



सत्यमेव जयते



Ministry of Environment,  
Forest and Climate Change



Zoological Survey  
of India, 1916

#### Cover

Black buck *Antelope cervicapra* (Linnaeus, 1758) at Betnoi, Odisha  
(Photo courtesy: ZSI-EBRC, Gopalpur-on-Sea, Odisha)

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Zoological Survey of India



Amidst the ongoing crisis Covid-19 ruining humankind across the globe, I present March 2020 issue of E-News to the readers. Like rest of the departments in the Union Government, the activities of ZSI also considerably disturbed due to the pandemic of deadly novel Coronavirus and it leads to postponement of conference and training programmes while deferring few surveys in the last quarter of the financial year scheduled for March 2020 to cope with the lockdown of entire Nation. However, in spite of the emerging epidemic, the ZSI described 4 new species/genera in trichoptera, crustacea and pisces and 7 species of new record to India in trichoptera, platyhelminthes and mollusca. Five wildlife sanctuaries, five national parks and two biosphere reserves in Andaman and Nicobar Islands, Andhra

Pradesh, Arunachal Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Odisha, Sikkim, Tamil Nadu, Telangana and West Bengal have been surveyed. A total of 4928 specimens pertaining to 742 species under different phyla from Protozoa to Mammalia have been identified during the month. In order to highlight the significance of pollinators, ZSI organized a National Workshop on Taxonomic Identification of Indian Bees on 2nd & 3rd March 2020 in which 21 participants benefited. Altogether 225 students from 26 different scientific and educational institutions visited the ZSI while 11013 general public visited the marine aquarium of ZSI-MARC at Digha. Three different confiscated wildlife material have been received and identified for law enforcing agencies. It is noteworthy to mention that the State Fauna series, Fauna of Haryana has been published with 2490 species while 21 papers published by the scientists, of which majority of them are in SCI journals with impact factor. Eighteen DNA sequences on octocorals, moths, crabs and amphibians were generated by regional centres, At this juncture, I appreciate the officers and staff of ZSI making reasonable progress during the month under this unrest period. Further I assure that ZSI fraternity is devoted to defeat the deadly virus by joining their hands together to disjoint the virus chain by abiding the advisories of Government to save the human lives.

Jai Bharat.

**Dr. Kailash Chandra**  
Director

Kolkata  
6th April 2020

# ZSI E-NEWS



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Jewel bug *Chrysocoris stollii*

## HEADQUARTERS

Faunistic surveys were conducted in Lokhari Valley Wildlife Sanctuary and Gahirmatha Marine Sanctuary in Odisha, Deccan plateau regions falling in Maharashtra and Madhya Pradesh, Agro ecosystem of Bihar, Neora Valley National Park, Murshidabad, Siliguri and Kurseong in West Bengal and selective localities in Sikkim. The identification of animals account to 287 species under 1810 specimens from various taxonomic groups such as protozoa, arachnida, collembola, diptera, thysanoptera, araneae, lepidoptera, orthoptera, hemiptera, hymenoptera, mollusca, echinodermata, crustacea, pisces, amphibia, reptilia and mammalia. The trichopteran *Chimarra gangtokensis* Kau, Garima and Pandher has been newly described while synonymized the genus *Carrbotus* Thorell, 1891 under Aranei: Salticidae: Salticini. In addition four trichopteran species *Polyplectropus admin* Malicky & Chantaramongkol 1993; *Hydropsyche briareus* Malicky & Chantaramongkol 2000; *Cheumatopsyche globosa* (Ulmer 1910); *Cheumatopsyche chryseis* Malicky & Chantaramongkol 1997 found as new record to India while terrestrial isopods *Cubaris chiltoni* Collinge, 1916 and

*Porcellio laevis* Latreille, 1804 are first report from Haryana. Three wildlife confiscated materials including Mangoose hair brushes, Deer skin and shahtoosh shawls received from various law enforcement agencies have been identified. The isopod specimens for Pondicherry University and dipteran specimens for College of Horticulture and Forestry, Himachal Pradesh have been taxonomically identified and report submitted. Suggestions have been given to MoEFCC to extend the area of Eco-Sensitive Zone of Coringa Wildlife Sanctuary, Andhra Pradesh for consideration on 18th March 2020. Comments offered to Ministry of Agriculture and Farmers Welfare regarding the import of seeds from Thailand to India (Chhattisgarh) for aquaculture purpose on 13th March 2020. Data on the faunal diversity in freshwater, marine, estuarine and mangrove ecosystems provided to Ministry of Statistics and Programme implementation in the publication of *EnviStats* India 2020. Under the State Fauna series, Fauna of Haryana has been published which dealt with 2490 faunal species belonging to 1421 genera in 34 major animal groups covered in 26 chapters.

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Murlen National Park, Mizoram

## NORTH EASTERN REGIONAL CENTRE, SHILLONG, MEGHALAYA

Scientists of the Centre conducted nine days surveys in Murlen National Park, Champhai, Mizoram and collected 931 specimens belonging to insects, arachnids, crustaceans, molluscs, amphibians, fishes and reptiles. A total of 52 species including 8 species of coleoptera, 3 species of amphibia, 20 species of pisces, 9 species of reptiles and 3 species of mammals have been identified.





# WESTERN REGIONAL CENTRE, PUNE, MAHARASHTRA

Surveys have been conducted to Chinnar Wildlife Sanctuary, Anamudi Shola National Park and Pambadam Shola National Park, Western Ghats during 13th to 19th March 2020. Eight species of amphibians were identified during the month. A new genus *Krishnamon* (Arthropoda: Crustacea: Malacostraca: Decapoda: Brachyura: Potamidae) of freshwater crab from Meghalaya State and two new species viz. a gall midge, *Asphondylia singanallurensis* (Arthropoda: Insecta: Diptera: Cecidomyiidae) from Tamil Nadu and a freshwater fish,



Gall midge, *Asphondylia singanallurensis* Vasanthakumar et al., 2020



Freshwater crab, *Krishnamon Pati*, Yeo & Ng, 2020

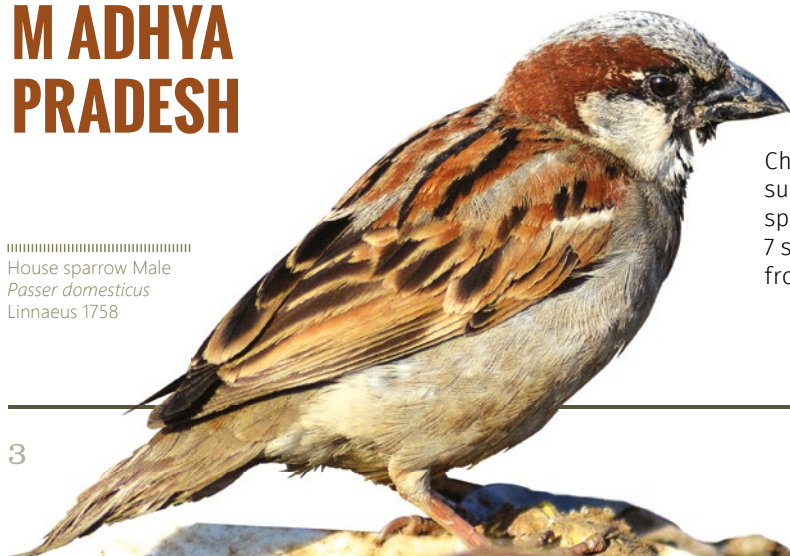
*Parapsilorhynchus alluriensis* (Chordata: Teleostei: Cyprinidae) from Eastern Ghats of India have been described. Ten 16s mt DNA sequences for amphibians from the Nicobar Islands, two sequences for moths were generated while attempts are being made to submit 24 mt COI gene sequences of termites to GenBank using BankIt software. Identification report submitted to Police Department, Pune, Maharashtra on one pair of horns of Blackbuck (*Antelope cervicapra*), which is protected as schedule I of the Indian Wildlife Protection Act, 1972.

# CENTRAL ZONE REGIONAL CENTRE, JABALPUR, MADHYA PRADESH



Yellow-throated sparrow *Gymnoris xanthocollis* Burton E 1838

House sparrow Male *Passer domesticus* Linnaeus 1758



Chhattarpur and Dindor of Madhya Pradesh have been surveyed during 18th to 25th March 2020. Altogether 29 species comprising 22 species of Lepidoptera (Moths) and 7 species of reptiles were identified. Thirty five persons from Jabalpur paid a visit to regional museum,



Bonnet Macaque  
*Macaca radiata*



## DESERT REGIONAL CENTRE, JODHPUR, RAJASTHAN

Udaipur and Chittorgarh districts of Rajasthan have been surveyed during 13th to 21st March 2020 to study the diversity of pollinating bees (Apoidea: Hymenoptera) of Semi-Arid and Desert Ecosystem. Fourteen species of fishes and 13 species of coleopteran insects have been identified from 181 specimens during the month. The resolution of the Rajasthan State Board of Wildlife (RSBWL) signed by the Centre for 40 wildlife clearance proposals on non-forestry activities inside the Wildlife Sanctuaries/ National Parks or Eco-sensitive Zone (ESZ) thereof, in accordance with the Govt. of India, Ministry of Environment, Forest and Climate Change guidelines dated 19.12.2012. The Centre organized a workshop on Official Language Hindi on 18th March, 2020.

Chameleon:  
*Chameleo zeylanicus*

## NORTHERN REGIONAL CENTRE, DEHRADUN

Nematodes (6 species), Odonates (8 species) and Lepidopterans (14 species) have been identified and registered. Dr. Gaurav Sharma, Scientist-E evaluated the Ph.D, thesis in Zoology for Rashtrasant Tukadoji Maharaj Nagpur University, Maharashtra.

Dr. Anil Kumar, Scientist-E guided JRF and FA in SERB Project for bio-acoustic studies on Indian Robin, one Ph.D. Student for his field work on Eurasian Magpie and three M.Sc. students for dissertation work on birdsong. Dr. Sanjay D. Paunikar, Scientist-D guided one M.Sc. Zoology student for dissertation work on Pisces; Dr. V.M. Sathish Kumar, Scientist-B guided one M.Sc. Zoology student for dissertation work on Protozoa and Dr. C.K. Mandal, Scientist-B guided three M.Sc. Zoology students of SGRR University, Dehradun for dissertation work on Annelida.

Egyptian Vulture  
*Neophron percnopterus*  
(Linnaeus, 1758)



*Mylabris pustulata* (Thunberg, 1821)





# SOUTHERN REGIONAL CENTRE, CHENNAI, TAMIL NADU

Survey tour to Agasthyamalai Biosphere Reserve, Maharashtra and Gujarat was conducted during the month. Dr. K. A. Subramanian, Scientist-E delivered lectures at Institute of Ocean Management, Anna University as part of ENVIS-GSDP programme-Valuation of Ecosystem Services and Green GDP on 17th March: 2020 on the topic of Freshwater Biodiversity and Conservation in India and Bio-monitoring of Freshwater Ecosystems.

.....  
Ratufa indica



.....  
Red disc bush brown

# GANGETIC PLAINS REGIONAL CENTRE, PATNA, BIHAR



.....  
Windian Marbled Toad  
*Duttaphrynus stomaticus*  
(Lutken, 1864)

Survey has been conducted to Deccan Peninsula during 11th to 19th March 2020 to study the moth diversity and another survey made in northeast India during 5th to 29th March 2020. Dr. Gopal Sharma, Scientist E attended a live television show telecasted by DD 1 National Patna on the topic Dolphin Conservation on 19th March 2020 in Bihar Bihan Programme and supervised a dissertation work on the topic Birds Diversity in and around Patna University campus during February - March 2020. Thirty five people visited the regional museum of the Centre.

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Black necked Stork  
*Ephippiorhynchus asiaticus*  
Latham 1790







Argynnis addipe  
from Ladakh

## HIGH ALTITUDE REGIONAL CENTRE, SOLAN, HIMACHAL PRADESH

The Centre compiled the data on all the identified collections and submitted to ZSI Headquarters. Faunistic identification from the Centre includes 20 species of Lepidoptera (out of 51 examples) from Grasslands of Himachal Pradesh; 07 species of Ephemeroptera, Trichoptera and Plecoptera (out of 32 examples) from North-West Himalaya; 05 species of Orthoptera (out of 21 examples) from Himachal Pradesh. 51 examples of Lepidoptera referable to 20 species have been digitized in RFD format-I. 02 species of Reptilia, 03 species of Amphibia and 03 species of Lepidoptera have been photographed and digitized in RFD format-II. The scientists of the Centre reviewed two research papers for national journals.

## MARINE BIOLOGY REGIONAL CENTRE, CHENNAI, TAMIL NADU

Gulf of Mannar Reef Fishes have been surveyed in Kilakarai group of islands during 4th to 12th March 2020. Forty seven species of marine organisms from different groups identified taxonomically. Second bio-rock structure in India has been installed in Gulf of Kachchh Marine National Park under "Restoration of reefs using Electricity – A suitable technology to enhance and conserve Gulf of Kachchh reef" in collaboration with Marine National Park Conservation Society, (MNPCS), Gujarat Forest Department from 8th to 18th March 2020. Dr. Ch. Satyanarayana, Scientist-D guided DST Women Scientist from National Institute for Research in Tuberculosis, Chennai in the field at Gujarat in connection with her research on Sponge associated Bacteria and their use in Medicine to control diseases like Tuberculosis.

Gymnothorax  
favagineus  
Bloch & Schneider,  
1801



Deployment  
of bio-rock in  
Arambhada,  
Gujarat



|||||  
Narcondam  
Horn Bill  
*Rhyticeros  
narcondami*  
Hume 1873

## ANDAMAN AND NICOBAR REGIONAL CENTRE, PORT BLAIR

One survey conducted to Narcondam Island Wildlife Sanctuary from 1st March 2020 - 31st March 2020 to assess the population dynamics of Narcondam Hornbill and its associated fauna and another survey conducted during 6th - 11th March 2020 to Great Nicobar Island. Dr. C. Sivaperuman, Scientist-E & Officer-in-Charge served as external expert member for selection of Scientist, Environmental Analyst, and Technical staff on 4th & 5th March 2020 at Department of Science and Technical, A & N Administration; assisted for Bird Watching to the Hon'ble Chief Justice of India Shri. S.A. Bobde, Hon'ble Justice of Supreme Court, Hon'ble Justice Shri. Nitin Jamdar, Mumbai High Court, along with senior officials of A & N Administration during 6th - 11th March 2020 at Great Nicobar Biosphere Reserve; attended meeting with Principal Conservator of Forests (Wildlife) & Chief Wildlife Warden, Department of Environment and Forests, A & N Islands in connection with the publication of Coffee Table Book on Mahatma Gandhi Marine National Park on 2nd March 2020; attended meeting with the Administrative Officer Captain Karmendra Tyagi, Indian Air force in connection with the Bird Hazard Studies in Car Nicobar Airport on 11th March 2020; attended meeting under the Chairmanship of the Chief Secretary, A & N Islands on 12th March 2020 in connection with the Human Crocodile Conflict & also presented the Coffee Table book on "Mesmerizing Fauna of Great Nicobar" to the Chief Secretary, A & N islands on 12th March 2020; Dr. Bineesh, K.K. Scientist-D, attended meeting at Fishery Survey of India, Port Blair in connection with the preparation of Action Plan for the year 2020 - 2021 on 9th March 2020.

|||||  
Long-tailed  
Macaque  
*Macaca  
fascicularis  
umbrosa*

# SUNDERBAN REGIONAL CENTRE, CANNING, WEST BENGAL

Twenty four species of marine animals viz. 2 species of platyhelminthes, 17 species of molluscs and 5 species of fishes were identified from Lakshadweep collections. Three species including a Platyhelminthes *Peronia peronii* (Cuvier, 1804) from Lakshadweep and the molluscs *Pseudobiceros damawan* Newman & Cannon, 1994 and *Costasiella kuroshimae* Ichikawa, 1993 from Gulf of Mannar are new record to India. Twenty six students visited the regional museum of the Centre.

*Peronia peronii* (Cuvier, 1804)



*Ptilomera agriodes*

Survey has been conducted in Rajahmundry, Polavaram, Kunavaram, Bhadrachalam, Mancheril, Nirmal from Telangana & Andhra Pradesh States to study the diversity, distribution and assemblage of fishes of Deccan Peninsula during 21st February to 8th March 2020. Altogether 2748 specimens were collected under different groups such as lepidoptera, aquatic coleoptera, aquatic hemiptera, odonata, branchiopoda, crustacea, mollusca and

*Psechetius qudriricostatus*

# FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD, TELANGANA

pisces. Twenty two species including 6 species of aquatic coleoptera from 226 specimens, 14 species of aquatic hemipteran from 128 specimens and 2 species of freshwater crabs from 124 specimens were identified during the month. A new species of cyprinid fish *Parapsilorhynchus alluriensis* Jadhav et al., 2020, from Eastern Ghats of India has been described. Fifty under graduate students from Nizam College, Hyderabad visited regional museum of the Centre.



# WESTERN GHATS REGIONAL CENTRE, KOZHIKODE, KERALA

*Rhysida immarginata*



During the month, Scientists of the centre identified 03 species of Centipedes (Chilopoda: Scolopendromorpha), 27 species of spiders (Arachnida: Araneae) and 25 species of wasps (Hymenoptera: Pteromalidae, Vespidae, Scoliidae & Sphecidae) from collections of Lakshadweep and Agasthyamalai Biosphere Reserve, Kerala. Male specimen of a rare species of preying mantid *Ephestiasula woodmasoni* Mukherjee, et al., 2010 (Insecta:

*Ephestiasula woodmasoni*



Mantodea: Hymenopodidae) is identified for the first from Kerala. ZSI, WGRC participated and arranged a stall at Regional Science Centre & Planetarium, Calicut in connection with '3rd Malabar Innovation Festival' from 28th February to 1st March 2020. Dr. Souvik Sen, Scientist-D, provided technical guidance to M.Sc. student in PG Research Department of Zoology, Jamal Mohamed College, Tiruchirappalli, Tamil Nadu to complete his M.Sc. project work on 'Diversity of Spiders in Ponkunnu Hills of Calicut District, Kerala' by identifying 25 species of spiders. Dr. Girish Kumar, P., Scientist-C, identified 25 species of wasps of the families Vespidae, Scoliidae and Sphecidae from Telangana state collected by the scientists of FBRC, ZSI, Hyderabad. During the month, sixteen students of All Saints' College, Trivandrum, Kerala visited the museum.





## ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR, ODISHA

Survey was carried out from 25th February to 07th March, 2020 to Dhamara Estuary and Lakhari Valley Wildlife Sanctuary. A total of 1271 specimens were collected from the survey, which include 445 of collembola, 04 coleoptera, 19 hemiptera, 10 crabs, 76 prawns, 01 isopoda, 25 other aquatic insects, 4 horseshoe crab carcass, 14 hermit crabs, 557 molluscs, 27 echinoderms, 87 fishes and 02 amphibians. During this month total 158 specimens belonging to 66 species were identified which includes 43 species of fishes, 12 species of crabs, 1 species of tick, 05 species of lice, 03 species of prawns and two species of parasitic Isopods. From local surveys 103 specimens were also collected from Tampara Lake, Ganjam, Odisha. The students and faculty members of Dept. Marine Sciences, Berhampur University, visited the museum on 13th March 2020.

White bellied Sea Eagle



## MARINE AQUARIUM AND REGIONAL CENTRE, DIGHA, WEST BENGAL

A total of 198 faunal specimens were identified and deposited in National Zoological Collection which include 135 examples of Mollusca (28), 29 examples of Annelida (09), 06 examples of Echinodermata (01), 11 examples of Alcyonacea, 14 examples of Nudibranch, 2 examples of Arthropoda and 1 example of Pisces. Seven DNA sequences belonging to one octocoral associated fungi sample (Accession no. MN279088), two sand crabs (MN 905327, MN905328), one octocoral associated algae sample (MN921648) and three octocoral samples (MN921650, MN921651, MN921652) were isolated and deposited in NCBI. The decapod crab *Biarctus sordidus* (Stimpson, 1860) is found as a new record to West Bengal coast. From 1st March 2020 to 14th March 2020, a total of 11013 tourists visited the marine aquarium. In addition, 13 educational institutions visited the MARC during the said period. Dr. S. Balakrishnan, Scientist – D reviewed a manuscript for *Indian Journal of Experimental Biology* on 12th March 2020 and evaluated Ph.D. thesis for Bharathidasan University, Tiruchirappalli Tamil Nadu on 18th March 2020. Dr. Yogesh Kumar, Scientist - D evaluated a Ph.D. thesis for Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu. Debashree Dam, Scientist-B and Dr. Aditya Kapil, Scientist – B (Chemi.) served as resource persons in an in-house interactive session on conservation and awareness of Marine Fauna conducted for 30 students and 3 teachers including the Principal of Swami Ramkrishna Paramhans Teachers' Training College, Bokaro on 4th March 2020 at the MARC.

*Goniobranchus tinctorius* Ruppell Leuckart 1830



# ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

Survey to Arung Community Reserve and Parang areas of Papumpare district and Pistana area of Lower Subansiri district of western Arunachal Pradesh conducted during 16th to 23rd March and collected 152 faunal examples including 5 plankton samples and also recorded 20 species of birds. Two local surveys to Taraso and Sangte village, Old Sagalee of Papum Pare district were conducted and collected 119 faunal examples. Eight species of Rotifera under 05 genera and 05 families have been identified from 141 examples extracted from 03 plankton samples collected from Ganga lake, Itanagar, Ziro and Siro village, L. Subansiri. Thirty species referable to 25 genera under five families from 66 examples of Rhopalocera were identified and registered. Also identified 50 examples of freshwater fish collected from Ranga nadi comprising 9 species under 9 genera and 3 families. In addition one species of Diplopoda has also been identified. Dr. B. Sinha rendered advisory services to 3 B. Sc. Final semester students of DN Government College, Itanagar towards their dissertation.

## EVENTS

National Workshop on Taxonomic Identification of Indian Bees was organized by ENVIS Centre on Biodiversity (Fauna), Zoological Survey of India, Kolkata in collaboration with Centre for Pollination Studies, University of Calcutta, National Centre for Biological Studies, Bengaluru and University of Agriculture Sciences, Bengaluru from 2nd – 3rd March 2020.

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29. Venkataraman, K., Sharma, G. and Banerjee, D. 2020. Faunal diversity of India. pp. 71-92. In: *Biodiversity of the Himalaya: Jammu and Kashmir State* (Eds.: Dar, G.H. and Khuroo, A.A.). Topics in Biodiversity and Conservation. 18: 1-1100. Springer, Singapore

## CONFERENCE/ SYMPOSIUM/ WORKSHOP/ TRAINING/MEETING ATTENDED

1. Dr. C. Raghunathan, Scientist-E attended the meet on Carbon Neutral Ladakh during 2nd to 4th March 2020 held at Leh, Ladakh and made a presentation on ZSI's Action Plan for Sustainable Development of Ladakh organized by the U.T. of Ladakh Administration
2. Dr. C. Raghunathan and Dr. S. Balakrishnan, Scientist-D attended the meeting on ICZM Project Phase II held at IESWM, State Project Monitoring Unit, Kolkata, West Bengal on 6th March 2020 to present the ZSI proposals on marine biodiversity of West Bengal, sea ranching of Horse shoe crab and capacity building training programme.
3. Dr. C. Raghunathan attended the meeting of Expert Committee of Eco sensitive Zone held at MoEFCC, New Delhi on 16th March 2020.

## PROCEEDINGS

1. Sanjeev Kumar, 2020. *Ethology of urban avian species and conservation strategies in the Thar Desert landscape*. In: National Symposium on Animal Behaviour Focal Theme: Avian Ethology *Souvenir*: 30 pp. (Abstracted)
2. Saini M.S. and Raina Rifat (2020). *Threatened status of Himalayan Bumblebees and recommendation of Indigenous Bumblebee species viz., Bombus tunicatus Smith for rearing in glasshouse farming in Indian Himalayan Region*, 22, IUCN, Annual Report 2019-20, published by Co-chair IUCN, U.K and Co-Chair, IUCN, USA.



4. Dr. C. Venkatraman, Scientist-E appeared before the District sessions Court (Special-Central), Tis Hazari, Delhi as witness in connection with identification of marine specimens on 11th March 2020
5. Dr. Rajmohana K, Scientist-E served in organizing committee of the two days National Workshop on Taxonomic Identification of Indian Bees, from 2nd to 3rd March 2020, organized by ENVIS Centre on Biodiversity (Fauna) Zoological Survey of India Kolkata, in collaboration with Centre for Pollination studies, (Calcutta University), University of Agricultural Sciences (Bangalore) and National Centre for Biological Sciences (Bangalore).
6. Dr. K. Valarmathi, Scientist-D, delivered an invited lecture on "Education and Women Empowerment" in Tamil Nadu Government Polytechnic College Madurai on 13th March, 2020 on the Occasion of their Women's day celebration.
7. Dr. R. H. Raina, Scientist-D, attended and delivered an invited lecture on Diversity of Indian Bumblebees during the National Workshop on Taxonomic Identification of Indian Bees at ZSI, Kolkata organized by ENVIS Centre, ZSI, Kolkata, in collaboration with University of Agricultural Sciences, Bangalore, National Centre for Biological Sciences, Bangalore and Centre for Pollination Studies, University of Kolkata on 2nd March, 2020. Besides, Dr. Raina imparted hands-on training to trainees during the workshop on the Taxonomic Identification of Indian Bees on 3rd March, 2020.
8. Dr. Sanjeev Kumar, Scientist-E attended and delivered a talk as an invited speaker on Ethology of urban avian species and conservation strategies in the Thar Desert landscape in the National Symposium on Animal Behaviour Focal Theme: Avian Ethology at Deptt. of Environmental Sciences, M.D.S. University, Ajmer, Rajasthan on 6th March, 2020. Also presided over as Co-Chair Person in the Technical Session VI-(A).
9. Dr. Sanjeev Kumar, Scientist-E and Officer-in-charge organized quarterly workshop on Official Language Hindi on 18th March, 2020 at DRC, ZSI, Jodhpur. All the officers and staff members participated in the said event.
10. Dr. R. H. Raina, Scientist-D, attended the Asian Pollinators Research Meet at University of Kolkata from 27th - 29th February, 2020 as a Resource person and discussed the present scenario of Himalayan bumblebees and their future challenge during Bombus meeting at Deptt. of Zoology, University of Kolkata on 29th February, 2020.
11. Dr. K. A. Subramanian, Scientist E represented Zoological Survey of India 54th Access and Benefit Sharing meeting held at National Biodiversity Authority on 5th and 6th of March, 2020 and represented Zoological Survey of India in Karnataka State Wildlife Board Meeting Chaired by Chief Minister, Karnataka on 9th March at Bengaluru.
12. Dr. C. Sivaperuman, Scientist-E delivered a talk on the Biodiversity of Andaman and Nicobar Island with special reference to Great Nicobar Biosphere Reserve on 10th March 2020 to the official of Department of Environment and Forests, Nicobar Forest Division, Great Nicobar
13. Dr. Ch. Satyanarayana, Scientist D delivered a special lecture on "Coral Reefs – The Underwater Paradise Under Threat and our Role to Protect Them" to about 400 of Saveetha Engineering College, Chennai on 4th of March.
14. Dr. Deepa Jaiswal, Scientist E attended Board of studies meeting at St. Anns College, Hyderabad on 3rd March 2020
15. Dr. P. M. Sureshan, Scientist E delivered a talk on "Knowing our environment" to students and general public at Regional Science Centre & Planetarium, Calicut on 1st March 2020 in connection with the valedictory function of 3rd Malabar Innovation Festival'
16. Dr. P. M. Sureshan, Scientist E & Officer-in-Charge delivered a talk on 'Threats to our environment and biodiversity" to students at Youth hostel, Calicut on 8th March 2020 in connection with the valedictory function of Leadership Camp for youth by Nehru Yuvak Kendra, Mahe Centre, Kerala.

## PROMOTION

Smt. Ranjna Lawrence, Office Assistant (MTS) promoted to the post of Laboratory Assistant on 20.03.2020 at ZSI-CZRC, Jabalpur, Madhya Pradesh.

**A recent study by the Scientists of Zoological Survey of India has proven that Himalayan Ibex distributed in the Trans-Himalayan ranges of Jammu & Kashmir, Union Territory and Himachal Pradesh is a distinct species from the Siberian Ibex. The paper titled *Genetic evidence for allopatric speciation of the Siberian ibex (Capra sibirica)* in India has recently been published in international peer reviewed journal *Endangered Species Research*.**

Siberian Ibex is a species of wild goat and is distributed in diverse habitats ranging from cold deserts, rocky outcrops, steep terrain, high land flats and mountain ridges to low mountains and foothills. From Mongolia its distribution extends towards Altai, Hangai, Gobi-Altai, Huruikh mountain ranges as well as Sayan Mountain near Russia and scattered populations in the small mountains of Trans Altai Gobi. In Asia, Ibex is distributed in the montane habitats, ranging elevations from 500 to 6700 m in different range countries like India, Kazakhstan, Tajikistan, Mongolia, Pakistan Southern Siberia and China. In India, the Ibex is distributed mainly in the Trans-Himalayan ranges of Himachal Pradesh and Union Territories of Ladakh and Jammu & Kashmir

**To unravel the complexity in species recognition of Indian Ibex, the researchers under a project funded through the National Mission on Himalayan Studies of the Ministry of Environment, Forest and Climate Change (MoEF&CC) undertook field surveys and collected faecal samples of ibex from the Lahaul and Spiti, Himachal Pradesh, India. The genetic analysis conducted with the inclusion of the sequences available from all across the distribution ranges in the Central Asia, Kazakhstan, Altai mountain, Mongoli and Russia provided first evidence to claim that Himalayan Ibex is genetically different from all other ranges of Siberian Ibex. The samples collected from India clustered with the sequences from Tajikistan in phylogenetic analysis which were adequately different from the other two clades K Z clade representing Kazakhstan and AMR clade representing Altai mountain, Mongoli and Russia.**

The results of the genetic analysis, surprisingly revealed that I-T clade (presently referred as Siberian Ibex) was estimated to have diverged from Alpine Ibex during the Pleistocene epoch (2.4 million years ago) than the Siberian Ibex during the boundary of (6.6 million years ago).

# FINDING THE PATHS

# HIMALAYAN IBEX



**Mukesh Thakur,  
Lalit Kumar Sharma and  
Kailash Chandra**  
*Zoological Survey of India*

The study reveals that Siberian ibex is a polytypic species, plausibly formed by lumping of at least 2 species and or 3 to 4 sub-species. It is presumed that the 'montane systems', formed by a series of climatic oscillations and temporal topographic metamorphosis, have broken up the contiguous distribution of widespread species and accelerated allopatric speciation. The study claimed that the Himalayan Ibex is a distinct species, divergent from Siberian Ibex and it is expected this report the present finding will be helpful to IUCN to treat this as a separate species for conservation.