiding in Plain Sight: Rain Water Puddles in Nicobar Islands of India Reveal Abundance of a New Frog Species of the Genus *Microhylla* Tschudi, 1838 (Anura: Microhylidae). *Zoological Studies* 61: 2 (2022) doi:10.6620/ZS.2022.61-2.
8. Ghosh, A., Dalui, S., Mukherjee, T., Joshi, B.D., Singh, S.K., Maheswaran, G., Sharma, L.K., Chandra, K. and Thakur, M., 2022.

Serendipitous discovery of White Cheeked Macaque (*Macaca leucogenys*) from Arunachal Pradesh, India. *Animal Gene*, p.200124.

9. Ghosh, S.K. 2022. A new species of genus *Hyphydrus* Illiger (Coleoptera: Dytiscidae: Hyphydrini) from Arunachal Pradesh, India. *Rec. zool. Surv. India*, 121(4): 441-445.
10. Ghosh, S., Bharti, D. and Kumar, S. 2021. Morphology of Indian populations of *Coleps elongatus* (Ehrenberg, 1830) Kahl, 1930 and *C. amphacanthus* Ehrenberg, 1833 (Ciliophora: Prostomatea: Prorodontida). *Records of Zoological Survey of India*, 121(4):447-452
11. Gurumayum, S. D. 2022. Ornamental prospects of indigenous fishes of Arunachal Pradesh in *Horizons in Fish Research*, Edt. V.B Sakhare, S. Abujam, SG. Jetithor. Discovery Publishing House Pvt. Ltd., New Delhi. 89-104.
12. Kalawate, A.S. and Dinesh, K.P. 2021. Following the tales: The Jonah's Ricinus biblical worms, *Olepa schleini* in Israel a local relict or an invasive alien species. *Halteres*, 12: 54–60.
13. Kodeeswaran, P., Mohapatra, A., Dhinakaran, A., Ajith Kumar, T. T. P. and Lal, K., K. 2022. A new species of the congrid eel genus *Ariosoma* (Anguilliformes: Congridae) from the south-west coast of India. *Journal of Fish Biology*, 1–8. <https://doi.org/10.1111/jfb.14994>.
14. Kumar, H., Chandra, K. and Kushwaha, S. 2022. A New Species of *Gerania* Stål, 1878 (Orthoptera: Acrididae: Catantopinae) from India, *Transactions of the American Entomological Society* 148(1), 1-6. <https://doi.org/10.3157/061.148.0101>
15. Mandal, S., Mitra, S., Laskar, B. A., Adimalla, H., & Jaiswal, D. 2022. A new species of freshwater crab of the genus *Barytelphusa* (Decapoda, Brachyura, Gecarcinidae) from the Eastern Ghats of India, *Crustaceana*, 95(1), 45-63. doi: <https://doi.org/10.1163/15685403-bja10171>
16. Mohapatra, S. K., Acharya, S., Sura, S., Mohanty, S.R., Behera, R. K., Seth, J. K., Tripathy, B. and Mohapatra, A. 2022. First report of parasitic isopod *Nerocila orbignyi* (Cymothoidae) from India with its molecular characterization. *Journal of Parasitic Diseases*. <https://doi.org/10.1007/s12639-022-01469-3>
17. Mukhopadhyay, S., K., Sreeraj, C. R., Raghunathan, C. and Sen, A. 2022. First report of a hermit crab *Clibanarius longitarsus* (De Haan, 1849) (Crustacea: Anomura) from sunderbans, India. *Journal of Entomology and Zoology studies*. 10(1): 220-

223

18. Pati, S.K., Sujila, P.S. and Ng, P.K.L. 2022. On the collection of marine crabs (Decapoda: Brachyura) in the Zoological Survey of India, Western Regional Centre, Pune, with a note on the taxonomy of *Sphaerozius scaber* (Fabricius, 1798) (Menippidae). *Zootaxa*, 5094(4): 501–552. DOI: <https://doi.org/10.11646/zootaxa.5094.4.1>
19. Paunikar, S.D., Sharma, G. and Sathish Kumar, V.M. 2021. Diversity of Moth (Lepidoptera: Heterocera) in different forest areas of North-West Himalaya. *Uttar Pradesh Journal of Zoology*. 42(24):925-935.
20. Praveen, J., Nameer, P.O., Jha, A., Aravind, A., Dilip, K.G., Karuthedathu, G., Tom, G., Mavelikara, H., Mannar, H., Palot, J., et al. (225 authors). 2022. Kerala Bird Atlas 2015–20: features, outcomes and implications of a citizen-science project. *Current Science*, 122(3): 298–309.
21. Rameshkumar, A., Ghosh, P., Saini, J. and Kazmi, S.I. 2021. Diversity of bee pollinators in Acharya Jagadish Chandra Bose Indian Botanic Garden, Kolkata, West Bengal, India. *J. ent. Res.*, 45 (Suppl.): 1030-1035.
22. Rao, B.S.K. & Sivaperuman, C.. 2022. New records of Pyraloid moths (Lepidoptera Pyraloidea Crambidae) from India. *Zoosystematica Rossica*, 31(1) 20-26.
23. Ray, D. and Mohapatra, A. 2022. First Report of Subfamily Ophidiinae Rafinesque, 1810 and Genus *Ophidion* Linnaeus, 1758 (Ophidiiformes: Ophidiidae) from Bay of Bengal, Indian Coastal Water. *Natl. Acad. Sci. Lett.* <https://doi.org/10.1007/s40009-022-01100-2>.
24. Sachithanandam V., Mohan, P. M., Karthik, R., Elangovan, S.S., Mageswaran, T., Marimuthu, N. 2022. A biogeographic assessment of phytoplankton richness and composition in the Andaman Archipelago and the potential links to anthropogenic and environmental impacts: A multivariate approach. *Regional Studies in Marine Sciences*. 102248. <https://doi.org/10.1016/j.rsma.2022.102248>
25. Saha, P., Hassan, M.E., Chandra, K. Kushwaha, S., Dasgupta, J., Mukherjee, P. & Jahan, S. 2021. Hemiptera: Insecta of Talle Wildlife Sanctuary Arunachal Pradesh, India with 10 New Records from the State. *Journal of Natural Resources and Development*, 16(1): 34–38.
26. Sharma, N. and Goswami, P. 2021. Diversity and distribution of butterflies (Insecta: Lepidoptera: Papilionoidea) in Punjab, India *J. ent. Res.*, 45 (Suppl.) : 1066-1073.
27. Sathish Kumar, V.M, Sharma, G., Paunikar, S.D., and Sharma, S. 2022. Molecular identification and first DNA Barcode sequence record of *Spodoptera pecten* Guenee, 1852 (Lepidoptera: Noctuidae) from Western Himalaya, India. *Journal of Scientific Research and Reports*. 28(1): 50-53.
28. Siddique, A., Purushothaman, J., Bhowal, A. and Mandal, S. 2021. Distribution and diversity of Polychaeta (Phylum: Annelida) in the Northern coastal waters of Bay of Bengal. *Records of Zoological Survey of India*, 121(4): 453-463.
29. Singh, N., Lenka, R., Chatterjee, P. and Mitra, D. 2022. Settling moths are the vital component of pollination in Himalayan ecosystem of North-East India, pollen transfer network approach revealed. *Scientific Reports*, 12, 2716 <https://doi.org/10.1038/s41598-022-06635-4>
30. Chand, S., Das, S.K. and Kumar, H. 2021. Diversity of short horned grasshoppers (Insecta: Orthoptera) in the Sunderban Biosphere Reserve, West Bengal, India. *Rec. zool. surv. India*. 121 (1).pp 473-481. DOI:10.26515/rzsi/v121/i/2021/143669
31. Surya, K.S., Binoy, C. and Sureshan, P.M. 2022. A new species of *Notanisus* Walker (Hymenoptera: Pteromalidae) from India. *Halteres*, 12: 49-53. DOI: 10.5281/zenodo.5812170
32. Wang, M.S., Thakur, M., Jhala, Y., Wang, S., Srinivas, Y., Dai, S.S, Liu, Z-X., Chen, H-M., Green, R.E., Koepfli, K-P., Shapiro, B. 2022. Genome Sequencing of a Gray Wolf from Peninsular India Provides New Insights into the Evolution and Hybridization of Gray Wolves, *Genome Biology and Evolution*, 14, 2. evac012, <https://doi.org/10.1093/gbe/evac012>.

BOOK CHAPTERS

1. Ahmed, I., Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Arachnida: Acari (Ticks). In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 95-98 (Published and Edited by the Director, Zoological Survey of India).
2. Ahmed, I., Singh, L.R.K., Saini, J., Gupta, D. and Chandra, K. 2022. Insecta: Plecoptera. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 297-300. (Published and Edited by the Director, Zoological Survey of India).

3. Ahmed, I., Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Symphyta. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 427-445. (Published and Edited by the Director, Zoological Survey of India).
4. Ahmed, I., Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Chalcidoidea. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 447-466. (Published and Edited by the Director, Zoological Survey of India).
5. Ahmed, I., Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Stephanidae, Evaniidae, Ceraphronidae, Megaspilidae, Diapriidae, Platygasteridae, Figitidae, Bethyidae, Chrysidae, Ampulicidae, Sphecidae, Crabronidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 525-534. (Published and Edited by the Director, Zoological Survey of India).
6. Ahmed, I., Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Vespoidea. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 535-566. (Published and Edited by the Director, Zoological Survey of India).
7. Babu, R. and Nandy, S. 2022. Insecta: Odonata. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26 (Part-1): 209-255. Published by the Director, Zoological Survey of India, Kolkata.
8. Bhatnagar, P.S. and Talmale, S.S. 2021. Mammalia. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 4-32 (Published by the Director, Zoological Survey of India, Kolkata).
9. Chandra, K., Gupta, D., Ghosh, J., Das, P. and Bhunia, D. 2022. Insecta: Coleoptera: Cerambycidae, Megalopodidae, Disteniidae and Chrysomelidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 51-65 (Published and Edited by the Director, Zoological Survey of India).
10. Chandra, K., Saini, J. and Gupta, D. 2022. Insecta: Hymenoptera: Apoidea (Bees). In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 505-524. (Published and Edited by the Director, Zoological Survey of India).
11. Das, P., Chandra, K., Gupta, D. and Dutta, S. 2022. Insecta: Coleoptera: Coccinelloidea: Coccinellidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 35-41 (Published and Edited by the Director, Zoological Survey of India).
12. Dinesh, K.P., Gopalan, S.V. and Das, S. 2022. Amphibia. In: Sureshan, P.M., Subramanian, K.A. and Palot, M.J. (Eds.), *Threatened Animals of Kerala*: 118-135 (Published by Kerala State Biodiversity Board, Thiruvananthapuram and Zoological Survey of India, Western Ghats Regional Centre, Kozhikode).
13. Ghosh, J., Gupta, D., Chandra, K., Das, P. and Bhunia, D. 2022. Insecta: Coleoptera: Scarabaeoidea. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 1-28 (Published and Edited by the Director, Zoological Survey of India).
14. Ghosh, S.K., Chandra, K., Gupta, D., Ghosh, J., Das, P., Bhunia, D. and Dutta, S. 2022. Insecta : Coleoptera: Hydrophiloidea. *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 613-618 (Published and Edited by the Director, Zoological Survey of India).
15. Gupta, D., Chandra, K. and Ghosh, J. 2022. Insecta: Coleoptera: Buprestidae and Byrrhoidea. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 29-33 (Published and Edited by the Director, Zoological Survey of India).
16. Gupta, D., Chandra, K., Ghosh, J. and Bhunia, D. 2022. Insecta: Coleoptera: Curculionidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 43-49 (Published and Edited by the Director, Zoological Survey of India).
17. Gupta, D., Chandra, K., Ghosh, J. and Das, P. 2022. Insecta: Siphonaptera. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-2): 385-387 (Published and Edited by the Director, Zoological Survey of India).
18. Gupta, D., Chandra, K., Das, P., Ghosh, J. and Ahmed, I. 2022. Insecta: Mantodea and Phasmida. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 293-296. (Published and Edited by the Director, Zoological Survey of India).
19. Gupta, D., Chandra, K., Das, P. and Saini, J. 2022. Insecta: Dermoptera. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 301-304. (Published and Edited by the Director, Zoological Survey of India).
20. Gupta, D., Chandra, K., Das, P. and Saini, J. 2022. Insecta: Phthiraptera. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 321-324. (Published and Edited by the Director, Zoological Survey of India).
21. Hegde, V.D. and Vasanthakumar, D. 2021. Insecta: Coleoptera: Tenebrionidae. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 129-134 (Published by the Director, Zoological Survey of India, Kolkata).

22. Kalawate, A.S. 2021. Insecta: Lepidoptera: Heterocera (Moths). In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 137–186 (Published by the Director, Zoological Survey of India, Kolkata).
23. Kalawate, A.S. 2021. Scarab Beetles (Coleoptera: Hybosoridae, Geotrupidae, Scarabaeidae). In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 187–207 (Published by the Director, Zoological Survey of India, Kolkata).
24. Kalawate, A.S. and Palot, M.J. 2021. Insecta: Lepidoptera: Rhopalocera. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 118–128 (Published by the Director, Zoological Survey of India, Kolkata).
25. Kushwaha, R.K. and Hegde, V.D. 2021 Insecta: Carabidae In: *Fauna of Himachal Pradesh- State fauna Series 26* (1) P: 597- 612.
26. Sar, A., Bhunia, D., Ghosh, J., Das, P., Gupta, D. and Chandra, K. 2022. Insecta: Coleoptera: Staphylinidea. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 619-672 (Published and Edited by the Director, Zoological Survey of India).
27. Sharma, I. 2022. Pisces Zool. Surv. India, *Fauna of Himachal Pradesh, State Fauna Series*, 26 (2): 393-422 (Published by the Director, Zool. Surv. India, Kolkata).
28. Seth, J.K., Mohapatra, A., Mohanty, S.R. and Roy S. 2021. Microsatellite Markers for Fish Conservation. In: Pandey P.K., Parhi J. (eds) *Advances in Fisheries Biotechnology*. Springer, Singapore. https://doi.org/10.1007/978-981-16-3215-0_12
29. Singh, L.R.K., Ahmed, I., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Braconidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 467-477. (Published and Edited by the Director, Zoological Survey of India).
30. Singh, L.R.K., Chandra, K. and Gupta, D. 2022. Insecta: Hymenoptera: Ichneumonidae. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 479-503. (Published and Edited by the Director, Zoological Survey of India).
31. Singh, L.R.K., Ahmed, I., Saini, J., Gupta, D., and Chandra, K. 2022. Crustacea: Cladocera and Copepoda. In: *Fauna of Himachal Pradesh, State Fauna Series*, 26(Part-1): 177-180. (Published and Edited by the Director, Zoological Survey of India).
32. Singh, L. R. K., Ahmed, I., Saini, J., Gupta, D., and Chandra, K. 2022. Myriapoda: Chilopoda and Diplopoda. In: *Fauna of Himachal Pradesh, State Fauna Series*, Fauna of Himachal Pradesh, State Fauna Series, 26(Part-2): 389-392 (Published and Edited by the Director, Zoological Survey of India).
33. Sreekumar, S. and Bhatnagar, P.S. 2021. Aves. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 33–53 (Published by the Director, Zoological Survey of India, Kolkata).
34. Subramanian, K.A. and Selvkumar, C. 2022. Insecta: Ephemeroptera. In: *The Fauna of Himachal Pradesh*. 193-208. Director, ZSI, Kolkata.
35. Talmale, S.S. 2021. Insecta: Odonata. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 218–243 (Published by the Director, Zoological Survey of India, Kolkata).
36. Vasanthakumar, D. and Sharma, R.M. 2021. Insecta: Diptera: Cecidomyiidae. In: The Director (Ed.), *Fauna of Koyna Wildlife Sanctuary, Maharashtra, Conservation Area Series*, 66: 135–136 (Published by the Director, Zoological Survey of India, Kolkata).

MEETINGS ATTENDED

1. Dr. Dhriti Banerjee, Director has inaugurated DNA Molecular Systematic Laboratory at ZSI, MARC, Digha on 3rd February, 2022.
2. Dr. Dhriti Banerjee, Director inaugurated week-long festival of Science & Technology- *Vigyan Sarvatra Pujyate* organized by Andaman & Nicobar Regional Centre, Port Blair of SCoPE for all (Science & Technology Communication, Popularization & its Extension) during 22nd to 28th February 2022, sponsored by PSA, Ministry of Culture and Vigyan Prasat, Government of India.
3. Dr. Dhriti Banerjee, Director attended a meeting to discuss the Red Panda Population Survey using non-invasive genetics in Bhutan as a collaborative project on 17th February, 2022.
4. Dr. Dhriti Banerjee, Director given interview to Doordarsan on 25th February, 2022.
5. Dr. C. Raghunathan, Scientist-E inaugurated the International Webinar on Bee Pollinators organized by ZSI Headquarters on 2nd February 2022 and delivered a lecture on 'Status of Pollinators in the World'; chaired the meeting with GIZ officials to review the

progress and to set the *modes operandi* to execute the project held on 2nd February 2022 through virtual mode and attended the meeting for compilation of Vision India @ 2047 document organized by MoEFCC on 3rd February 2022.

6. Dr. C. Raghunathan, provided the inputs to Institute of Forest Genetics and Tree Breeding (IFGTB) B for the preparation of National Policy and Action Plan on Management of Alien Invasive Species on 6th February 2022; attended 32nd Meeting of National Committee on Introduction of Exotic Aquatic Species into Indian Waters held on 16th February, under the chairmanship of Joint Secretary (Inland Fisheries), Ministry of Fisheries, Animal Husbandry and Dairying, Govt. of India through VC.
7. Dr. C. Raghunathan, provided inputs for FTA sustainability (environment) negotiations under India-UK FTA - Chapter 22 Environment provided and sent to Ministry for the following articles (Article 22.19 – Protection of the marine environment from ship pollution; Article 22.11 – Marine litter; Article 22.12 – Marine Wild Capture Fisheries; Article 22.14 – Trade and Biodiversity; Article 22.15 – Invasive Alien Species; Article 22.16 – Conservation and Illegal Wildlife Trade and Article 22.21 – Environment Working Group.). Also provided inputs for CBD document related to invasive alien species submitted to MoEFCC on 24th February 2022 and draft model text for Trade And Sustainable Development for India-UK FTA submitted to MoEFCC on 28th February 2022.
8. Dr. Deepa Jaiswal attended Meeting organized by Dr.Nalini Mohan, PCCF & Member Secretary Andhra Pradesh State Biodiversity Board on 2nd Feb.2022 on the Occasion of Wetland day and discussed on “ Conservation of wetlands of Andhra Pradesh”
9. Dr.Deepa Jaiswal and Dr. Karuthapandi attended 4th Meeting of Reconstituted State Board of Wildlife,Telangana on 24th Feb.2022
10. Dr. S. Sambath, Scientist-E attended as an external member of review committee meeting of Survey of India, Jabalpur for review of Govt. Employees who attained 50/55 years of age or have completed 30 years qualifying Govt. service on 11.02.22.
11. Dr. D.S. Suman has participated as an Expert Member in Central Insecticide Board meetings committee and sub-committees.
12. Dr. Mukesh Thakur has attended a virtual meeting with the Forest and Govt Officials of the Royal Govt of Bhutan which was organized to discuss the Red Panda population survey using non-invasive genetics in Bhutan as a collaborative project

on 17th Feb 2022.

13. Dr. Basudev Tripathy, Scientist-E attended meeting for GIZ project implementation of NERAQ and Consultancy Contract Financial documentation discussion with regard to the project on Inventory of aquatic species and identification of biodiversity hotspots in the North Eastern Region of India organized by ZSI and GIZ on virtual mode on 2nd February and 18th February 2022.
14. Dr. Varadaraju, Scientist-D, deputed as departmental representative for document verification to the post of Junior Zool. Asst. on 11.2.2022 to the Office of the Deputy Director, Staff Selection Commission, Chennai.
15. Dr. K.P. Dinesh, Scientist-D attended a virtual event on ‘Urgent need to conserve wetlands, grass lands, catchments and waterways for a better Bengaluru’ organized by New India Forum on 22nd January 2022.
16. Dr. Pratyush P. Mohapatra imparted training to forest department staff and volunteers of Bhopal Forest Division on Mugger and Bird census and participated in the census from 18th – 20th February 2022; presented in the Symposium on Indo-German cooperation in research Museums on “Indo-European museum collaboration in addressing taxonomic shortfalls in various faunal groups” on 21st February 2022.
17. Dr. Uttam Saikia, Sci-C . virtually attended a MVSc. viva-voce examination of the College of Veterinary Sciences, Assam Agriculture University, Guwahati on the 17th Feb. as an external member of the Research Advisory Committee.
18. Dr. T. Kubendran, Scientist-C acted as external Examiner for Ph.D from Madurai Kamaraj University, Palkalai Nagar, Madurai on 19.12.2021.

WEBINAR ORGANIZED

Zoological Survey of India, Headquarters, Kolkata organized one International Webinar on “Bee Pollinators” on 2nd February, 2022.

LECTURES DELIVERED

1. Dr. Deepa Jaiswal delivered a lecture on "Wetlands and its faunal diversity" organised by St. Francis College for Women, Hyderabad, on 2nd Feb 2022.
2. Dr. Gaurav Sharma, Scientist-E delivered invited lecture on "Insect diversity of India" in virtual "National Seminar on Biodiversity of Insects" organized by Government College, Kota, Rajasthan on 21 February, 2022; delivered a lecture on "Faunal diversity and their conservation in India" to 26 trainees and 04 teachers of District Institute for Education and Training (DIET), Kinnaur, H.P. on their education visit at ZSI, NRC, Dehradun on 17 February, 2022.
3. Dr. Anil Kumar, Scientist-E delivered virtual lecture on topic entitled "*Status of trans-Himalayan wetlands of eastern Ladakh, India, with special reference to avifauna and conservation issues*" organized by Dept. of Zoology & Env. Science, Gurukul Kangri (deemed to be University), Haridwar on the occasion of World Wetlands Day on 02 February, 2022.
4. Dr. K. A. Subramanian, Scientist-E & Officer-in-Charge, delivered two lectures on Odonata and aquatic insects to students of the Green Skill Development Course, ANRC, ZSI, Port Blair.
5. Dr. V.D. Hegde, Scientist-E, delivered one lecture during the inauguration of the Zoology Association in St. Albert's College (Autonomous), Ernakulum on 09.02.2022 through virtual mode.
6. Dr Gopal Sharma, Scientist-E delivered a lecture on Bird identification and migration of winter water birds on 02.02.2022 at Patna Zoo and delivered an online lecture for the training of University on Nature and Natural resources organized by Patna University, Patna.
7. Dr. C. Sivaperuman, Scientist-E delivered a talk on the Importance of wetlands, conservation & wetland birds – Delhi University as a part of celebrations of World Wetland Day 2022 on 2nd February 2022.
8. Dr Ch. Satyanarayana, Scientist - D, delivered two invited lectures; on 'Research Developments for Sustainability of Ecosystems – Coral reefs, the Paradises underwater' at the National Seminar organised by Department of Zoology, C. H. S. D. St. Theresa's College for Women, Eluru, Andrapradesh, and on 'Coral reefs of the Indian Coast and their conservation at the Regional Museum of Natural History, Bhubaneswar, during the function organised as part of the world wetlands day.
9. Dr Rahul Joshi, Scientist-C delivered an invited lecture (online) on 28th February 2022 on "Importance of Biodiversity" to school students and teachers organized by Eco club and Punjab State council for Science and Technology, Chandigarh.
10. Dr. Basudev Tripathy, Scientist-E delivered a talk on "Darwinism in Social Context" organized by the Haryana Gyan Vigyan Samiti, Haryana Vigyan Manch and Haryana Vidyalaya Adhyapak Sangh on virtual mode for the webinar on 12th February 2022.
11. Dr. Indu Sharma, Scientist-E and Dr. R. H. Raina, Scientist-D delivered a lecture on "Introduction of ZSI and Faunal diversity of Desert Ecosystem" and "Principle of insect classification" respectively and also provided "Scientific information on Vertebrate" and entomofauna displayed in the museum on 31st January, 2022 to 43 participants of "Diploma in Agriculture Extension Services for Input Dealer (DEASI) Course, under State Institute of Agriculture Management, Durgapura- Jaipur at the centre.
12. Dr. Anil Mohapatra, Scientist-E, presented online on the "Faunal Diversity of Ramsar Wetland: Conservation and Challenges" on the occasion of World Wetland day (02.02.2022), organized by Faculty of Agriculture, Sri Sri University, Cuttack.
13. Dr. R. H. Raina, Scientist-D delivered an invited Lecture on "*Diversity of Bees in India; Morphological and Molecular approaches*" during winter school on apiculture organized by PAU Ludhiana through virtual mode on 11th Feb 2022 at the Centre; delivered a Lecture on "Introduction of Zoological Survey of India and its Research Activities" on 18th Feb 2022 during an Online Training Program on Advanced Techno-Management Program at Bella Vista, Hyderabad sponsored by the Department of Science and Technology)
14. Dr. Karuthapandi delivered a lecture on "Wetland Day and its Significance" organised by St. Francis College for Women, Hyderabad, on 2 Feb 2022.
15. Dr. T. Kubendran, Scientist-C: Served as a resource person and delivered a lecture on the topic "Diversity of Aquatic Insects and conservation" to UG, PG Students & Scholars, organized by PG & Research Department of Microbiology association with IIC (MoHRD) Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai, Tamil Nadu on 29th December, 2021.
16. Dr. M.J. Palot, Scientist-B delivered a lecture on 'Importance of wetlands' to the teacher trainees of Govt. College of Teacher Education (GCTE), Kozhikode in connection with the observation of World Wetland Day

webinar organized by the Kerala Forests & Wildlife Department, Social Forestry & Extension division, Kozhikode on 2nd February 2022; delivered a talk on 'Wetlands for people and nature' at the World Wetland Day webinar organized by the Periyar Foundation, Periyar Tiger Reserve, Kerala on 2nd February 2022.

17. Ms. Debashree Dam, Scientist – B, delivered a lecture on “Perspectives of Zoology” to the B. Sc., Zoology 1st & 6th Semester students on 16th February 2022 at Bajkul Milani Mahavidyalaya, Purba Medinipur District, West Bengal; guided and interacted with students of B.Sc. (Aquaculture) from Khejuri College, Purba Medinipur District on their visit to the Marine aquarium on 11th February 2022.

TRAININGS ATTENDED

1. Dr. R. H. Raina, Scientist-D, Dr. Supriya Nandi, Dr. Mrinal Kumar Das, Scientist-C, and Dr. T. Kubendran, Scientist-C attended “Advanced Techno Management Programme for the scientists” on online platform, organized by Administrative Staff College of India, Hyderabad, sponsored by Department of Science And Technology Government of India, from 31 January- 25 February, 2022 .
2. Dr. P.S.Bhatnagar, Scientist- E attended online training on “Environmental Leadership and Life Skills” organized by IIFM, Bhopal from 07-11 February, 2022.

3. Dr Swetapadma Dash, Scientist E attended training Programme for Women Scientists on Community Resource Management (Women Components) from 21.02.2022 to 25.02.2022 (online)
4. Dr. Boni Amin Laskar attended 5 days online MDP on “Environmental Leadership and Life Skills” from 7 - 11 February, 2022
5. Ms. Debika Bunia presented a research paper titled “Scarab Beetles of Indian Himalaya (Coleoptera: Scarabaeoidea)” and received ISEB student grants “*International Conference on Insect Systematics and Evolutionary Biology*”, Hybrid mode conference dedicated to the memory of Edward Osborne Wilson organized by Punjabi University Patiala from 16-18 February, 2022.

AWARDS

Best women Scientist award by IIPA, New Delhi received by Ms. Debasree Dam, Scientist-B, ZSI-MARC, Digha



SUPERANNUATION

Mr. Sujit Ghosh, Senior Zoological Assistant; Mr. Sudhamoy Majumdar, Office Superintendent; Mr. Sunil Kumar Naskar, Office Superintendent; Mr. Lachman Singh, Motor Driver Gr. 1; Mr. Swapan Saha, MTS from ZSI headquarters were retired on 28th February 2022.

OBITUARY



DR. P.T. CHERIAN

With profound grief, we inform the sad demise of our eminent scientist, Dr. P.T. Cherian, Former Addl. Director of Zoological Survey of India on 09.02.2022 at the age of 79, at his residence in Thiruvananthapuram. Dr. Cherian was a globally known Dipterologist who contributed significantly to the taxonomy and biogeography of Indian Diptera (true flies), especially the family Chloropidae (frit flies or grass flies). Dr. Cherian was born on 18th April, 1942 in Thumpamon village, Pathanamthitta District, Kerala. Mentored by Prof. M.S. Mani, a renowned entomologist and biogeographer of that time, Dr. Cherian, completed post-graduation and Ph.D at St. Johns' college, Agra. After completing Ph.D., he joined ZSI in 1972 at the Diptera Section, Headquarters, Kolkata as a Zoologist and promoted as Superintending Zoologist at the North Eastern Regional Centre, Shillong. Later, he was posted in a project at Kochi, Kerala studying the impact of hydroelectric project on fauna and later continued his research on Diptera taxonomy at the Southern Regional Centre, ZSI, Chennai and retired as Additional Director and Officer-in-Charge of the Centre in 2002. After retirement, he was settled in Thiruvananthapuram, Kerala and continued his research on Diptera as an Emeritus Scientist at the Kerala University.

Among colleagues and friends, Dr. Cherian is known for his affectionate, humble, straight forward nature and simple life style. His deep understanding of insect taxonomy and insightful discussions on the subject has helped several students and colleagues across the country. During his lifetime, Dr. Cherian discovered over 700 new species, 20 new genera and a new tribe of Chloropidae. The classification schema of Chloropidae devised by Dr. Cherian is still followed world over. He also carried out global revision of many tribes and genera of Chloropidae and published his work on Indian Chloropidae as a Fauna of India volume. He was the Chief Editor of Biosystematica journal and Member Trustee of Prof. TC Narendran Trust for Animal Taxonomy. Moreover, He was the president of the Indian Academy of Entomology, a member of the Programme Advisory committee of the MoEFCC.

Recognizing his outstanding contributions to Diptera taxonomy, Govt. of India conferred on him, the Janaki Ammal Award for Taxonomy in the year 2017. His passing is a great loss to the Zoological Survey of India. Those of us who have been fortunate enough to know and work with him have lost a great teacher and mentor. The fraternity of Zoological Survey of India pay homage to the departed soul.