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ZSI enews



सत्यमेव जयते



Ministry of Environment,
Forest and Climate Change



Zoological Survey
of India, 1916



आज़ादी का
अमृत महोत्सव

From the Director's Desk



I am glad to present the October 2021 issue of E-News to readers. Surveys have been intensified during the month and the scientists of ZSI conducted about 21 surveys covering mountain, agro-ecosystem, alpine, cold desert, freshwater, estuarine, islands, mangrove and marine ecosystems in different States and UTs viz. Andaman and Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Bihar, Gujarat, Kerala, Lakshadweep, Maharashtra, Manipur, Meghalaya, Odisha and West Bengal. Altogether 10764 specimens comprising 1169 species have been identified from different faunal groups covering Protozoa to Mammalia. Fifteen species under insects, spider, crabs and fishes were described as new to science while two genera of Hymenopteran insect and three species including insect, mollusc and fish found as new addition to Indian fauna. As a development in augmentation of fauna, 87 species have been added in National Zoological Collections. Substantial work has been done on DNA barcoding during the month by submitting 270 sequences comprising 62 species. Twenty seven identification and advisory services have been rendered to different institutions. Scientists of ZSI made 77 publications during the months which includes a book, book chapters and papers in SCI/NAAS rated journals. All the employees of ZSI observed Swacchatta Campaign from 2nd October to 1st November 2021, Vigilance Awareness Week from 26th October to 1st November 2021 and National Unity Day on 31st October 2021. I extend by appreciations to all the officers and staff of ZSI for making October 2021 as productive month in terms of scientific contribution.

Jai Hind

Dr. DHRITI BANERJEE
Director
November 6, 2021
Kolkata

October
2021
Vol. 32

Monthly E-Newsletter from
Zoological Survey of India
© Government of India

Published by
The Director,
Zoological Survey
of India, Kolkata,
INDIA

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

Citation:
Zoological Survey
of India, 2021:
E-NEWS, 32: 1-22

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Cover photo: Soft ground
Barasingha *Rucervus*
duvaucelii (G. Cuvier, 1823)

HEADQUARTERS, KOLKATA

Surveys were conducted to Chota Nagpur Plateau from 25th October to 3rd November 2021; Eastern Ghats in Odisha and Andhra Pradesh from 28th September to 11th October 2021; Agro-ecosystem of Bihar from 30th September to 13th October, 2021; Nandankanan Zoological Park, Bhubaneswar, Odisha from 10th to 24th October, 2021. Altogether 4577 specimens comprising 592 species have been identified

Asian Wild Dog *Cuon alpinus* (Pallas, 1811)

under different faunal groups of Protozoa to Mammalia. Eight species under insects, spider and fishes were described as new to science while three species have been reported as new record to India. Two hundred DNA barcodes comprising 45 species under Thysanoptera, Protozoan Ciliates, Nematode, Hymenoptera, Trichoptera, Lepidoptera, Orthoptera, Arachnida and Fishes have been generated and submitted to GenBank. Forty species of different animals have been newly augmented to National

Zoological Collections while rendering 5 identification and advisory services. ZSI headquarters participated in exhibition on *Shining Uttar Pradesh* at Varanasi on 19th to 21st October 2021. Comments on amendment bill for Wildlife (Protection) Act, 1972 to administrative ministry have been submitted. In addition, PBRs for Dakshin Dinajpur (4), Malda (8), Paschim Medinipur (11), Purba Medinipur (13) and Uttar Dinajpur (6) were evaluated and submitted to West Bengal Biodiversity Board. 14th meeting of Research Advisory and Monitoring

Committee of ZSI has been convened on 26th October 2021 in which various activities and achievements of ZSI made during April to September 2021 have been discussed at length. Subsequently, Half Yearly Progress Monitoring Committee meeting of ZSI was held on 27th to 29th October 2021 to assess the progress of ZSI made during April to September 2021 in which all the Officers-in-Charge of ZSI Regional Centres and various Sections & Divisions of ZSI Headquarters made a presentation.



Photo: Amitava Ma

NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

Surveys conducted from 11th -26th October 2021 under the programme “Diversity & status of small mammalian fauna of Manipur state. Total of 130 exs under 28 spp. containing Pisces-37 exs. under 15 spp. Amphibia-41 exs. under 04 spp. Crustacea-08 exs. under 03 spp. and Hemiptera-44 ex. under 6 spp. were identified. A book “Bats of Meghalaya” was published by scientist of the Centre detailing fifty percent of the total bat diversity of the country and it was released by Mr. James P K Sangma, Hon’ble Minister in-Charge, Forest and Environment Department, Government of Meghalaya. This is the first book on the bat fauna of any Indian state. Swachhta Pakhwada and Vigilance Week were celebrated with in-house activities.



Release of book *Bats of Meghalaya*

Short-Nosed Vine
Snake *Ahaetulla
prasina* Boie, 1827



WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA



Maharashtra State
Wildlife Board meeting

Gautala-Autramghat Wildlife Sanctuary was surveyed during 20th to 29th October 2021. A total of 461 zoological specimens comprising 74 species have been identified which includes Coleoptera 18 spp., Lepidoptera 38 spp., Odonata 8 spp., Decapoda 3 spp., Amphibia 5 spp. and Mammalia 2 spp. Five new species of freshwater crabs were discovered from the Western Ghats. Identification of the confiscated specimens of fishes and sea shells was done for the Divisional Forest Officer, Malayattoor Forest Division, Ernakulam district, Identification of an image of confiscated turtle (Indian Flapshell

Turtle, *Lissemys punctata*) was done for the Deputy Conservator of Forests, Aurangabad, Maharashtra. DNA Barcodes were generated for the Desert Locust (*Schistocera gregaria*) swarm collected from the recent survey and four sequences (OK283662, OK283663, OK283664, OK283665) of the same were submitted to GenBank. One sequence (OK465098) of cockroach (*Periplaneta* sp.) collected from the southern Western Ghats was submitted to GenBank. The officers and staff took green pledge to eliminate single use plastics and segregation of the wastes generated at its source.

CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH



*Indotestudo
elongata*
(Blyth, 1853)

Eastern Ghats in Andhra Pradesh and Odisha have been surveyed from 25.09.2021 to 12.10.2021. A total of 218 exs. under 80 spp. were identified for the month containing Lepidoptera- 34 exs. under 30 spp., Orthoptera- 39 exs. under 16 spp., Hemiptera- 6 exs. under 6 spp., Scorpions- 28 exs.

under 5 spp., Reptilia- 27 exs. under 13 spp. and Amphibia- 52 exs. under 10 spp. All the scientists and staff celebrated Swachhata Abhiyan and Vigilance Awareness Week.

*Cyrtodactylus
jeyporensis*
(Beddome, 1877)



DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

|| Celebrations at DRC, ZSI, Jodhpur



Faunistic survey of Hingolghadh Wildlife Sanctuary, Rajkot was conducted under the programme "Assessment of faunal diversity of some selected Wildlife Sanctuaries of Gujarat - Gaps in Research". A total of 571 exs. under 41 spp. were identified containing Gastropoda- 26 exs. with 4 spp., Insects- 492 exs. with 33 spp. and Pisces- 53 exs. with 4 spp.



Mantis religiosa
(Linnaeus, 1758)

NORTHERN REGIONAL CENTRE, DEHRADUN, UTTARAKHAND



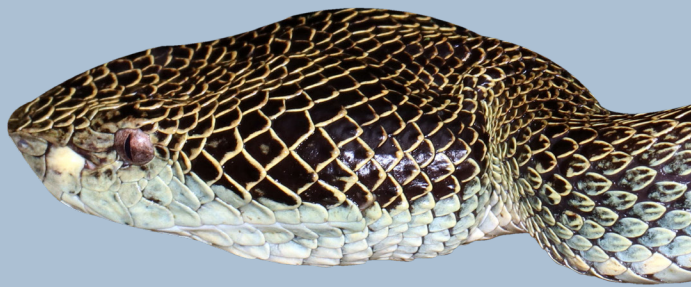
Hoopoe, *Upupa epops*
Linnaeus, 1758



Chukar partridge, *Alectoris chukar*
(J.E. Gray, 1830)

Scientists of the centre examined 319 specimens and identified 70 species i.e. 5 species of Nematoda; 14 species of Lepidoptera; 5 species of Odonata; 10 species of Annelida; 10 species of Pisces; 2 species of Amphibia and observed 24 species of Aves. The Centre organized Vigilance Awareness Week.

SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU



Faunistic survey of Deccan biogeographic zone (Jharkhand State) was conducted. Another survey was carried out at Goordrickal range, Ranni Forest division, Kerala along with scientists of Western Ghats Regional Centre, Western Regional Centre and Kerala Forest Department for rapid biodiversity assessment. The scientists of the centre identified and registered 444 specimens under 84 species of various faunal groups viz. Lepidoptera, Odonata, Coleoptera, Hemiptera, Pisces, and Reptiles. Swatch Bharat event was organized on 21.10.2021 at ZSI, Chennai office premises.

*Craspedocephalus
anamallensis* (Gunther, 1864)

Goodrickal Range



GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR

Swachhata
Saptah GPRC
ZSI Patna



Total 794 specimens under 31 species of Lepidoptera, 317 examples under 9 species of Mollusca and 265 examples of Fishes under 40 species from

backlog collections were identified. A Cleanliness Campaign was organized on 22nd October 2021 in the office premises and all sections and campus were cleaned.

Woolly necked stork
Ciconia episcopus
Boddaert 1783

HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH



Swachhta campaign in
ZSI, Solan on 13.10.2021



Common Moorhen, *Gallinula chloropus* (Linnaeus, 1758)

Riwalsar Lake, Khajair & Pongdam and adjoining areas (HP) were surveyed during the month. A total of 206 exs under 38 species were identified comprising Amphibia- 6 spp., Reptilia- 4 spp. and Insecta- 28 spp. In addition, identified 04 photographs belonging to 1 species of family Lycanidae (Lepidoptera) for Department of Fruit Sciences, PAU, Ludhiana. One thesis evaluated for Madurai Kamaraj University for the degree of Doctor of Philosophy in Zoology and submitted review report to Department of Biotechnology, Government of India for DBT-RA programme.

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU



Turbinaria mesenterina (Lamarck, 1816) in a biorack structure

Survey conducted at Narara, Gulf of Kachchh under the externally funded 'ZSI-IOCL Coral Translocation Project' to initiate the translocation of coral colonies from subtidal areas which fall in the proposed pipeline alignment of the IOCL. A total of 129 exs. under 42 spp. were identified including moss inhabiting testate amoebae- 36 exs. under 12 spp., marine sponges- 9 exs. under 4 spp., Scleractinian coral- 3 exs. under 3 spp., Nematode- 20 exs. under 7 spp., Crustacea- 17 exs. under 5 spp., Mollusca- 39 exs. under 6 spp., Echinoderms- 5 exs. under 5 pp. In addition, 06 species of Orthoptera of 29 exs. were accessioned in SRC, Chennai. Prepared a list of marine fishes, including sharks and rays, to finalise the Wildlife (Protection) Amendment Bill, 1972. Four identification services were rendered during this month: two identification reports of the confiscated materials received were prepared for the Department of Environment and Forest, Gujarat; an identification service to the Department of Zoology, University of Madras, and another to a PhD scholar from PG & Research Department of Zoology, Kanchi Mamunivar Government Institute for Post Graduate Studies and Research, Puducherry.

Shifting coral frames to recipient sites



ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

Great Mormon
Papilio memnon
Linnaeus, 1758

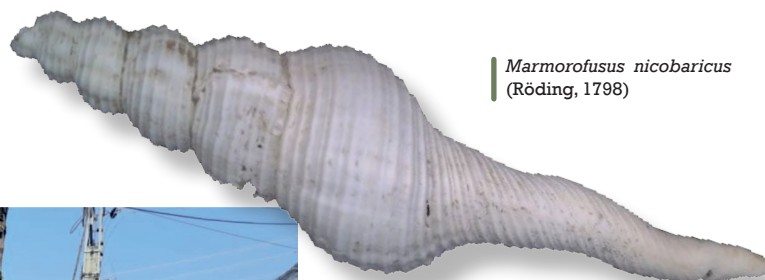


Pied Imperial
Ducula bicolor
(Scopoli, 1786)

Long-term surveys were conducted during 1st to 31st October 2021 to Nancowry group of Islands; fourteen days survey to Great Nicobar group of Islands; one day survey to Swaraj Dweep to study the terrestrial and marine faunal diversity and four days local surveys were conducted to

Shoal Bay, Kalatang, Sippighat, South Andaman to assess the terrestrial faunal diversity. A total of 210 species were identified comprising Crustacea- 13 species; Mollusca- 34 species; Fishes- 24 species; Echinodermata- 2 species from the marine environment and Arachnida- 48 species; Hemiptera- 3 species; Hymenoptera- 2 species, Odonata- 5 species; Lepidoptera- 79 species from the terrestrial environment. Identified two species of scheduled mollusc to Forest Department, A & N Islands; Information on the Scheduled animals of ANI to Deputy Conservator of Forests (Wildlife), Department of Environment and Forests, A&N Islands was provided as requested.

SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL



Marmorofusus nicobaricus
(Röding, 1798)



Survey conducted from 16th to 25th October 2021 in Paradeep, Konark, Puri, Chilka Lake at Odisha coast and collected specimens of Mollusca, Crustacea, fish, sea fans, sea anemone, jelly fish, Ctenophora, Annelida, Bryozoa, Reptilia and Amphibia. A total of 505 specimens identified under 55 species and 16 species added in NZC, making a total of 820 spp. available in SbRC, Canning. Celebrated Vigilance awareness week, Swachh Bharat, Ekta Diwas.

Swachh Bharat campaign

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

A total of 544 specimens from Godavari river, protected areas of Chattisgarh, Jharkhand, Andhra Pradesh and Telangana are examined and identified. Out of which, 15 species of aquatic Coleoptera from 160 exs., 3 Malocostacans from 19 exs., 5 species of Ostracods from 52 exs., 21 species of Lepidoptera from 38 exs., 8 species of Mollusca from 49 exs. and 19 species of fishes from 226 exs were identified. Twelve DNA barcodes were submitted to NCBI and BOLD. Scientists of the centre observed Wildlife week on 4th October, 2021.

Halcyon smyrnensis
(Linnaeus, 1758)



Felis chaus Schreber, 1777

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE, KERALA

Vijayachelys silvatica
(Henderson 1912)
(Boisduval, 1836)



Congregation of Common
Albatross *Appias albina*
(Boisduval, 1836)



A total 521 specimens under 63 spp. were identified which includes Hymenoptera (50 spp.), Coleoptera (7 spp.), Lepidoptera (4 spp.) and Araneae (2 spp.). Three new species viz., *Eosmicromyrma subbuka* Terine, Lelej & Girish Kumar, 2021, *E. balakrishnani* Terine, Lelej & Girish Kumar, 2021 and *Strangulotilla sureshani* Terine, Lelej & Girish Kumar, 2021 were described. Two new records of genus to India and 17 new records to various States of India are published. Identification services rendered on one species of the genus *Ropalidia* (Hymenoptera: Vespidae) for ATREE and one species of genus *Leucospis* (Leucospidae) for ICAR-National Research Centre for Banana, Thiruchirapalli, Tamil Nadu.

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

Surveys conducted from 27.09.2021 to 01.10.2021 and collected 552 specimens belonging to insects, molluscs, fishes, amphibians and reptiles. One more survey was conducted to Dhamra estuary from 04.10.2021 to 08.10.2021 and collected 412 specimens belonging to crustaceans, molluscs, fishes, etc. A total of 486 specimens were identified which includes insects, crabs, isopods, molluscs, fishes and reptiles belonging to 157 species. Four DNA barcodes were uploaded in the NCBI database. Staffs of this Centre have participated in the campaign of "Stop selling Wild Marine Animals under Schedule of Wildlife Protection Act, 1972" organized by the Forest Department on 3rd of October (In the Wildlife Week). Staffs of EBRC took Pledge on Vigilance awareness week. Reviewed 2 manuscripts for *Frontiers in Marine Science* and *Cybium*.



Hoplosebastes armatus
Schmidt, 1929



Cyrtodactylus nebulosus
(Beddome, 1870)



ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Cyclophorus fuscicolor
Godwin-Austen, 1876

Surveys conducted during 2nd to 16th October 2021 in western parts of Arunachal Pradesh and collected 558 exs. of 10 faunal groups and one local survey to Hoj Basti and Dikrong Dam, Papumpare District and collected 94 examples of 3 groups (Mollusca, Crustacea and Pisces). A total of 83 species from 251 examples (3 species from 49 examples of Millipedes; 56 species from 75 examples of Lepidoptera; 8 species from 86 examples of Mollusca; 10 species from 25 examples of Pisces; 2 species from 12 examples of Amphibia and 4 species from 4 examples of Reptilia) identified for the month. Provided advisory service to a Ph. D. Scholar from Rajiv Gandhi University, Arunachal Pradesh.

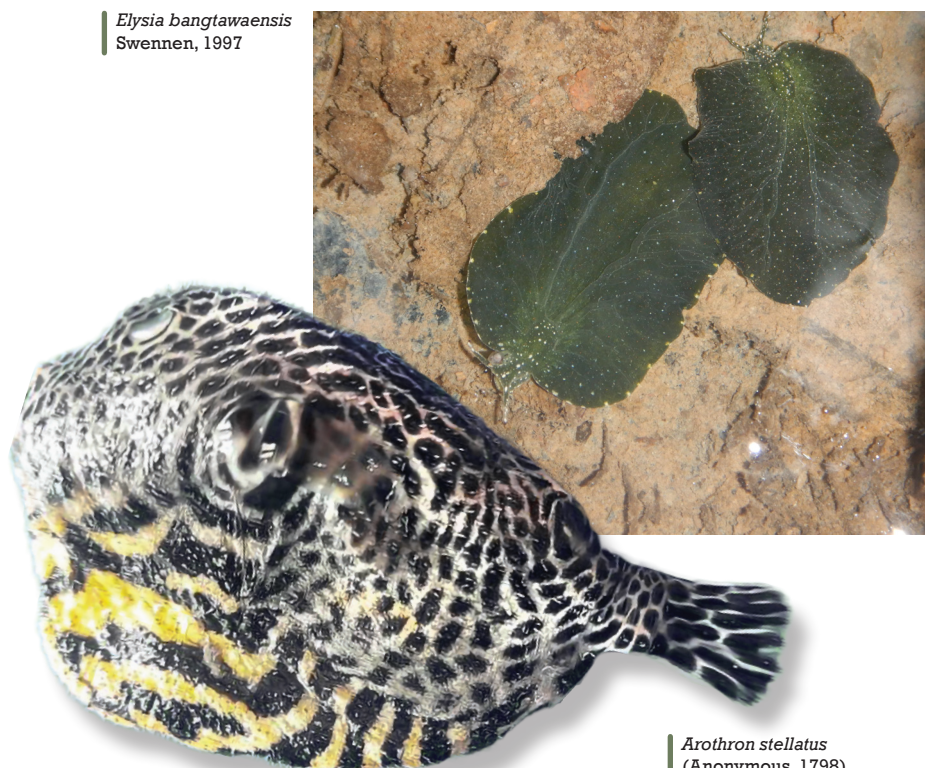
Integrity pledge by staff members



MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

Elysia bangtawaensis
Swennen, 1997

Conducted surveys on 9th, 15th and 29th October 2021 under the programme, "Assessment on Landing of By-Catch Fauna in the Digha Shankarpur Fish Landing Center of East Coast of India". Total 332 specimens and 64 species were identified consisting Mollusca- 294 ex. under 45 spp., fishes- 31 ex. (18 spp.) and crab- 7 ex. (1 sp.). Scientists of the centre evaluated two Ph.D. thesis for Manonmaniam Sundaranar University, Tirunelveli and Bharathidasan University, Tiruchirappalli Tamil Nadu; and reviewed one manuscript from *Journal of Parasitic Disease*.



Arothron stellatus
(Anonymous, 1798)

NEW DISCOVERIES AND NEW RECORDS

NEW SPECIES



Chatiana durrelli Pati
& Thackeray, 2021



Ghatiana rouxi Pati &
Thackeray, 2021



Sahyadriana inopinata Pati
& Thackeray, 2021



Sahyadriana keshari Pati &
Thackeray, 2021



Sahyadriana keshari Pati &
Thackeray, 2021



Eosmicromyrmilla balakrishnani Terine,
Lelej & Girish Kumar, 2021



Eosmicromyrmilla subbuka Terine, Lelej
& Girish Kumar, 2021



Srangulotilla sureshani Terine, Lelej &
Girish Kumar, 2021



Psilorhynchus magnaoculus
Shangningam & Kosygin, 2021



Garra jaldhakaensis Kosygin,
Shangningam, Singh & Das, 2021

NEW RECORD



Araneus tubabdominus Zhu &
Zhang, 1993

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MEETINGS ATTENDED

1. Dr. Dhriti Banerjee, Director, ZSI has visited ANRC/ZSI on 16th & 17th October 2021 in connection with the inauguration of National Repository for Island's Faunal Diversity.
2. Dr. Dhriti Banerjee, Director, ZSI, inaugurated an online 'Wildlife Week' (2nd to 8th October 2021) event, on the occasion of "Azaadi Ka Amrit Mahotsav" in Moolji Jaitha College (Autonomous), Jalgaon, Department of Zoology, on 2nd October, 2021.
3. Dr. Dhriti Banerjee, Director, ZSI attended an International Seminar on "Issues and Challenges in Conservation of Freshwater cetaceans in Asia" conducted by Department of Environment, Forest and Climate Change, Patna and National Dolphin Research Centre (NDRC), Patna, Bihar on 5th October, 2021
4. Dr. Dhriti Banerjee, Director, ZSI, celebrated National Wildlife Week, 2021 organized by ENVIS Center on Biodiversity (Fauna), ZSI on 6th October, 2021; Celebrated Wildlife Week, 2021 organized by WRC, ZSI-Pune and addressed a webinar on 'Citizen Science and Wildlife Biology: Synergies & Challenges' on 7th October, 2021; Signed MoU with Presidency University, Kolkata

5. Dr. Dhriti Banerjee, Director attended meeting on CITES on 20th Oct, 2021.
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6. Dr. Dhriti Banerjee, Director delivered a speech on First International Symposium on Aquatic Biodiversity of the North Eastern Region of India being held on 26th October, 2021
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7. Dr. Dhriti Banerjee, Director celebrated Rashtriya Ekta Diwas by taking pledge in the spirit of unification of our country and resolution to ensure internal security of our nation on 31st Oct, 2021.
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8. Dr. Dhriti Banerjee, Director celebrated Vigilance awareness week for collective participation in the prevention of and fight against corruption, to raise public awareness regarding the threat posed by corruption and weeding out unethical practices and corruption on 26th Oct to 1st Nov, 2021.
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9. Dr. C. Raghunathan, Scientist-E chaired the meeting for the amendment of list of species under Schedules I and II of Wildlife (Protection) Act, 1972 at ZSI headquarters with the Scientists of RCs on 18th October 2021.
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10. Dr. C. Raghunathan, Scientist-E presented the Half Yearly Progress report of ZSI in the 14th meeting of Research Advisory and Monitoring Committee held at ZSI on 26th October 2021 .
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11. Dr. C. Raghunathan, Scientist-E served as Member Secretary, Scientific Committee of Half Yearly Progress Monitoring Committee meeting held on 27th to 29th October 2021 at ZSI Headquarters on virtual mode.
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12. Dr. R. H. Raina, Scientist-D attended 4th meeting of State Board for Wildlife of the Union Territory of Ladakh under the Chairmanship of Sh. R.K. Mathur, Hon'ble Lt. Governor of the Union Territory of Ladakh held on 4th July, 2021 at Leh, Ladakh.
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13. Dr. Gopal Sharma, Scientist-E attended the wetland Biodiversity Park meeting with the official of Forest Dept on 19th Oct. 2021
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14. Dr. Gaurav Sharma, Scientist-E participated as member in Management Effectiveness Evaluation (MEE) of three Wildlife Sanctuaries of Himachal Pradesh with Chairman (Team-3, MEE) and member of Wildlife Institute of India from 01.10.2021 to 12.10.2021.
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15. Dr. Mrinal K. Das, Scientist-C served as an invigilator at RMRC, ICMR for conducting Methodology exam for PhD scholars on 26th October September 2021.
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16. Dr L. Kosygin Singh, Scientist-E, chaired one session of the First International Symposium on Aquatic Biodiversity of the North Eastern Region of India organized by the Indo German Bilateral Cooperation Project: NERAQ held online on 26th and 27th October 2021.
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17. Dr. K.A. Subramanian, Sci-E conducted Ph.D viva for one student each of SACON, Coimbatore and University of Madras.
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18. Dr.C.Venkatraman, Scientist-E & officer-in-Charge and Dr.Kamalakaran, Sr.Zool.Asstt. attended a meeting on Coordination meeting between CITES management and Scientific authorities organised by CITES cell, Wildlife division, MoEF&CC on 20.10.2021 nominated by DZSI
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19. Dr. B. Sinha, Sci-E and Bhaskar Saikia, Sr. Zool. Asstt. attended and presented two papers in the first international symposium on aquatic biodiversity of north-eastern region organized by GIZ between 26th -27th October, 2021. Dr. B. Sinha, attended the 2nd quality evaluation monitoring committee meeting of Meghalaya Biodiversity Board on the 1st October.
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20. Dr. Kamalakannan, Sr. Zool.Asstt participated in four days exhibition on Shining Uttar Pradesh-Varanasi held during 17-21, October, 2021 organised by Achievers foundation, Varanasi, UP.
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21. Dr. P.C. Tudu, Scientist – C attended and participated a field visit to Subarnarekha Port, Odisha on 28.10.2021 & 29.10.2021 to study ecological sensitivity related to CRZ IA.
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22. Dr. Aditya Kapil Valiveti, Scientist – B (Chemi.) attended seven days hands on training programme for DNA molecular and systematic at Estuarine Biology Regional Centre, Gopalpur-on-sea, Odisha on 3rd-9th October 2021.
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TRAININGS/ WEBINAR ORGANISED

1. ZSI Headquarters participated in the exhibition 'Shining Uttar Pradesh' held at Varanasi on 19th to 21st October 2021.
2. Zoological Survey of India, Western Regional Centre, Pune conducted a national webinar on "Citizen Science and Wildlife Biology: Synergies and Challenges" on 7th October 2021.

LECTURES DELIVERED

1. Dr. Indu Sharma, Scientist-E delivered invited lecture on "Desert Ecosystem: Fauna and Animal Adaptation" in a National Webinar organized by P. G. College, Guna on 5th October, 2021 during Wild life Conservation Week (1st to 7th October, 2021) on 5th October, 2021.
2. Dr. Indu Sharma, Scientist-E delivered lecture as resource person on "Desert Ecosystem: Faunal Diversity, Threats and Conservation Measures" in Wildlife Week Celebration 2021: Lecture Series on 6th October, 2021 organized by Forest Department, WWF, Green Peepal Society and Wildlife Research Laboratory, Udaipur, Rajasthan.
3. Dr. P.S. Bhatnagar, Scientist-E delivered an invited lecture, during Wildlife week on 5th October organized by Govt. College, Sanquelim, Goa.
4. Dr. Deepa Jaiswal Presented the Project report on "Fauna of three Protected Areas of Andhra Pradesh" to Andhra Pradesh State Biodiversity Board on 4th October 2021.
5. Dr. Karuthapandi M., Scientist-C delivered a lecture on "Wildlife & its Importance" on 4th October 2021 during th celebration of Wildlife Week.
6. Dr. Avtar Kaur Sidhu, Scientist-E delivered lecture on, "India's Biodiversity: Challenges and Solutions" on 05.10.2021 to students at Government High School, Parkachik Taisuru, Ladakh.
7. Dr. B. Sinha, Sci-E delivered an invited talk by Arunachal Pradesh State Council for Science and Technology on the 6th October 2021

8. Dr. Gopal Sharma, Scientist-E delivered a lecture online on 7th October 2021 on "Wildlife Conservation in India", organized by Department of Zoology and Biotechnology, Govt. Girls College, Ujjain. Madhya Pradesh.
9. Dr Gopal Sharma, Scientist-E Delivered a lecture on River Biodiversity w.s.r. to Gangetic Dolphin in the NCC headquarters of Bihar at Rajendra Nagar Patna on 22nd October 2021
10. Dr. Mukesh Thakur, Scientist-C delivered the talk on Multifaceted and complex history of chicken domestication" at Edward Grey Institute, Department of Zoology, Mansfield Road OX1 3SZ, University of Oxford, UK. Through Zoom meeting on 18th October, 2021.
11. Dr. A.S. Kalawate, Scientist-D served as guest lecturer for the, the 'Amazing Arthropods' an online course scheduled from 11th to 30th October 2021 and delivered a talk on 'Moths Diversity and Distribution' jointly conducted by the SNDT College of Home Science, Pune and the Institute of Natural History Education and Research, Pune.
12. Dr. K.P. Dinesh, Scientist-D delivered lectures entitled 'Shortfalls and Status survey of fauna' and 'Diversity and Conservation status of the Amphibians of India' on 4th October 2021 to the IIIrd Semester M.Sc. students of Bharati Vidyapeeth, Pune.
13. Dr. M.J. Palot, Scientist-B delivered an invited talk on "Wildlife Act & Faunal wealth of Kerala" at the the Kerala Forests & Wildlife Department, on 2nd October 2021; delivered a lecture on "Malabar Wildlife Sanctuary" organized by the Aranyakam Foundation, Kerala on 7th October 2021; delivered a talk on Snakes around us to the students of Vijnana Jalakam club of Mala, Thrissur on 3rd October 2021; delivered an invited talk on Snake diversity of Kerala and Indian Wildlife (Protection) Act to the students of Kerala Law Academy, Thiruvananthapuram on 5th October 2021.
14. Dr. S.R. Patil, Assistant Zoologist was acted as Chief Guest for 'Inauguration of Wildlife Week Celebrations 2021' organized by Dr. D. Y. Patil Sr. College, Pune.
15. Dr. Anil Kumar, Scientist-E, delivered an invited talk (online) titled, *Startling birds of secluded pinnacles of North-West Trans-Himalaya, India: Diversity, Significance and Conservation Issues* on 7th of October 2021, @ 'National Wildlife Week Celebrations' organized by Gurukul Kangri (deemed to be University), Haridwar, from 5th to 7th October, 2021.
16. Dr. V.M. Sathish Kumar, Scientist-B delivered

an invited Lecture @ National Seminar on *"Biodiversity and Environmental Governance in India: Safeguarding Ecosystem for Human Welfare"* sponsored by the Uttarakhand State Council for Science & Technology (UCOST), on October 23rd, 2021, organized by the Chaman Lal Mahavidhyalaya, Landhaura, Roorkee, Haridwar, UK.
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17. Dr. P.C. Pathania, Scientist-D acted as Resource Person- and delivered a Lecture on the topic, "Microlepidoptera diversity from India" in Wildlife Week 2021 of the National Webinar Series and Competitive Events organized by Department of Zoology, Khalsa College for Women, Civil Lines, Ludhiana and MC Zoological Park Chhatbir, Department of Forest and Wildlife Preservation, Govt of India, Chhattbir, Punjab on 06.10.2021.
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18. Dr. Kamal Saini, Asstt Zoologist, delivered an invited talk on Role of Science in Nation Development on the birth anniversary of Dr. A.P.J Abdul Kalam organized by the Vigyan Bharti and Deptt of Chemistry, Choudhary Bansi Lal University, Bhiwani (Haryana) on 20-10-2021.
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19. Dr. Pratyush P. Mohapatra delivered a lecture for FRB Training-2021 of ODRAF personnel on the topic "Snake Management in Flood Situation" on 05.10.2021 at DMTC, ROTI, Gothapatana, Bhubaneswar through VC.
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20. Dr. S.S. Talmale, Scientist-B delivered invited talk on 'Small Mammal diversity and their Conservation in India' organized by the Shri Shivaji Science College, Amravati in collaboration with Melghat Tiger Reserve and Wildlife and Environment conservation Society (WECS), Amravati on 2nd October 2021.
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21. Dr. S.R. Patil, Assistant Zoologist delivered a lecture on "Spider Taxonomy" in the national workshop organized by the Department of Zoology, Govt. O.F.K. College, Jabalpur, Madhya Pradesh on 4th October 2021.
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22. Miss Shabnam Ansari, Junior Research Fellow delivered a talk on "DNA barcoding - a non-invasive approach in wildlife conservation" in the Citizen Science and Wildlife Biology: Synergies and Challenges webinar hosted by the Zoological Survey of India, Western Regional Centre, Pune on 7th October 2021.
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23. Dr. Kamalakannan M., Sr. Zoological Assistant, delivered an invited lecture to the Post Graduate students of Zoology department, Lady Dock College, Madurai, Tamil Nadu titled "Wildlife Crime" for the Wildlife Week celebration on 3rd October 2021.
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