

ZSI enews



सत्यमेव जयते



Ministry of Environment,
Forest and Climate Change



आज़ादी का
अमृत महोत्सव

From the Director's Desk



It gives me an immense pleasure to present the September 2021 issue of E-News to the readers. It is a matter of pride to the Zoological Survey of India as it entered the Memorandum of Understanding with Natural History Museum, London, United Kingdom on 24th September 2021 to have a bilateral cooperation for taxonomic studies which will enhance the importance of taxonomy at a global scale. Faunistic surveys were conducted in the protected areas of Andaman and Nicobar Islands, Arunachal Pradesh, West Bengal, Rajasthan, Odisha, Gujarat, Bihar, Karnataka, Tamil Nadu and U.T. of Ladakh during the month. Altogether 10477 specimens comprising 1205 species were identified from the different faunal groups under Protzoa to Mammalia. The present month witnessed the description of five new species from Hymenoptera and an Eel while reporting eight species of new records to India. In addition, thirty eight species under different faunal groups were augmented to the National Zoological Collections of ZSI and 67 DNA barcodes have been generated. The quarterly journal of *Records of Zoological Survey of India* Vol. 121(3), 2021 was released on 30th September 2021. Identification and advisory services are the regular activities of ZSI in which 17 services have been rendered to different agencies including wildlife managers, universities and research organizations. Scientists of ZSI published 30 papers during the month of which majority of them are in SCI/ NAAS rated journals. World Ozone day was observed on 16th September 2021 by ZSI Headquarters and Regional Centres by organizing invited lectures and conducting different competition for students. Hindi Diwas was also celebrated in befitting manner with the participation of officers and staff of ZSI. I gratefully acknowledge the significant contribution made by officers and staff of ZSI during this month.

Jai Hind

Dr. DHRITI BANERJEE
Director
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Kolkata

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Cover photo: Painted Stork
Mycteria leucocephala
(Pennant, 1769), [Photo
ZSI-FBRC, Hyderabad]

HEADQUARTERS, KOLKATA



Hon'ble Union Minister (State), MoEFCC, Shri Aswini Kumar Choubey and Dr. Dhriti Banerjee holding discussion at Kolkata during the visit of Hon'ble Minister

Surveys were conducted to Mudflat ecosystems of Odisha from 8th to 17th September 2021, Bibhutibhushan Wildlife Sanctuary, Murhidabad, Malda, Howrah, Shibpur and Randidra Sarobar in West Bengal during 18th to 26th September 2021. Altogether 670 species from 4744 specimens have been identified under different faunal groups of Protozoa to Mammalia. The hymenopteran species *Pteroceraphron apoorva* Bijoy and Rajmohana, 2021, *Elysoceraphron aadi* Bijoy and Rajmohana, 2021, *Cyoceraphron sahyadri* Bijoy and Rajmohana, 2021 and *Cyoceraphron indicus* Bijoy and Rajmohana, 2021 were newly described while three genera under Hymenoptera *Pteroceraphron* Dessart, 1981, *Elysoceraphron* Szelenyi, 1936 and *Cyoceraphron* Dessart, 1975 and a mite *Calvolia summersi* Mostafa, 1970 were new record to India. Besides, 30 species have been augmented to the National Zoological Collection of Platyhelminthes, Nemathelminthes, Trichoptera, Hymenoptera, Coleoptera, Hemiptera and Mites. Eleven identification and advisory services including confiscated material have been rendered to different institutions such as WCCC, and West Bengal Forest department; University of Kashmir, Asutosh College, Kolkata, ZSI, Gulbarga University, Kalaburagi, Karnataka, Department of Agricultural Entomology UAHs, Shivamogga. World Ozone Day was celebrated on 16th September 2021 and Organised one day mini-symposium to celebrate International Red Panda Day in collaboration with partners in Nepal (Resource Himalaya and Small Mammal Conservation Research Foundation), Bhutan (Department of Forest and Park Services) and China on 18/09/2021. On the occasion of Teachers day on 05th September 2021 an online training programme in regional language (Bengali) for school teachers of Purba Medinipur district, West Bengal was organised which was inaugurated by Dr. Dhriti Banerjee, Director, ZSI in which more than 70 school teachers took part. This was to implement the Wipro-Earthian Paryavaran Mitra project 2021-22 where the school children are taken from "lab to field" to study Biodiversity, ecosystem and its sustainability. On this occasion an awareness video on Horseshoe Crab of Sundarban in Bengali was also released by Director, ZSI.

NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

Grassland habitat in
Bhuyanpara Range



A field survey was conducted to Manas National Park, Assam, from 1st -10th September 2021 and a total of 148 examples were collected, which were identified into 31 species. The fauna identified are Pisces (57 examples, 12 species), Reptilia (5 examples, 4 species), Amphibia (55 examples, 4 species), Crustacea (6 examples, 2 species), Coleoptera (1 example, 1 species), (Hemiptera 20 examples, 5 species), Mammalia (3

examples, 2 species) and Aves (1 example, 1 species). Identification and advisory services were provided to the Chief Wildlife Warden, Govt. of Meghalaya (two road-killed animals), Field Director, Manas National Park, Assam (67 species of fishes) and Divisional Forest Officer (T), Khasi Hills Division. A manuscript was reviewed for the *Journal of Threatened Taxa*.



Rhinoceros unicornis Linnaeus, 1758

A total of 407 examples were identified into 78 species in 63 genera belonging to 8 different faunal groups. Identification of one Antler was carried out for Police Upnirikshak, Dattawadi, Pune and six specimens of antlers for Police Upnirikshak, Chakan, Pune. Advisory services rendered to the Maharashtra State Biodiversity Board. Swachhata Pakhwada was celebrated from 1-14 September 2021 by observing a cleanliness drive at the WRC campus, and Hindi Pakhwada was celebrated from 14-28 September 2021.

Samanya Gyan
competition
Hindi Pakhwada



Cleaning of WRC
Campus



WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA



CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH



Indian Moon Moth,
Actias selene
Hubner, 1806



Identified and registered 218 specimens comprising of 80 species belonging to 70 genera in 33 families. Identification and advisory services were given to the Principal, Govt. College, Majholi (Jabalpur) regarding 42 photographs of both butterflies and birds of 7 species of butterflies and 13 species of Birds. Hindi Diwas was celebrated on 14 September 2021 with the participation of all officers and staff.

Congregation of *Neophron percnopterus*
Linnaeus, 1758

DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

Hindi celebrations at DRC, ZSI, Jodhpur



Gongylus gongylodes (Linnaeus, 1758)



A faunistic survey was conducted to Purna Wildlife Sanctuary, Dang, Gujarat, from 2nd to 13th September 2021. Identified 435 specimens and 35 species, comprising 343 examples and 28 species of insects, 42 examples and four species of gastropods, and 50 examples and three species of Pisces. A manuscript was reviewed on fishes for *Uttar Pradesh Journal of Zoology*. Hindi Diwas (14th September, 2021), Hindi Pakhwara and Hindi Karyashala were celebrated.



Oriental magpie-robin,
Copsychus saularis
(Linnaeus, 1758)

NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND

Himalayan treepie,
Dendrocitta formosae R.
Swinhoe, 1863



A total of 345 specimens were examined and identified into 85 species belonging to different faunal groups (7 species of Protozoa; 7 species of Nematoda; 22 species of Lepidoptera; 4 species of Odonata; 14 species of Phthiraptera; 10 species of Annelids; 7 species of Pisces; 4 species of amphibians and ten species of Aves). The centre organised Hindi Day on 14th September 2021 and *Hindi Pakhwada* by organising various competitions to enhance the use of Hindi in official work from 14th to 28th September 2021.

SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU

Lachesilla vellimali Ramesh,
Babu, Subramanian & García
Aldrete, 2021

Identified and registered 558 specimens into 138 species of various faunal groups viz. Ephemeroptera, Odonata, Coleoptera, Hemiptera, Blattodea, Psocoptera, Mollusca, Pisces, and Reptiles. One new species of Psocoptera, *Lachesilla vellimali* Ramesh, Babu, Subramanian & García Aldrete, 2021 described from Southern Western Ghats of Tamil Nadu & Kerala. *Lachesilla aethiopica* (Enderlein), known in the Neotropics, the USA and Africa, was collected from Tamil Nadu, Kerala & Karnataka, representing a range extension to Asia.



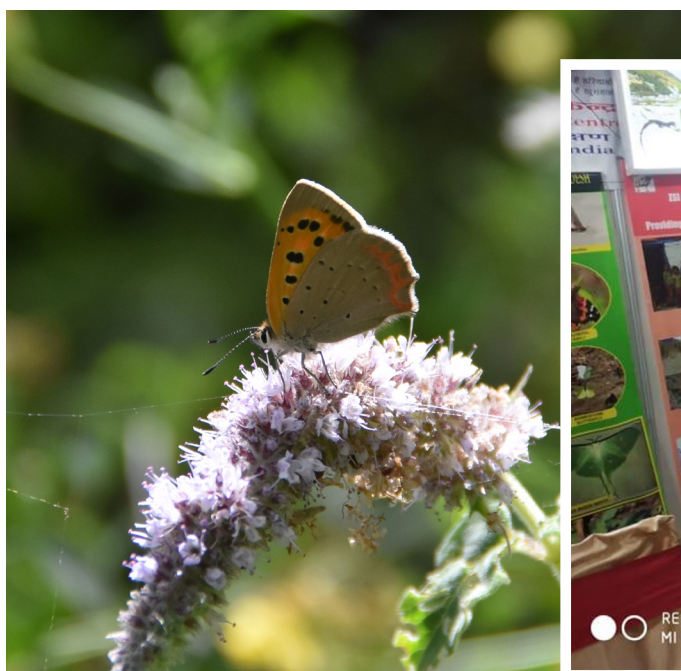
GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

Identified and registered 473 examples representing 37 species (15 Mollusca, 22 Lepidoptera) from backlog collections.

HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH

Registered and digitised 45 species from 206 specimens, comprising 22 species of Lepidoptera, 4 species of Orthoptera and 19 species of EPT complex. Organized Hindi Pakhwara from 16-28 September, 2021 and Hindi Karyashala on 22nd September 2021. To generate awareness for public to protect the faunal diversity, ZSI participated in the Destination Himachal Pradesh, 2021 exhibition from September 28-30, 2021. Identification and advisory services rendered to Department of Fruit Sciences, PAU, Ludhiana; Government Degree College, Hamirpur and Eternal University, Baru Sahib, Sirmour. One research paper was reviewed for *Records of the Zoological Survey of India* and another for the *Journal of Pharma Research*.

Lycaena phaleas (Linnaeus,
1761) in Lahaul valley



ZSI stall at Himachal Destination
Exhibition organised from 26-30
September 2021



MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU



Coral frames being loaded on to the boat for transportation to the recipient site

Nine days survey was conducted to east and west coast of India-faunal diversity of Pondicherry State from 16th to 24th September, 2021 and collected 210 specimens, including Porifera (40 exs.) Gastropoda (150 exs.), Echinoderms (5 exs.) and Meiofaunal samples (15 nos.). Identified 108 examples into 35 species (Protozoa 17 species, 64 exs.; Mollusca 5 species, 24 exs.; Crustaceans 8 species, 12 exs.; Echinoderms 5 species, 8 exs.; Orthoptera 6 species, 29 exs.). Reviewed a manuscript for the *Journal Microbial Ecology*.



*Charybdis (Charybdis)
natator* (Herbst, 1794)

ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR



Thirty days field survey to Great Nicobar Island; 13 days survey to Nancowry group of islands; 5 days local survey to Chidiyatapu, Burmanalla and Rutland Island and Shoal Bay, Kalatang, Sippighat in South Andaman were conducted. A total of 298 species comprising Mollusca (63 species), Decapoda (3 species) and fishes (20 species) were identified from the marine environment and Amphibia (5 species), Coleoptera (3 species), Birds (31 species), Hemiptera (9 species), Odonata (4 species), Lepidoptera (98 species), Arachnida (31 species), Hymenoptera (4 species), Diptera (1 species) and Reptilia (26 species) were identified from the terrestrial environment. Identification services were rendered regarding 2 schedule species of molluscs to the Department of Environment & Forests, A & N Islands.

SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL

Twelve days survey tour has been conducted in Pondicherry, Karaikal and Mahe along East and West coast of India from 15.09.2021 to 26.09.2021. Thirty-nine species and 596 specimens were identified and registered for the month.

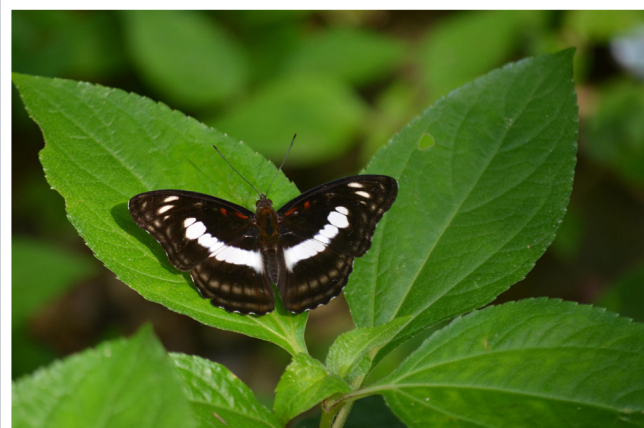


FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

Examined 535 specimens from West Singhbhum, Seraikela-Kharsawan districts Jharkhand; Guntur, Visakhapatnam and East Godavari districts, Andhra Pradesh; Rollapadu Wildlife Sanctuary; Papikonda National Park, Andhra Pradesh and identified 15 species of aquatic coleoptera from 73 examples, 9 species of aquatic Hemiptera from 69 examples, 5 species of Cladocera from 82 examples, 12 species of Mollusca from 196 examples, 24 species of fishes from 271 exs, during the month. Two Identification and advisory services rendered to Gulbarga University, Karnataka. Thirteen DNA barcodes were submitted to NCBI and BOLD. Two species of fishes and one species of Mollusca augmented to the National Zoological Collections. Ozone Day was observed on 16th September 2021 and Hindi saptah was observed from 14th to 20th September 2021.



Sarkidiornis melanotos
(Pennant, 1769)



Athyma selenophora
(Kollar, 1844)

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE, KERALA

Identified 59 species (Hymenoptera – 45 spp., Mantodea 03 spp., Araneae 04 spp., Lepidoptera 04 spp. and Coleoptera – 03 spp.) from 334 examples. Four identification and advisory services rendered.



Scolopendra tigrina
Newport



Indian Giant
Squirrel,
Ratufa indica
Erxleben

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

A new blind eel species *Rakthamichthys mumba* Praveenraj, Thackeray, Mohapatra, Pavan-Kumar, 2021 is described from 5 specimens collected from a well inside Mancherji Pagina Banaji, Mumbai city, Maharashtra. One survey along the Odisha coast on the Status Survey of Windowpane Oyster (*Placuna placenta*) conducted from 14th to 21st September 2021. A total of 321 specimens were identified which includes insects, crabs, isopods, molluscs, fishes and reptiles belonging to 89 species. Two DNA barcodes were uploaded in the NCBI database. One manuscript was reviewed for *Scientific Reports*. Hindi pakhwada was celebrated by organising competitions and distributing prizes to encourage



Rakthamichthys mumba
sp. nov. Praveenraj,
Thackeray, Mohapatra,
Pavan-Kumar, 2021

use of Hindi in official work. Staff members participated in Beach Cleaning programme in collaboration with Berhampur University at Gopalpur coast.

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Conducted two extensive surveys to Papumpare, Lower Subansiri, Lower Siang and Lepa Rada district of Arunachal Pradesh and collected 1,134 examples of 11 groups (2 Diplopoda, 10 Lepidoptera, 9 Orthoptera, 3 Coleoptera, 1 Odonata, 74 Decapoda, 1 Arachnida, 778 Mollusca, 237 Pisces, 17 Amphibia, 1 Reptile). Three species under 3 genera and 18 examples of Millipedes; 6 species under 6 genera and 20 examples of Hemiptera; 53 species under 44 genera and 80 examples of Lepidoptera; 11 species under 11 genera and 46 examples of Mollusca; 10 species under 9 genera and 71 examples of Pisces, were identified and registered. Celebrated Hindi Pakhwara from 14th to 28th September, 2021 by the Scientists and staff members.



Ethope himachala
Moore, 1857

MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

Mudflat survey
Odisha



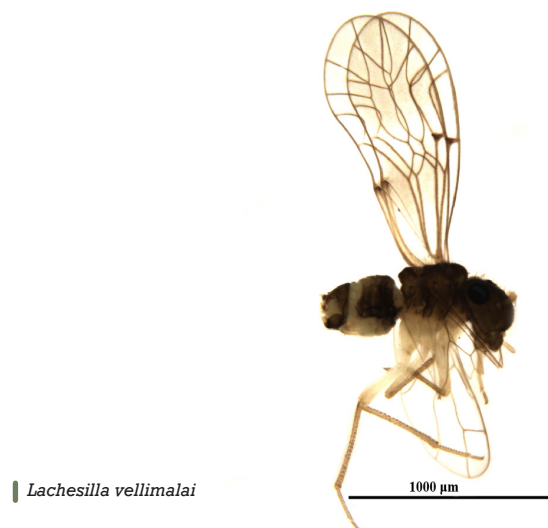
Two field visits conducted; one in Ramnagar area on 10th September 2021 for students and teachers of Dasagram High School, Ramnagar and one in Digha Mohona Beach on 25th September 2021 for Digha Vidyabhawan School to observe study and reflect on the Marine/Estuarine Faunal diversity. A total of 268 specimens were identified into 49 species pertaining to following groups [181 ex. of Mollusca (27 spp.), 61 ex. of fishes (21 spp.) and 26 ex. of Polychaete (01 sp.)]. New initiative was undertaken titled “from lab to field”, a practical field experience for higher secondary school children of Purba Medinipur District, West Bengal, following an online training programme for school teachers of Purba Medinipur district, West Bengal, 05 schools and around 80 students are implementing the project.



Horse-shoe crab

NEW DISCOVERIES

NEW SPECIES



Rakthamichthys mumba
Praveenraj, Thackeray,
Mohapatra, Pavan-Kumar, 2021



PUBLICATIONS

BOOK CHAPTER

1. Kumar, D., Kumar, R., Kumar, A., Singh, M.P. and Bhaskar, R. 2021. Molecular Markers: A Powerful Tool for study of Genetic Biodiversity and Conservation of Wildlife Flora and Fauna. In: Biodiversity: Status Threats and its Conservation Strategies, Eds. I. Malik, D. S., Sharma, A. K., Sharma, A.K., and Sharma, M. pp. 213-227. JPS Scientific Publications, India. ISBN: 978-93-91342-04-3.

mongoose, *Herpestes edwardsii*. *Annals of Parasitology*. 67 (2), 151-159.

2. Akhilesh, K V., Rajan, P T., Vineesh, N., Idrees Babu, K K., Bineesh, K K., Muktha, M., Chellappan Anulekshmi., Manjebrayakath, Hashim., Gladston, Y and Nashad, M. 2021. Checklist of serranid and epinephelid fishes (Perciformes: Serranidae & Epinephelidae) of India. *Journal of the Ocean Science Foundation*, 38. pp. 35-65.
3. Bhaskar, S., Sinha, B., Shabnam, N.A. and Dinesh, K.P. 2021. Additional information on the Giant Himalayan Horned Frog, *Megophrys periosa* Mahony, Kamei, Teeling & Biju, 2018 (Anura: Megophryidae). *Records of the Zoological Survey of India*, 121(2): 219-224.
4. Das, M. N., Kumar, R. R. and Padmanaban, P. 2021. First record of *Pseudamia gelatinosa* Smith, 1956 (Perciformes: Apogonidae) from Gulf of Mannar, Southeast coast of India. *Records of the Zoological Survey of India*, 121(2)/307-309.
5. Dubey, A.K. and S. Singh, 2021. A new whitefly of quarantine importance infesting a native and invasive plant, *Rubus ellipticus* Sm. (Rosaceae) in the Western Himalaya, India. *Journal of Asia-Pacific Entomology*. <https://doi.org/10.1016/j.aspen.2021.08.011>.

JOURNALS

1. Ahmad, A. and Gupta, N. 2021. Light and scanning electron microscopy of an ischnoceran louse, *Felicola rohani* and an amblyceran louse, *Heterodoxus spiniger* (Phthiraptera: Insecta) from the Indian grey

6. Girish Kumar, P. 2021. A review of the genus *Nysson* Latreille (Hymenoptera: Crabronidae: Bembicinae: Nissonini) from India. *Records of Zoological Survey of India*, 121(2): 269-277. DOI: 10.26515/rzsi/v121/i2/2021/154391
7. Gopinathan Maheswaran, Indra Prasad Acharja, Lalit Kumar Sharma, Himadri Sekhar Mondal, Tanoy Mukherjee, Save the white-bellied heron from extinction. Imran Alam and Amitava Majumder 2021. *SCIENCE* 373(6561): 1317. DOI: 10.1126/science.abl9682
8. Gurumaym, S. D. 2021. Ichthyological inventory of Lower Dibang valley, Arunachal Pradesh, India, *J of Fish. Soc. India*, 53(1&2): 51-56.
9. J. Praveenraj, T. Thackeray, A. Mohapatra, A. Pavan-Kumar (2021). *Rakthamichthys mumba*, a new species of Hypogean eel (Teleostei: Synbranchidae) from Mumbai, Maharashtra, India. *Aqua* 27 (3): 93 – 102.
10. Joshi, R., Singh, N. & Kuni, N. (2021) A catalogue of Nolidae Bruand, 1846 from India (Lepidoptera, Noctuoidea). *Zootaxa* 5034 (1): 001–112
11. Jyotirmoy Roy, Abhishek Singh, M. M. Rohith, Lalit K. Sharma, Abraham Johnson, Hemant Joshi, Venkatraman Chinnadurai, Kailash Chandra and Mukesh Thakur. 2021. Cranio-dental signature of three big cats of India: implications in wildlife forensics. *Proc Zool Soc*. <https://doi.org/10.1007/s12595-021-00390-6>.
12. Kamila, A. P. and Sureshan, P. M. 2021. First report of *Oxyophthalma engaea* (Wood-Mason, 1889) (Insecta: Mantodea: Eremiaphilidae) from Kerala, India. *Entomon*, 46(2): 173-176. <https://doi.org/10.33307/entomon.v46i2.603>.
13. Kamila, A. P., Sureshan, P. M. and Mukherjee, T. K. 2021. First Record of the male of *Ephestiasula woodmasoni* Mukherjee, Stiewe & Ghorai, 2010 (Insecta: Mantodea: Hymenopodidae) from Kerala. *Records of Zoological Survey of India*, Vol. 121(2): 279–282. DOI: 10.26515/rzsi/v121/i2/2021/151367.
14. Kumar, S., Banyal, H. S. and. Sharma, I. 2021. First Record of *Phalaropus lobatus* (Linnaeus, 1758) Red Necked Phalarope (Charadriiformes: Scolopacidae) from Narayan Sarovar Wildlife Sanctuary, Gujarat. *Rec. zool. Surv. India*, 121(2): 211-214.
15. Kumar, S., Banyal, H. S. and. Sharma, I. 2021. First record of Sind Krait, *Bungarus sindanus* Boulenger, 1897 (Reptilia: Squamata: Elapidae) from Narayan Sarovar Wildlife Sanctuary, Kachchh, Gujarat. *Rec. zool. Surv. India*, 121(2): 215-218.
16. Mrinal Kumar Das, R. Rajendar Kumar and P. Padmanaban 2021. First record of *Pseudamia gelatinosa* Smith, 1956 (Perciformes: Apogonidae) from Gulf of Mannar, Southeast coast of India. *Records of Zoological Survey of India* 121(2): 307-309.
17. Pakrashi, A., Tyagi, K. and Kumar, V., 2021. The complete mitochondrial genome of *Aeolothrips indicus* Bhatti, 1964 (Thysanoptera: Thripidae). *Mitochondrial DNA Part B*, 6(10), pp.2808-2809.
18. Paunikar, S. and Panwar, S. 2021. Morphometric and meristic study of five freshwater fish species of Song River, Dehradun, Uttarakhand. *Journal of Entomology and Zoology Studies*. 9(5): 288-292.
19. Ramesh, G., Babu, R., Subramanian, K.A. and García Aldrete, A.N. 2021. A new species of *Lachesilla* in species group *pedicularia* (Psocodea: 'Psocoptera': Lachesillidae) and a new record of *L. aethiopica* (Enderlein) from India. *Zootaxa*, 5027 (2): 282–289. <https://doi.org/10.11646/zootaxa.5027.2.8>
20. Rifat H. Raina, Aejaz H. Parrey, Kailash Chandra and Sajad A. Khan 2021. New distributional records of Bumblebees (Hymenoptera: Apidae) from Bangus Valley in North Kashmir of Union territory of Jammu and Kashmir, India, *Rec. Zool. Surv. India*, 121(2): 261-267.
21. Rifat H. Raina, Babu Sadam, Purnima Pathak, Aejaz H. Parrey, and Kailash Chandra (2021): Mites an emerging problem for Bumblebees in Indian Himalayan region, *Current Science*, 121(4): 581-585
22. Saha, N., Mondal, H.S. and Das, S.K. 2021. Birds of Diu: First Avian Checklist of Diu Prepared from a Preliminary Survey. *Journal of Advanced Scientific Education and Research (JASER)*, 1: 46-62.
23. Saini, Kamal, Sidhu, Avtar Kaur & Babbar, Deepak Rai. 2021. Distribution, Ecological and Taxonomic study of *Locusta migratoria migratoria* (Linnaeus, 1758) and long term monitoring of its outbreak in Cold desert of Ladakh (UT) India. *J. of Entomology & Zoology Studies*, 9(4): 357-361.
24. Sainudeen, P. and Palot, M.J. 2021. Mass mortality of Giant Water Bug *Lethocerus indicus* (Lepeletier & Serville, 1825) [Heteroptera: Belostomatidae] in Thiruvananthapuram, Kerala State, South India. *Records of the Zoological Survey of India*, 121(2): 315–317.
25. Sheela, S. 2021. Effective Utilisation of available resources by ants: an observation from Buxa Tiger Reserve. *Insect Environment*. 24 (3) 466-467.

26. Sivaleela, G., Surendar, C., & Kumar, R. R. (2021). Free-living marine nematodes in Andhra Pradesh Coast, India. *Records of the Zoological Survey of India*, 121(2), 283-301.
27. Terine, J.B., Lelej, A.S. and Girish Kumar, P. 2021. Discovery of the genus *Andreimyrm* Lelej, 1995 (Hymenoptera: Mutillidae) in India and description of a new species from the Western Ghats. *Zootaxa* 5020(1): 184-190. <https://doi.org/10.11646/zootaxa.5020.1.10>
28. Vasanthakumar, D. and Sharma, R.M. 2020. A review on the gall midges (Diptera: Cecidomyiidae) of Andaman Islands, India. *Journal of Advanced Scientific Education and Research*, 215-218.
29. Veeramani, A., R. Gayathri, S. Ravichandran, and C. Sivaperuman 2021. Spider's assemblage in the Cauvery Delta Region, Tamil Nadu, India. *Journal of Emerging Technologies and Innovative Research* 8(8): 1-11.
3. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended 21st Meeting with MoEFCC the DGQI with the AS & Dr Anshu Singh, Statistics Division, MoEFCC on 21st September, 2021.
4. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended 30th Meeting of National Committee on Introduction of Exotic Aquatic Species into Indian Waters on 23rd September, 2021.
5. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended Meeting of Notification of Animal Species Under Section 38 of Biodiversity Act, 2002 on 28th September, 2021.
6. Dr. C. Raghunathan attended a meeting with Hon'ble Union Minister (State), MoEFCC, Mr. Aswini Kumar Choubey at Kolkata on 24th September 2021 and briefed about the activities of ZSI.
7. Dr. C. Raghunathan attended the meeting of Lakshadweep Coastal Zone Development Authority at Kavaratti Island, Lakshadweep on 27th September 2021 as Expert Member.
8. Dr. C. Raghunathan chaired the 71st Scientific Consultative Committee meeting of ZSI Headquarters and 19th Scientific Consultative Committee meeting of ZSI Regional Centres on 30th September 2021.
9. Dr. C. Raghunathan convened the Ph.D. synopsis presentation meeting for Pondicherry University on 2nd September 2021.
10. Dr. Gaurav Sharma, Scientist-E & Officer-in-Charge participated in RAC meeting as External Expert Member for evaluation of Six monthly Progress of Ph. D. Research Scholars of Forest Protection Division, Forest Research Institute, Dehradun held at Lecture Hall of Forest Pathology Discipline, Forest Protection Division, Forest Research Institute, Dehradun on 20 September, 2021.
11. Dr. Gaurav Sharma, Scientist-E & Officer-in-Charge participated as nominated ZSI representative in virtual meeting on "Notification of Animal Species under Section 38 of Biodiversity Act, 2002" organised by National Biodiversity Authority, Chennai on 28 September, 2021.
12. Dr. K. A. Subramanian, Scientist- E attended meeting with Data Quality Governance Index, Statistics Division, MoEF & CC, New Delhi on 21.09.2021.
13. Dr. K. A. Subramanian, Scientist- E attended a Board meeting at Chennai Snake Park on 17.09.2021.
14. Dr. K. A. Subramanian, Scientist- E attended meeting with NBA: Section 38 Discussion meeting. MoEF& CC, New Delhi. 20.09.2021.

POPULAR ARTICLE

1. Palot, M.J. 2021. Further additions to the checklist of reptiles of Kerala State, India. *Zoos' Print. ReptileRap*, 36 (9):16-24.

MEETINGS ATTENDED

1. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India chaired the DGQI (Data Governance Quality Index) Questionnaire Discussion (Self-assessment for GOI) meeting on 2nd September, 2021.
2. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India chaired the briefing meeting on 2nd edition of DGQI Questionnaire Discussion 8th September, 2021.
3. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended 21st Meeting with MoEFCC the DGQI with the AS & Dr Anshu Singh, Statistics Division, MoEFCC on 21st September, 2021.
4. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended 30th Meeting of National Committee on Introduction of Exotic Aquatic Species into Indian Waters on 23rd September, 2021.
5. Dr. Dhriti Banerjee, Scientist-G & Director, Zoological Survey of India attended Meeting of Notification of Animal Species Under Section 38 of Biodiversity Act, 2002 on 28th September, 2021.
6. Dr. C. Raghunathan attended a meeting with Hon'ble Union Minister (State), MoEFCC, Mr. Aswini Kumar Choubey at Kolkata on 24th September 2021 and briefed about the activities of ZSI.
7. Dr. C. Raghunathan attended the meeting of Lakshadweep Coastal Zone Development Authority at Kavaratti Island, Lakshadweep on 27th September 2021 as Expert Member.
8. Dr. C. Raghunathan chaired the 71st Scientific Consultative Committee meeting of ZSI Headquarters and 19th Scientific Consultative Committee meeting of ZSI Regional Centres on 30th September 2021.
9. Dr. C. Raghunathan convened the Ph.D. synopsis presentation meeting for Pondicherry University on 2nd September 2021.
10. Dr. Gaurav Sharma, Scientist-E & Officer-in-Charge participated in RAC meeting as External Expert Member for evaluation of Six monthly Progress of Ph. D. Research Scholars of Forest Protection Division, Forest Research Institute, Dehradun held at Lecture Hall of Forest Pathology Discipline, Forest Protection Division, Forest Research Institute, Dehradun on 20 September, 2021.
11. Dr. Gaurav Sharma, Scientist-E & Officer-in-Charge participated as nominated ZSI representative in virtual meeting on "Notification of Animal Species under Section 38 of Biodiversity Act, 2002" organised by National Biodiversity Authority, Chennai on 28 September, 2021.
12. Dr. K. A. Subramanian, Scientist- E attended meeting with Data Quality Governance Index, Statistics Division, MoEF & CC, New Delhi on 21.09.2021.
13. Dr. K. A. Subramanian, Scientist- E attended a Board meeting at Chennai Snake Park on 17.09.2021.
14. Dr. K. A. Subramanian, Scientist- E attended meeting with NBA: Section 38 Discussion meeting. MoEF& CC, New Delhi. 20.09.2021.

15. Dr. K. A. Subramanian, Scientist- E attended meeting with NBA: Section 38 Discussion meeting through video conferencing on 27.09.2021.
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16. Dr. R. Venkitesan, Scientist-E attended the State Biodiversity Board meeting at Secretariat, Tamil Nadu Govt, Chennai on 20.09.2021.
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17. Dr. R. Babu, Scientist-E, Conducted the Viva-Voce examination online as an External examiner of the Ph.D. A thesis submitted to the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur on 22.09.2021.
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18. Dr. C. Sivaperuman, Scientist-E attended meeting organised by BNHS in connection with the conservation of single species action plan in the Central Asian Flyway and East-Asian Australasian Flyway on 12th September 2021.
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19. Dr. C. Sivaperuman, Scientist-E served as observer for the online Entrance Examination conducted by Pondicherry University in Port Blair on 2nd, 3rd, and 4th September 2021; attended Doctoral Committee meeting to review the ongoing research work at Department of Ocean Studies and Marine Biology, Pondicherry University, Port Blair on 18th September 2021.
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20. Dr. P.C. Pathania, Scientist-D acted as Co-Chairs/Moderator for the Session-I & II (Life Sciences) in International E-Conference on Progress of Science & Technology during Pandemic PSTDP-2021 organised by Him Science Congress Association, Himachal Pradesh on 11-12 September, 2021.
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21. Dr Deepa Jaiswal, Scientist-E & Dr M. Karuthapandi, Scientist-C attended meeting on “Scientific and Research activities at Osmania University” conducted by Science College, OU on 2nd Sept, 2021.
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22. Dr. Deepa Jaiswal was invited as Chief Guest for Hindi Diwas Celebrations organised by Deccan Regional Centre, Botanical Survey of India, Hyderabad on 14th Sept, 2021.
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23. Dr Deepa Jaiswal, Scientist-E & Dr. M. Karuthapandi, Scientist-C attended 3rd meeting of reconstituted State Board for Wildlife at Aranya Bhavan, Hyderabad on 7th September 2021 organised by Telangana State Forest Department.
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24. Dr. V. D. Hegde, Scientist-E attended meeting with Town Official Language Implementation Committee ((TOLIC), Kozhikode on 24.09.2021.
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25. Dr. A.S. Kalawate, Scientist-D, Dr S.S. Talmale, Scientist-B and Dr. M.J. Palot attended meeting (online) of State Biodiversity Board for discussion on proposal received to the board for

permission of specimen collection on 06.09.2021.
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26. Dr. A.S. Kalawate, Scientist-D & Dr M.J. Palot, Scientist-B attended the Animal expert committee meeting (online) on 2nd and 6th September 2021 organised by Maharashtra State Biodiversity Board.
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TRAININGS/ WEBINAR ORGANISED

1. ANRC, Port Blair organised one day online training workshop on “Island Biodiversity, Conservation and Challenges” under the Social Science Responsibility (SSR) for the faculty of School/Colleges on 7th September 2021.
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2. ANRC, Port Blair organised one day workshop as a part of celebration of World Ozone Day 2021 on 16th September 2021.
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3. HARC, Solan organised and celebrated one week Hindi Pakhwara from 14-28 September, 2021 at HARC, ZSI, Solan. In that Sulekh competition, essay writing and story writing competitions were organised among officers and staff of ZSI, Solan. On 22.09.2021 Rajbhasha Partigya was taken by staff to maximum official work in Hindi.
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4. HARC, Solan organised Hindi Karashala on 22nd September, 2021, Sh. Baldev Thakur, retd Professor, Govt. College, Solan gave training on Hindi language to ZSI, Solan staff.
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5. HARC, Solan placed ZSI stall Destination Himachal Pradesh 2021 exhibition at Centarosa Resort, Majhgaon Village, PO Shamti, Rajgarh Road, Solan, Himachal Pradesh from 28-30 September, 2021, depicting the fauna of Himalaya through LED frames, banners besides preserved specimens.
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6. MARC, Digha conducted two online orientation programme in Bengali for the students and teachers of the other schools, Kishorenagar SSB School, Contai, Majilapur Birendra Vidyapith, Contai and Bajkul Balaichandra Vidyapith High School.
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7. हिन्दी पखवाड़ा 2021 के उपलक्ष्य में भारतीय प्रणी सर्वेक्षण, पश्चिम प्रादेशिक केन्द्र, पुणे द्वारा दिनांक 24 सितम्बर 2021 को हिन्दी और अन्य भारतीय भाषाओं में “ वर्ण की प्रयोज्यता” विषय पर श्री प्रकाश निर्मल, शाखा प्रबंधक, भारतीय जीवन बीमा निगम, (सोलापुर शाखा) का एक वेबिनार आयोजन किया गया है।
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LECTURES DELIVERED

1. Dr. C. Sivaperuman, Scientist-E delivered a talk on the overview of Faunal diversity of Andaman and Nicobar Islands in the one day workshop organised for Teachers of Andaman and Nicobar Islands on 7th September 2021 as a part of SSR Activities sponsored by SERB, Department of Science and Technology, Government of India; delivered a talk on the Antarctica: A fascinating journey through everlasting ice on 16th September 2021 as a part of World Ozone Day workshop; delivered a talk on the overview of Bird diversity of India, Bird watching and Ecosystem services of Birds to the teachers of southern India and union territory organised by CPREEC as a part of WIPRO Earthian Programme on 13th September 2021;
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2. Dr. Gaurav Sharma, Scientist-E delivered lecture on topic entitled “use of Hindi in Official work” on celebration of Hindi Day to the staff at the Conference Hall of ZSI, NRC, Dehradun on 14 September, 2021.
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3. Dr. Avtar Kaur Sidhu, Scientist-E delivered a lecture on, “Conserving butterflies in Urban Landscape” on 08.09.2021 at Department of Zoology, Kirori Mal College, University of Delhi in Celebrations of Butterfly Week.
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4. Dr. Deepa Jaiswal delivered a lecture on “*Significant Achievements of Zoological Survey of India*” to participants from Osmania University and various Colleges on the occasion of World Ozone Day on 16th September, 2021.
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5. Dr. T. Kubendran, Scientist-C delivered a guest Lecture on the topic “Molecular tools for Environmental Monitoring” to UG, PG students and Research scholars organised by Department of Biotechnology and the IQAC of Thiagarajar College, Madurai, Tamil Nadu on 16th September, 2021.
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6. Dr. D.S. Suman has started a Monthly Lecture Series on Vectors and Vector Borne Disease Management and the Inaugural session held on 10th September, 2021.
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7. Dr M. Karuthapandi, Scientist-C delivered a lecture on “*Ozone for Life*” to participants from Osmania University and various Colleges on the occasion of World Ozone Day on 16th September, 2021.
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8. Dr. A. Anand Kumar, Scientist – B, delivered a lecture on “Setting up a Marine Aquarium” for observing marine animals as part of the activity, to school children, who were part of “Wipro-Earthian Paryavaran Mitra project 2021-22” on 14th September 2021.
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