



Cover

Potter Wasp *Delta pyrifera*
(Fabricius, 1775)
[Photo: ZSI-WRC, Pune]

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Monthly E-Newsletter from
Zoological Survey of India

I am glad to present the February 2021 issue of E News to the readers. The month began with an introduction of ten months long Post Graduate Diploma Course on Integrative Animal Taxonomy which is a new initiative in the annals of ZSI. Second day of the month witnessed the release of a book on *Faunal Diversity of Ramsar Wetlands of India* on the occasion of World Wetlands Day by Hon'ble Union Minister [State], MoEFCC Shri Babul Surpiyo. Another giant leaf of the month is laying a foundation stone for additional building for ZSI, Southern Regional Centre, Chennai with a graceful message of Hon'ble Union

Minister, MoEFCC, Shri Prakash Javadekar on 5th February 2021. Further the Hon'ble Minister inaugurated the National Conference on *Deep Sea Bio-resources in Indian Ocean* virtually organized by ZSI on 25th & 26th February 2021 in which he released ZSI book on *Deep Sea Faunal Diversity in India* which is first-of-its-kind publication in India which provides baseline information about all deep sea animals under a single document. The Hon'ble Minister also released a book on *Faunal Diversity of Biogeographic Zones: Coasts of India at Kavaratti Island, Lakshadweep* on 19th February 2021. As far as the inventorying of fauna is concerned 1449 species out of 11737 specimens under various group from Protozoa to Mammalia were identified with an augmentation of 88 species to National Zoological Collections. It is noteworthy to mention about description of 4 new species, reporting of 18 new species records to country, publication of 4 books and 39 papers in SCI and NAAS rated journals and DNA barcoding of 76 specimens during the month. I congratulate all the officers and staff of ZSI for making it as yet another productive month in scientific perspective with their earnest contribution.

Jai Hind.

Dr. KAILASH CHANDRA
Director

March 5, 2021
Kolkata

ZSI E-NEWS

HEADQUARTERS, KOLKATA

Faunistic surveys conducted to Uttarakhand, Pulicat Lake in Andhra Pradesh part, West Bengal and Great Nicobar Island in Andaman and Nicobar Islands. A total of 842 species have been identified from 2784 specimens from different faunal groups comprising Protozoa, Copepoda, Nematelminthes, Platyhelminthes, Echinodermata, Porifera, Crustacea, Mollusca, Acari, Arachnida, Thysanoptera, Diptera, Hymenoptera,

Release
of ZSI
publication
by Hon'ble
Minister



Orthoptera, Odonata, Lepidoptera, Hemiptera, Pisces, Amphibia, Reptilia, Aves and Mammals. Three species including two hymenopteran insects *Zeuxevania hayati* Rameshkumar and Kazmi and *Z. bengalensis* Rameshkumar and Kazmi and Lepidopteran insect *Thespea* aka N. Singh & Ahmad, 2021 were described while reporting 10 species viz. Collembola *Cyphoderopsis nepalensis* (Wilson, 1982); Hymenoptera *Lipotriches (Rhopalomelissa) parca*

(Kohl, 1906); Lepidoptera *Melinaria pseudorepanda kalawensis* (Orhant, 2000), *Parasa julikatis* Solovyev & Witt, 2009. *Thosea lutea* Heylaerts, 1890, *Mammarona congrua* (Walker, 1862), *Alcyphanes clavata* Park, 2001, *Torodora macrosigna* Gozmany, *Padenia obliquifascia* Rothschild, 1920 and *Padenia acutifascia* De Joanis, 1928 reported as first record to Indian fauna. Altogether 75 species were augmented to National Zoological Collections which includes, Nematoda,

Collembola, Hemiptera, Hymenoptera, Lepidoptera and Platyhelminthes. Thirty-three barcodes have been generated for different group of animals. A seized live Parakeet for Directorate of Forests, Government of West Bengal and two species of confiscated mammals for Forest Department, Government of West Bengal have been identified. Forensic examination/ species identification of seized materials done using morphological analysis and reports

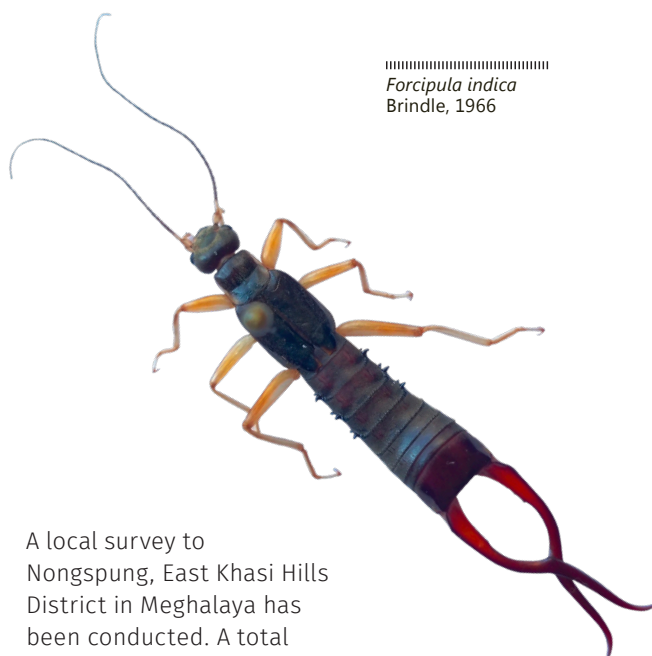
Inauguration of National Conference on Deep Sea Bio-resources in Indian Ocean by Hon'ble Union Minister, MoEFCC, Shri Prakash Javadekar

submitted to respective Forest Departments of Odisha, Uttarakhand and West Bengal. In addition, 2 species of spiders have been identified for School of Life sciences, Sambalpur University. Scientists reviewed 5 manuscripts for different journals and adjudicated Ph.D. thesis for M.S. University, Tamil Nadu.

NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA



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Rhinoceros unicornis Linnaeus, 1758



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Forcipula indica
Brindle, 1966

A local survey to Nongspung, East Khasi Hills District in Meghalaya has been conducted. A total of 119 species comprising 63 spp. of Lepidoptera, 7 spp. of Coleoptera, 3 spp. of Crustacea, 37 spp. of Pisces, 5 spp. of Amphibia and 4 spp. of Reptilia were identified out of 689 specimens. A coleopteran insect *Derispiella bhutanensis* Kaszab, 1975

reported from Assam is a new record to country. Identification services for fishes have been rendered to ICAR, Umiam, Meghalaya and Department of Zoology, Government College, Chavara, Kollam District, Kerala.

WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA



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Delias echaris (Drury, 1773)

Altogether 82 species comprising 6 spp. of Crustacea, 10 spp. of Coleoptera, 32 spp. of Lepidoptera, 6 spp. of Orthoptera, 7 spp. of Odonata and 21 spp. of Amphibia have been identified from 1453 specimens. Project proposals submitted by the Haffkine Institute, Mumbai and NCBS, Bangalore for the Maharashtra State Biodiversity Board for collection permission have been reviewed.

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Delta pyriforme (Fabricius, 1775)



CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH

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Aiteta truncata
Walker, 1858



.....
Maliattha separata
Walker, F., 1863

Surveys conducted to Bhopal, Indore, Dewas, Betul, Chhindwara and Seoni districts of Madhya Pradesh to assess the Amphibian and Scorpions diversity. A total of 54 species comprising Lepidoptera 39spp, Amphibia 4 spp. and Reptilia 10 spp. have been identified. Moths *Aiteta truncata* Walker, 1858 (Lepidoptera: Nolidae) and *Maliattha separata* Walker, F., 1863 (Lepidoptera: Noctuidae) were recorded as new to Madhya Pradesh. Three manuscripts have been reviewed for *Journal of Threatened Taxa* and *Zootaxa*.

DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

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Trainee Foresters of
Rajasthan SFD

A local survey conducted to Bhinmal Region, Jalore district, Rajasthan on 05th February, 2021. Sixty-seven species comprising 55 spp. of insects and 12 spp. of fishes were identified from 938 specimens, while sighting 23 species under Reptilia, Aves and Mammalia during surveys. Dr. R. H. Raina, Scientist-D was nominated as Regional Coordinator for BBSG (Himalaya) by Paul William Co-Chair, IUCN-SSC, BBSG,



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Euodice malabarica Linnaeus 1758



UK, London and Sarina Jepsen, Co-Chair, IUCN-SSC, BBSG, USA. Twenty-four trainee Foresters of Rajasthan State Forest Department (SFD) visited on 12th February 2021, and were provided scientific training/information regarding behavioral ecological aspects of the fauna displayed in the museum. Scientist of the Centre reviewed one manuscript for the journal. The scientist provided an information on morphology, anatomy, habits and habitat of Blue-rock pigeon to the beneficiary at Jodhpur.

NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND

Survey conducted to Asan Conservation Reserve- a designated Ramsar site, District-Dehradun, Uttarakhand on 02 February, 2021 and observed 28 species of Aves. Scientists of the Centre examined 817 examples and identified 106 species of different faunal groups i.e. 7 species of Protozoa; 6 species of Nematoda; 5 species of Odonata; 53 species of Lepidoptera; 8 species of Annelida; 9 species of Crustacea; 6 species of Pisces; 2 species of Amphibia and 10 species of Aves. Eight DNA barcode sequences belonging to Diptera, Hymenoptera and Hemiptera have been generated with NCBI accession numbers. "World Wetlands Day" was celebrated at Asan Conservation Reserve on 2nd February 2021 with the participation of 42 students of M.Sc. Zoology and faculty from Alpine Group of Institutes and MAATY organization.

Participants of World Wetlands Day celebration



Indian Spot-billed Duck, *Anas poecilorhyncha* Forster, 1781



Foundation stone laying ceremony for new building



Release of ZSI publication by the Chairman, NBA and Director, ZSI

SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU

Surveys were undertaken from 18th to 29th January 2021 to Karnataka, Goa and Telangana to study phylogeography of black buck and to Kerala part of Nilgiri Biosphere Reserve under LTEO project from 6th to 25th February, 2021. Identified 503 examples belonging to 67 species of Odonata, Mollusca, Psocodea, Hemiptera and Reptilia. Thirty DNA sequences of 17 species of marine fishes were published. A new record to India of *Megalestes gyalsey* Gyltshen, Kalkman & Orr, 2017 (Zygoptera: Synlestidae) from Arunachal Pradesh and West Bengal with first description of female and larva was published. The Centre organized foundation stone laying ceremony for new building of SRC, Chennai on 5th February, 2021 with the message of Shri Prakash Javadekar Hon'ble Minister for Environment, Forest and Climate Change with the presence of Dr. Vinod B. Mathur, Chairman, National Biodiversity Authority and of Dr. Kailash Chandra, Director, ZSI. A book entitled, Faunal Diversity of Biogeographic Zones of India: Western Ghats published by Zoological Survey of India was released on the occasion. Organized a one-day Seminar on "Biodiversity and Challenges for Conservation" over 50 students from different colleges and universities participated. Lectures on flora and different faunal groups were delivered by experts.

GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

Field survey in the catchment area of Kosi river



Reconnaissance survey in Kosi River conducted during 8th to 11th February 2021. Identified 18 species of Lepidoptera and 14 species of Mollusca from the backlog collections. World Wetlands Day was celebrated on 2nd February 2021. The scientist reviewed a manuscript for the journal.

Blue Throat *Luscinia vecica*
Linnaeus 1758

HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH

Temperate grasslands at Dhaaron ki Dhaar, Solan

A local survey in Grasslands has been conducted to Shilli, Jaunaji and Dhaaron ki Dhar and its surrounding areas in District Solan (HP). Scientists identified



Red Wattle Lapwing *Vanellus indicus* (Boddaert, 1783)



69 species, out of which 32 species belong to Lepidoptera, 14 species under EPT complex and 15 species of Orthoptera, 4 species of Amphibia by examining 309 specimens.

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU

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Cyphastrea serialia
 (Forskål, 1775)

Scientists of the Centre identified 63 species out of 181 specimens which includes Moss inhabiting Testate Amoebae 20 species, Marine Sponges 12 species, Crab 05 species, Mollusca 04 species, Echinodermata 01 species, Pisces 21 species and Orthoptera 09 species. A species of confiscated holothurian specimens has been identified for the Union Territory of Lakshadweep

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 Biophysical monitoring of Gulf of Kachchh reefs

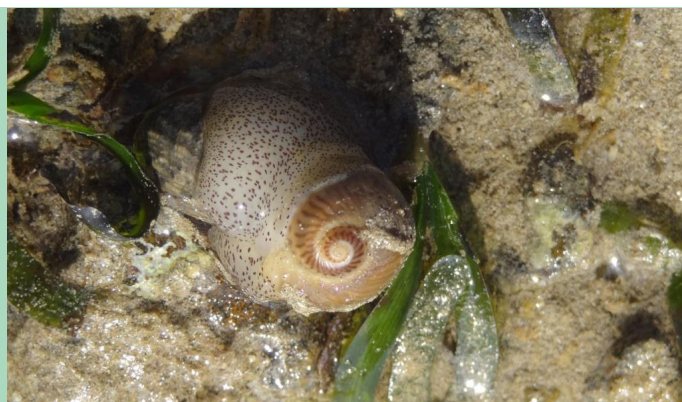
Administration. A practical session to 12 Postgraduate students of New College, Chennai has been conducted from 22nd -26th February 2021. The practical session includes Collection, Preservation, Identification, sorting, labelling and registering of the specimens.



ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

Surveys to Great Nicobar Island from 1st to 12th February 2021, local surveys during 3rd to 8th February 2021 to Mount Harriet, Kalatang, Wandoor, Chidiyatappu, Kadakachan and South Andaman and from 10th to 13th February 2021 to Burmanallah, Kodyaghat, Chatham and Scissostri Bay were conducted to assess the faunal diversity. A total of

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Rumphella aggregata
 Klunzinger 1877



.....
Notocochlis gualtieriana
 Rcluz 1844

370 species comprised of 83 spp. Mollusca; 04 spp. Sea anemone; 79 spp. Coral; 18 spp. Echinodermata; 15 spp. Decapoda; 17 spp. Hydrozoa; 21 spp. Pisces were identified from marine environment and 35 spp. Spiders; 7 spp. Hemiptera; 83 spp. Lepidoptera; 1 sp. Hymenoptera; 2 spp. Odonata; 4 spp. Coleoptera; 1 sp. Blattodea were identified from terrestrial environment. Organized Ph.D. synopsis seminar for the Research Scholars on 25th February 2021 and conducted Ph.D. Doctoral Committee meeting on 26th February 2021. One species of bird identified to INS Utkrosh, two species of scheduled molluscs identified for Forest Department, A & N Islands



SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL

Galathea Bay, Great Nicobar Island



Scientists have undertaken a survey to Great Nicobar in Andaman and Nicobar Islands from 31.01.2021 to 15.02.2021. Thirteen species including 6 spp. of Reptiles, 4 spp. of Amphibia and 3 spp. of fishes have been identified from 46 specimens. One species of Amphibia and 3 species of Fishes augmented for National Zoological

Leatherback turtle hatchlings at Galathea Bay



Collections while reporting a fish *Oryzias javanicus* (Bleeker, 1854) as new record to Andaman and Nicobar Islands Guided a post graduate student for dissertation work.

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

The scientists, staff and research scholars of the Centre examined 1006 specimens from Amrabad & Kawal Tiger Reserve, Himayatsagar, Nagarkurnool & Sangareddy districts, River Krishna in Telangana, Koil sagar, Jurala dam, Telangana; Amravati and Visakhapatnam in Andhra Pradesh; Ahmadnagar & Satara districts, Maharashtra; Hoshangabad district in Madhya Pradesh

and identified 6 species of decapods, 18 species of aquatic coleoptera., 10 species of blattodea, 10 species of Ostracoda &



Dawkinsia filamentosa
Valenciennes 1844



Stenocypris major Barid 1859

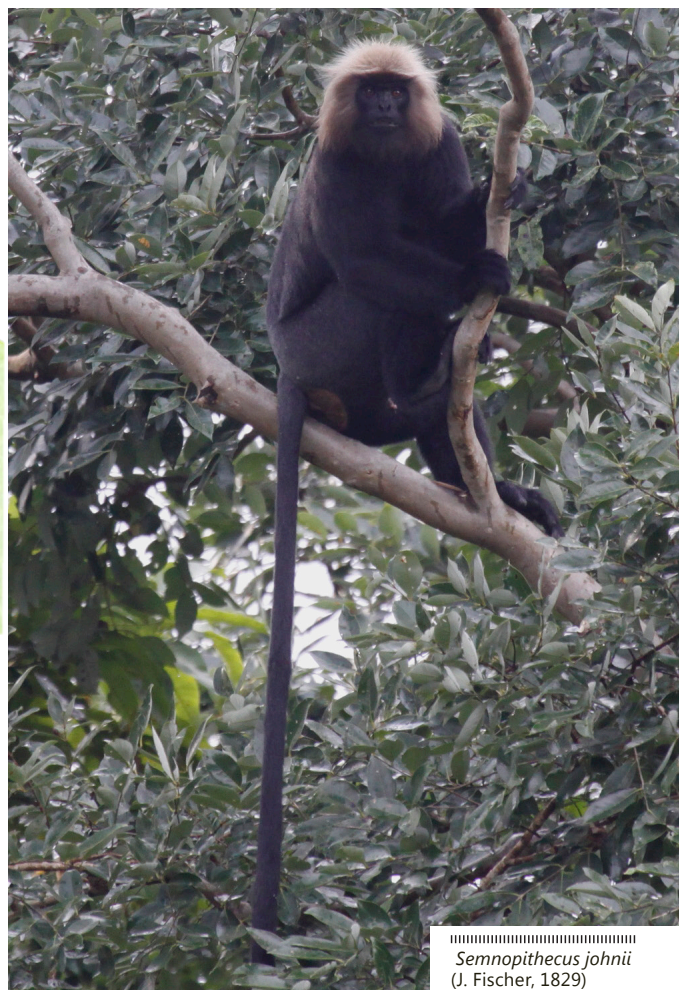
Branchiopoda , 11 species of Mollusca, 31 species of fishes, 11 species of butterflies. As part of the digitization of the National Zoological Collections of the centre, 122 species were digitized. Five DNA sequences of fishes have been uploaded in NCBI.

WESTERN GHATS REGIONAL CENTRE, KOZHIKODE, KERALA



Halpe homolea
Hewitson, 1868

Scientists of the Centre identified 59 species comprising Spider-15 spp., Hymenoptera-23 spp., Mantodea- 06 spp., Coleoptera- 10 spp. and Reptile-05 spp. from 660 specimens. A new species *Argogorytes pulawskii* Girish Kumar & Dubey, 2021 (Hymenoptera: Crabronidae) has been discovered and published. The genus *Argogorytes* Ashmead, 1899 (Hymenoptera: Crabronidae: Bembicinae) and *Argogorytes tonkinensis* (Yasumatsu, 1943) and the Nursery Web Spider, *Polyboea vulpina* Thorell 1895 were reported for the first time from India.



Semnopithecus johnii
(J. Fischer, 1829)

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR, ODISHA

A total of 417 specimens were identified which includes lice, crabs, molluscs and fishes. Two days local survey was carried out at Tampara Lake in which 213 specimens were collected and two days local survey of *Phthirapteran* ectoparasites infesting common Poultry of Odisha along Ganjam district was conducted from which 4 lots of specimens were collected.

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR



Devario aequipinnatus
McClelland 1839

Two local surveys were conducted to Ganga Village, Itanagar WLS & Jote, Distt. Papum Pare on 4th & 23rd February 2021 and to Upper Holongi and Lotha village, Borum circle, Itanagar WL sanctuary, Papumpare on 13th & 18th February 2021. Identified 42 spp. of Lepidoptera, 3 spp. of Diplopoda, 2 spp. of Rotifera, 4 spp. of Cladocera, 15 spp. of Pisces, 1 sp. of Amphibia and 1 sp. of Reptilia during the month.

Field survey



MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL



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Acanthopleura brevispinosa
G.B. Sowerb II 1840

Surveys conducted to Great Nicobar Island in Andaman & Nicobar Islands during 31st January to 15th February 2021 and to Udaipur, West Bengal on 10th & 13th February 2021. Scientists of the Centre identified 334 specimens and 86 species comprising Cnidaria (05 spp.), Arthropoda (03 spp.), Platyhelminthes (01 sp.), Polychaete (01 sp.), Mollusca (73 spp.) and Fishes (03 spp.).



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Physalia physalis
Linnaeus, 1758

NEW DISCOVERIES AND NEW RECORDS

New Species



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Thespea aka N. Singh
& Ahmad, 2021



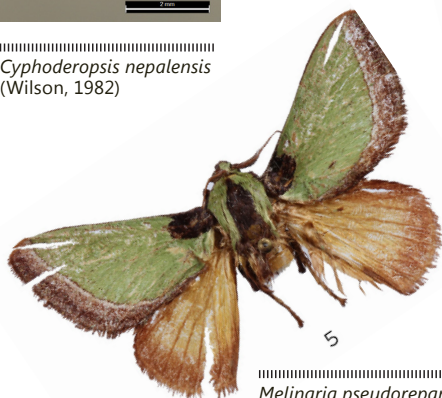
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Argogorytes pulawskii Girish
Kumar & Dubey, 2021

New Records to India

Argogorytes tonkinensis
(Yasumatsu, 1943)



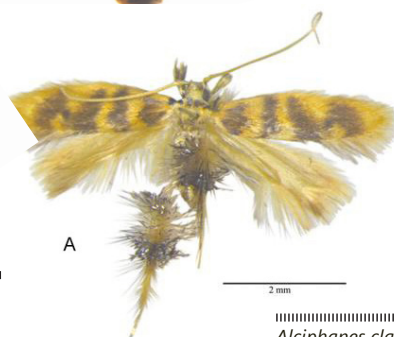
Cyphoderopsis nepalensis
(Wilson, 1982)



Melinaria pseudorepanda
kalawensis Orhant 2000



Polyboea vulpine
Thorell. 1895



Alciphanes clavata
Park 2001



Mambarona congrua
Walker 1862

Padenia obliquifascia
Rothschild, 1920



Padenia acutifascia
De joanis, 1928



Parasa julikatis
Solov'yev Witt 2009



Torodora macrosigna
Gozmny 1973



Thosea lutea Heylaerts
1890

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Book Chapters

1. Anagha, S., Girish Kumar, P. and Sureshan, P.M. 2020. Insecta: Hymenoptera: Apoidea: Ampulicidae. In: *Faunal Diversity of Biogeographic Zones of India: Western Ghats* (Eds. Kailash Chandra, C. Raghunathan, P.M. Sureshan, K.A. Subramanian and A.N. Rizvi). Pp. 413-416 (Published by the Director, Zool. Surv. India, Kolkata).
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Popular Article

1. Kalawate, A.S., Dinesh, K.P. and Shabnam, A., 2021. Nature's Marvels-Discovery of three new species and a subspecies of Tiger moth. *Science Reporter* (A CSIR publication), 58: 54-55.

Conference Organized

1. ZSI Headquarters, Kolkata organized National Conference on Deep Sea Bio-resources in Indian Ocean on 25th and 26th February 2021.

Meetings Attended

1. Dr. Kailash Chandra, Director, ZSI chaired the 31st monthly consultative meeting for Junior Zoological Assistant and Senior Zoological Assistant of ZSI HQ, via video conferencing 4th February 2021.

2. Dr. Kailash Chandra, Director, ZSI attended foundation stone laying ceremony of a new building of Southern Regional Centre, ZSI, Chennai and a Seminar on 'Biodiversity of the Western Ghats and Conservation Challenges' was organized at Chennai on 5th February, 2021
3. Dr. Kailash Chandra, Director, ZSI chaired the 16th Editorial Board Meeting of the Publication Division on 9th & 10th February 2021.
4. Dr. Kailash Chandra, Director, ZSI chaired the meeting for discussion on 'Faunal Diversity Studies in Various Protected Areas of West Bengal' via video conferencing on 23rd February, 2021.
5. Dr. Kailash Chandra, Director, ZSI organized a 'National Conference on Deep Sea Bio-resources in the Indian Ocean' at ZSI, HQs. Kolkata on 25th & 26th February 2021. Shri Prakash Javadekar, Hon'ble Cabinet Minister MoEFCC, Government of India inaugurated the conference and also released the book titled 'Deep Sea Faunal Diversity of India' via video conferencing.
6. Dr. C. Raghunathan attended the World Wetlands Day celebration at MoEFCC on 2nd February 2021 in which Hon'ble Union Minister [State], MoEFCC, Shri Babul Supriyo released the ZSI publication 'Faunal Diversity of Ramsar Wetlands of India'.
7. Dr. C. Raghunathan attended inauguration of Atal Paryavaran Bhawan of Union Territory of Lakshadweep on 19th February 2021 in which Hon'ble Union Minister, MoEFCC, Shri Prakash Javadekar released ZSI publication on *Faunal Diversity of Biogeographic Zones: Coasts of India*.
8. Dr. P.S. Bhatnagar, Scientist-E attended a meeting on 25th February 2021 at the Van Bhavan, Forest Department, Pune under a committee constituted by APCCF

(Wildlife) to consider grant of permission to external project.

9. Dr. S. Sambath, Scientist-E served as an external member in the DPC meeting of Tropical Forest Research Institute (TFRI), Jabalpur on 02.02.2021; attended meeting on 26.02.2021 through video conferencing, organized by the Office of the PCCF (WL) Madhya Pradesh, for the field permission to undertake faunistic survey of protected areas of Madhya Pradesh
10. Dr. Gopal Sharma, Scientist-E attended a meeting with Principal Secretary, Department of Environment Forest, and Climate Change, Government of Bihar on 23.02.2021 in the Sichai Bhawan, Patna
11. Dr. Ch. Satyanarayana, Scientist-D attended a meeting with IOCL, Vadinar in connection with the Translocation of Corals proposal on 19th of February 2021 and National Wildlife Board meeting chaired by the Honorable Minister for MoEFCC along with the PCCF (Wildlife), Gujarat Forest Department and Director, GEER Foundation, Gujarat on 18th February 2021.
12. Dr. P. M. Sureshan, Scientist-E and Dr. Souvik Sen, Scientist-D attended the first physical meeting of the expert committee on 'Threatened Taxa of Kerala' on 4th February 2021 at ZSI, WGRC, Kozhikode
13. Dr. Souvik Sen, Scientist-D attended DST sponsored online Training Workshop on "Biodiversity Conservation" organized by Wildlife Institute of India, Dehradun from 22nd to 26th February 2021.
14. Dr. Anil Mohapatra, Scientist-E, served as External Expert member of the Selection Committee for the recruitment of Project Assistant in the OURIP-Seed project at Khallikote University, Berhampur – on 05.02.2021.
15. Dr. Anil Mohapatra, Scientist-E, had attended the Departmental Research Committee (DRC) meeting

of Natural Resources management and Geo-informatics (NRMG), Khallikote University on 28.02.2021.

Lectures Delivered

1. Dr. C. Raghunathan delivered a talk on the status of taxonomical research in the inaugural session of the Post Graduate Diploma course on Integrative Animal Taxonomy held on 1st February 2021.
2. Dr. C. Raghunathan delivered a keynote lecture on the Faunal Diversity of Western Ghats in the seminar on Biodiversity of Western Ghats: Prospects and Conservation organized by ZSI-SRC, Chennai on 5th February 2021 on the occasion of foundation stone laying ceremony for the additional building for SRC, Chennai.
3. Dr. C. Raghunathan delivered a lecture on Marine Biodiversity in India for the students of Post Graduate Diploma course on Integrative Animal Taxonomy on 22nd February 2021.
4. Dr. C. Raghunathan delivered a keynote lecture on Deep Sea Faunal diversity in India in the National Conference held on Deep Sea Bio-resources in Indian Ocean on 25th and 26th February 2021 organized by ZSI
5. Dr V D Hegde, Scientist-E delivered a lecture on the history and achievements of NERC Shillong for the participants of the PG Diploma on Integrated Animal Taxonomy course on 4th February 2021.
6. Dr. S.S. Talmale, Scientist-B delivered lecture as resource person on the topic '*Collection, Preservation and Identification of Rodents of Economic Importance*' in the training workshop (virtual mode) organized by the All India Network Project on Vertebrate Pest Management, Central Arid Zone Research Institute, Jodhpur on 12th February, 2021
7. Dr. Muhamed Jafer Palot, Scientist-B delivered a talk (online) on '*Faunal diversity of Kerala- An Overview*' at the International Webinar series (Esperanza-2021) organized by the Department of Zoology, CPA College of Global Studies, Puthanathani, Malappuram district, Kerala on 03rd February, 2021.; delivered a talk on '*Vertebrate Faunal Diversity of Western Ghats*' at the Seminar on 'Biodiversity & conservation of the Western Ghats' on 05th February, 2021 organized by Zoological Survey of India, Southern Regional Centre, Chennai in connection with the release of the book, Fauna of Western Ghats Biogeographic Zone; delivered a talk on '*Mangrove wetlands of Kerala*' at the Wetland day webinar organized by NSS College, Manjeri, Malappuram district on 02nd February, 2021; delivered a talk on '*Butterflies of Western Ghats*' for the Zoology students of Malabar Christian College, Kozhikode on 05th February, 2021.
8. Dr. Pratyush P. Mohapatra, Scientist-D delivered a talk on "Herpetofauna of Chhattisgarh" at Chhattisgarh Vigyan Sabha on 02.02.2021; delivered an invited talk on "Prospects in Zoological Studies" during a webinar organized by the Dept. of Zoology, Govt. Sundar Agrawal PG College, Sihora, Jabalpur on 12.02.2021 organized by the Dept. of Zoology, Govt. Shyam Sundar Agrawal PG College, Sihora, Jabalpur.
9. Dr. Sanjeev Kumar, Scientist-E made a presentation on the Introduction of Desert Regional Centre of Zoological Survey of India at Jodhpur, Rajasthan to the students of Post Graduate Diploma in Integrative Animal Taxonomy Course as part of the Inaugural Function of the course conducted by ZSI, HQ, Kolkata on 3rd February, 2021 through virtual mode.
10. Dr. Sanjeev Kumar, Scientist-E delivered the lectures on The Desert Ecology on 17th February, 2021 and Desert and Arid Zone

Faunal Diversity on 23rd February, 2021 to the students of Post Graduate Diploma in Integrative Animal Taxonomy Course under conducted by ZSI, HQ, Kolkata on through virtual mode

- 11.** Dr. Gopal Sharma, Scientist-E delivered an introductory lecture on the History and Achievements of GPRC ZSI, Patna from its inception in the inaugural session of Post Graduate Diploma Course in Integrative Animal Taxonomy on 3.02.2021.
- 12.** Dr Avtar Kaur Sidhu , Scientist E & Officer in Charge delivered an introductory lecture on “High Altitude Regional Centre: its activities and achievements” at inaugural session of PG Diploma Course in Integrative Animal Taxonomy being organized by ZSI, Kolkata, on 03.02.2021.
- 13.** Dr Avtar Kaur Sidhu , Scientist E delivered a lecture on “High Altitude faunal diversity” to students of PG Diploma Course in Integrative Animal Taxonomy being organized by ZSI, Kolkata 23.02.2021.
- 14.** Dr. Archana Bhauguna, Scientist-E delivered invited lecture on “Biodiversity of freshwater turtles and tortoises of Ganga and Baanganga (Haridwar: Uttarakhand) by using molecular tool for their conservation” in National workshop (online) Biodiversity and Ecosystem Health Assessment of Upper Ganga Basin on 25th February 2021 organized by Department of Zoology and Environment Science Gurukul Kangri University Haridwar and National Institute of Hydrology, Roorkee, Uttarakhand
- 15.** Dr. P. M. Sureshan, Scientist-E delivered a lecture on the topic ‘Brief on Western Ghats Ecology’ under module Ecological Principles and Methods for PG diploma course on Integrative Animal Taxonomy being conducted by ZSI, Kolkata on 18th February 2021.

- 16.** Dr. Anil Mohapatra, Scientist-E presented on “Sea Turtle tagging”: on 10.02.2021 in the workshop on Sea Turtle Management, 2021, Organized by State Forest Department, Odisha.
- 17.** Dr. Narender Sharma, Scientist-E delivered a lecture on “Gap Areas with particular reference to Faunal Studies in Arunachal Pradesh” in a workshop organised by the Arunachal Pradesh State Council for Science and Technology and North East Regional Centre (NERC), G.B. Pant National Institution of Himalayan Environment (GBPNHE), on 24.02.2021 at Itanagar and also delivered an Introductory lecture on ZSI, APRC, Itanagar and Faunal Diversity of Arunachal Pradesh to the participants of Post Graduate Diploma in Integrative Animal Taxonomy on 3rd February 2021
- 18.** Dr. A.N. Rizvi, Scientist-E delivered lecture on Soil Faunal Diversity to students of Post Graduate Diploma in Integrative Animal Taxonomy.
- 19.** Dr. M.E. Hassan, Scientist-E delivered a lecture on “Ecosystem: Agriculture” under the Module - Ecological principles and methods in the Post Graduate Diploma in Integrative Animal Taxonomy-2021.
- 20.** A Rameshkumar, Scientist-C delivered a lecture on “Ecological Niches & flows” under the Ecology module for PG Diploma in Integrative Animal Taxonomy.
- 21.** Dr. Mukesh Thakur delivered a lecture as a Resource person in the Faculty Development Program on “Good Laboratory Practices” organized by the Department of Life Sciences, School of Basic Sciences and Research, Sharda University, Greater Noida, India on 8th Feb 2021.
- 22.** Dr. Mukesh Thakur delivered a lecture in the module 1: Ecology principles and methods, PG Diploma course in Integrative Animal Taxonomy during 8th Feb-10th Feb 2021.

- 23.** Dr. Mukesh Thakur delivered a lecture as a Resource person in “Use of Wildlife Forensic in Investigation” in the e-course on Investigation of Wildlife crime cases organized by the Central Detective Training institute, Jaipur during 22nd to 24th Feb 2021
- 24.** Dr. C. Sivaperuman, Scientist-E delivered a talk on Island Faunal Diversity to the diploma trainees of ZSI, Kolkata on 24th February 2021; Delivered a talk on Faunal Diversity of Island ecosystem to the student and teachers of Government Model Senior Secondary School, Port Blair visited on 27th February 2021 as a part of World Science Day 2021 organized by Department of Science & Technology, A & N Islands.