

ZSI e-NEWS

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The Monthly Electronic Newsletter of Zoological Survey of India

*ZSI in the 101st year of Service to the Nation
(1916 to 2016)*

FROM THE DIRECTOR'S DESK

This month several dignitaries from MoEFCC, including the Hon. Secretary, Shri Ajay Narayan Jha, IAS, Dr. Anandi Subramanian, Senior Economic Adviser with her team, Shri P.J. Michael, Deputy Secretary, IT Division visited ZSI-HQ, Kolkata. It was a moment of pride and prestige, when the Secretary, MoEFCC, referred ZSI as a World-class Institution and as an organization having international foot prints. He said the entire ZSI team owed appreciation for their dedication, perseverance and hard work put in.

ZSI proudly marked its presence in two significant international events. Participated in various workshops, seminars and symposia, at the IUCN World Conservation Congress, the world's largest conservation event, where leaders from government, the public sector, non-governmental organizations, business,

UN agencies and indigenous and grassroots organizations assembled to discuss and decide on solutions to the world's most pressing environment and development challenges, held at Hawaii in USA from 1st to 10th September 2016. A presentation was delivered at HIMEK Alliance Meeting (Regional Cooperation between the Himalayan Nations and the Countries of the Mekong Basin to protect the Himalayas and the Mekong region from adverse effects of climate change), on the Faunal Diversity of Himalayan Landscapes- the ongoing project at ZSI, as part of National Mission on Himalayan Studies of MoEFCC, Govt. of India.

ZSI also participated CITES CoP 17, at Johannesburg, South Africa from 24th-30th Sept. 2016.

Dr. Kailash Chandra
Director
Zoological Survey of India, Kolkata

HEADQUARTERS, KOLKATA

A combined faunistic survey was undertaken to Daman & Diu and Dadar Nagar Haveli from 9th to 23rd of the month in which scientists and staff from Lepidoptera, Coleoptera, Hemiptera and Orthoptera sections were involved. In addition to this a number of other surveys were also undertaken during the month. From 26th August to 9th September to Satkosha-Baisipally Tiger Reserve & Chilka, from 29th August to 17th September to the Eastern Ghats (Telangana and Andhra Pradesh states), from 26th August to 4th September to East coast of India, from 22nd September to 7th October to Gujarat coast, to Eastern Ghats from 29th August to 12th September and to Terai Grassland including Bettiah, 5 ranges of Valmiki Tiger Reserve namely Valmiki Nagar, Ganauli, Madanpur, Harnatang and Chiutaha from 16th to 25th September.

During the month, scientists of Headquarters identified, 14 species of soil oribatid mites, 55 species of Orthoptera, 7 species of termites from Arunachal Pradesh, 16 specimens of Odonata, 7 species of Ephemeroptera 10 species of parasitic hymenoptera, 22 species of Coleoptera, 42 species of Hemiptera, 39 species of Nematelminthes, 12 species of Platyhelminthes, 11 species of Crustacea, 2 species of crabs and 3 species of shrimps from Satkosia and Baisiapally WLS, 35 species of fresh water fish, 26 species of marine fishes, 9 species of reptiles from Andhra Pradesh and 1 species of mammal.

Anonchotaenia adhiraji (Platyhelminthes: Cestoidea) has been recorded as new to science and *Xiphocheilus typus* Bleeker (Family: Labridae) recorded for the first time from India.

Six identification reports of seized materials were sent to agencies like the Forest Department and Wildlife Crime Control Bureau. One sample of confiscated material was received during the month and the report has been dispatched.

Eight research papers were published, six (6) were accepted and eleven were communicated during the month under report.

Identification and advisory services were rendered on eighteen lots of specimens, received from different institutions and organizations. Identification services were rendered to Dr. S. J. Srinivasa, Regional Museum of Nat. History, Roopa Nagar, Mysore by Isoptera Section. Ms. Debashree Dam, Asstt. Zoologist of Mammal Section provided detailed scientific information on the families of Canidae and Felidae to Dr. P.K. Maity, retired Scientist, ZSI, as part of advisory services.

Research scholars of the Himalayan project were provided hands-on-training cum field visit on the faunal collections and preservation, at Botanical Garden.

Shri Ajay Narayan Jha, IAS, Secretary, MoEFCC, New Delhi visited Zoological Survey of India, Headquarters on 30th

September and held a review meeting with DZSI and interacted with the scientists and staff of HQs. He also visited various scientific Divisions / Sections to see the NZC. On 1st October he visited the Indian Museum to oversee the progress of renovation of Zoological galleries in the Indian Museum.

Ms. Vishwasree, Mr. Ravinder Singh, Ms. Nancy Sahay and Mr. Ajay Dahiya, IAS, Assistant Secretaries from MOEFCC, visited ZSI from 14th to 16th September and as a field visit they were taken to Sunderban Biosphere Reserve, West Bengal. On 16th September the team visited ZSI Headquarters and held discussion with DZSI and scientists. They were also taken to various scientific Division / Section to see NZC.

Dr. Kailash Chandra, Director, attended the IUCN World Conservation Congress held at Hawaii from 1st to 10th September 2016 and participated in various workshops, seminars and symposia.

Dr. Gaurav Sharma, Sci-D & O/C, Mammal & Osteology Section attended a meeting at CITES CoP 17, Johannesburg, South Africa from 24th to 30th September 2016.

Dr. Rajmohana K, Sci. D, attended the first meeting of the Committee to examine and prepare a roadmap for Environmental Data and Assessment, at MoEF and CC, New Delhi on 27th.

Shri S.S. Mishra, Sci-C & Officer-in-Charge of Marine Fish Section attended a National Seminar on "Conservation of biodiversity and Natural Resources in sustainable development" at A.P.C. College, New

Barrackpore on 6th September and delivered an invited lecture on "Fish Diversity and need for Conservation"

Shri. S. Mitra attended the International Training Workshop on Taxonomy of Crustacea, (ITWOTAC 2016) from 20th to 23rd September at the Department of Aquatic Biology & Fisheries, University of Kerala, Kariyavattom, Thiruvananthapuram, Kerala. Dr. Rajmohana undertook type studies of Platygastriidae (Hymenoptera), at WGRC Calicut, from 15th to 16th September and also attended the Doctoral Committee meeting and Ph.D. open defense viva of two researchers at WGRC, Calicut, on the 15th.

Dr. Kailash Chandra attended the 93rd foundation Day function of Indian Institute of Natural Resins and Gums, ICAR, Ranchi on 20th September and delivered a special lecture during the occasion. On 21st September, at Mizoram University, Aizwal, Mizoram, he attended and delivered the key note address on Impact of Climate Change on Biodiversity, Application of Recent Technologies for conservation of Threatened Species during the inaugural session of the National Conference. On 4th September he held a meeting with Shri P. J. Michael, Deputy Secretary, IT Division, MoEF&CC, New Delhi in connection with the evaluation of progress of digitisation of ZSI type specimens and installation of solar panels in ZSI HQs and Regional Centres buildings during the latter's visit to ZSI HQs, Kolkata. Dr. Chandra conducted a meeting at HQ, when Dr Anandi Subramanian, Senior

Economic Advisor, MoEF&CC and her team members visited ZSI HQs, Kolkata from 15th to 16th September in connection with the evaluation of Plan Scheme objectives, achievements and future plans of the organisation. He attended the DPC / MACP meeting for the promotion of group C officials of Zoological Survey of India, held on 15th September 2016 at ZSI HQs, Kolkata and also the DPC meeting for the promotion to the post of Scientist 'B' in the Zoological Survey of India, MoEF&CC, held at UPSC, New Delhi on 29th of the month.

Publications:

- Poovoli Amina, K. Rajmohana , K.V. Bhavana & P.P. Rabeeha, 2016. New records of termite species from Kerala (Isoptera: Termitidae), *Journal of Threatened Taxa*, 8(11): 9334–9338.
- Roy, S., Bhaumik, S., Imam, I., Chatterjee, T., Roy, K., and Mitra, B. 2016. A preliminary study on the succession of insect visitors and their symbiotic interaction for effective pollination in *Brassica juncea* (L.) of southern West Bengal. *Int. J. Adv. Res.* 4(8): 1762-1768.
- Roy, S., Chakraborty, S.K., Parui, P., Chakraborti, U., Biswas, O., and Mitra, B. 2016. Redescription of *Cadrema pallida* var. *bilineata* (de Meijere, 1904) (Diptera: Chloropidae) and its role as pollinator and carrion feeder from Indian Sunderbans. *Ambient Science*, 03(2); Online DOI: 10.21276/ ambi.2016. 03. 2.nn01.
- Mitra, B., Biswas, O. Roy, S., Chakraborti, U. and Panja, B. 2016. Insect Faunal Diversity of the Sunderban Biosphere Reserve, West Bengal, India. *Int. J. Curr. Res. Aca. Rev.* 4 (9): 87-98.
- Mishra, S.S. and Saren, S.C. 2016. First Record of Blue-Banded Wrasse, *Xiphocheilustypus* Bleeker 1856, from India. *Rec. zool. Surv. India*, 116 (1): 93-95.
- Mitra, B., Roy, S., Biswas, O., Chakraborti, U. and Parui, P. 2016. Further record of some flies (Insecta: Diptera) from the Indian Sunderbans. *Bionotes* 18 (3): 95-97.
- Gupta, D., Chandra, K. and Hillert, O. 2016. *Odontotrupes* (*Odontotrupes*) *tawangensis* new species (Coleoptera: Geotrupidae) from Arunachal Pradesh, India. *Zootaxa*, 4154 (5): 559-566.
- Chandra, K. 2016. Centenary Celebrations of Zoological Survey of India and National Conference on Faunal Diversity in the Indian Land & Seascapes [30th June–2nd July, 2016]. *Uttar Pradesh Journal of Zoology*, 36 (2): 171-173.
- Suranjana Banerjee, Buddhadeb Manna and A.K. Sanyal. 2016. *Anonchotaenia adhiraji* sp. n. (Platyhelminthes: Cestoidea) from a bird *Hypsipetes madagascarensis* from Arunachal Pradesh, India. *Proceedings of the Zoological Society*, DOI 10.1007/s12595-016-0183-x, published online.



Book release by Shri Jha, secretary, MOEFCC during his visit to ZSI.



Welcoming Shri Ajay Narayan Jha, IAS, Secretary, MoEFCC, New Delhi.



Deputy Secretary at the Bird Section, HQ.



Deputy Secretary's visit to HQ.



During visit of Assistant Secretaries (IAS), MoEFCC, New Delhi.



During visit of Assistant Secretaries (IAS), MoEFCC, New Delhi.



Welcoming Dr. Anandi Subramanian, Senior Economic Advisor, MoEFCC.

ANDAMAN & NICOBAR REGIONAL CENTRE, PORT BLAIR

To assess the faunal communities of the marine ecosystem of North Bay, Pongibalu and Chester Island of Mahatma Gandhi Marine National Park from 5th to 9th and 14th September 2016, terrestrial ecosystems of Great Nicobar Island from 16th to 27th September 2016, marine and terrestrial ecosystems of North Bay, Rutland Island and Rifleman Island of Mahatma Gandhi Marine National Park from 20th to 22nd September 2016 have been surveyed. A total of 333 species of fauna comprising of 147 species of scleractinian corals, 20 species of octocorals, 6 species of sea anemones, 17 species of sponges, 14 species of opisthobranchs, 2 species of polyclads, 5 species of crabs, 1

species of shrimp, 1 species of lobster, 25 species of echinoderms, 26 species of ascidians and 6 species of fishes were identified from marine environment while 10 species of butterflies, 5 species of dragonflies, 4 species of spiders, 4 species of dipterans, 1 species of Hymenoptera, 6 species of amphibians, 3 species of reptiles and 30 species of birds were identified/observed from terrestrial environment. Among them, 3 species of opisthobranchs- *Phyllidiapicta* (Pruvot-Fol, 1957), *Notodoris minor* Eliot, 2004 and *Hoplodoris flammea* (Fahey & Gosliner, 2003) were new records to Indian waters. 498 specimens including 65 specimens of scleractinian corals, 24 specimens of

octocorals, 4 specimens of sea anemones, 40 specimens of sponges, 157 specimens of molluscs, 15 specimens of opisthobranchs, 3 specimens of crabs, 1 specimen of shrimp, 1 specimen of lobster, 30 specimens of echinoderms, 39 specimens of ascidians, 1 specimen of fish, 4 specimens of spiders, 4 specimens of Diptera, 24 specimens of butterflies, 44 specimens of dragonflies, 1 specimen of Hymenoptera, 11 specimens of Amphibia, 27 specimens of reptiles and 3 specimens of birds were registered in National Zoological Collections. Meta data for 900 registered specimens has been prepared, of which, 450 specimens belonging to marine ecosystem while 450 specimens to terrestrial habitat.

Identification of 210 specimens of scleractinian corals under 63 species, 445 specimens of molluscs under 89 species, 9 specimens of echinoderms under single species and 3 specimens of fishes belonging to single species were identified for Samudrika-Naval Marine Museum, Port Blair on request. Detailed list of butterflies and their host specific plants has been provided to the Deputy Conservator of Forest, Silviculture Division, Andaman and Nicobar Administration, Port Blair for setting up a Botanical Garden and Nature Interpretation Centre (BGNIC) at Port Blair. Proposal on Rapid Environmental Impact Assessment Studies for reserve forest area in Tiger Quarry at Baratang was prepared for the Executive Engineer, APWD, Rangat, Middle Andaman and submitted to ZSI headquarters

for onward transmission. Field assistance was extended to Mr. Varma, Hon'ble Justice of Supreme Court of India for Bird-watching at Chidiyatapu Biological Park on 28th September 2016. Government-Land Information System in respect of ZSI, Port Blair has been uploaded in the website of National Centre of Geo-Informatics, Ministry of Communications and Information Technology as directed by ZSI headquarters. Requisite information pertaining to ZSI, Port Blair for updating Dashboard for Tracking Performance under NITI Aayog from Prime Minister's Office has been provided to ZSI Headquarters for onward transmission to administrative ministry.

Dr. C. Raghunathan, Scientist-D and Officer-in-Charge reviewed the manuscripts for the Palgo Journal of Medicine and Medical Research and International Journal of Modern Biological Research on antioxidant activities of algae, and anthropogenic threats to coastal and marine biodiversity respectively. He served as a witness in the Sessions Court at Port Blair for wildlife case on 23rd September 2016. O & M Inspection committee for subordinate office visited ZSI/ANRC on 29th and 30th September 2016 and requisite details have been furnished to the committee in the prescribed questionnaire.

Hindi Fortnight-2016 was celebrated and several competitions were organized from 15th to 28th September 2016. Closing ceremony for the same was observed on 28th September 2016 in which certificates and prizes were

distributed to winners.

Mr. S. Kumaralingam, Research Associate, participated in a workshop “International Training Workshop on Taxonomy of Crustacea” organized by Department of Aquatic Biology and Fisheries, University of Kerala from 20th to 23rd September 2016.

Publications

- Tamal Mondal and Raghunathan, C., 2015. Locomotion of anthocyathus mushroom corals (Scleractinia: Fungiidae) of Andaman and Nicobar Islands, India.

Indian Journal of Geo-Marine Sciences, 44(6): 818-824.

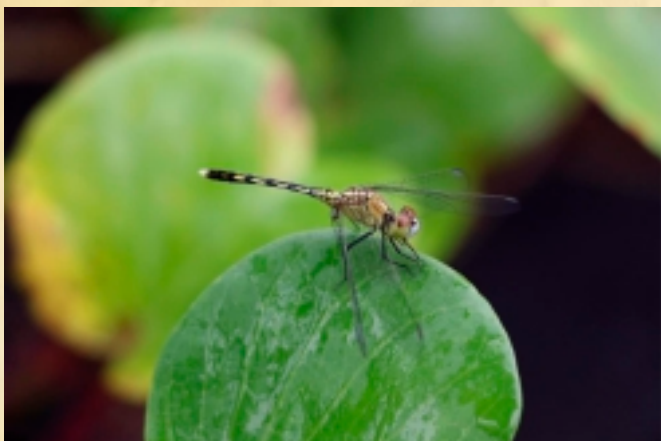
- Rajeshkumar, S., Raghunathan, C. and Kailash Chandra, 2015. Reticulated Python *Malayopython reticulatus* (Schneider 1801): Rescue, recovery and recent sightings from Great Nicobar Island-A conservation approach. *Ecoprint*, 22: 50-55.
- Rajan, P.T. and Vikas, N., 2016. Eight new records of Coral Reef Fishes from Andaman and Nicobar Islands. *Rec. zool. Surv. India*, 116(Part-1): 83-87.



Coral *Acropora tenuis* Dana 1846



Echinoderm, *Stichopus herrmanni* Semper 1868



Dragonfly, *Diplacodes trivialis*, Rambur 1842



Phyllidiella nigra van Hasselt 1822

WESTERN GHAT REGIONAL CENTRE, KOZHIKODE (CALICUT)

During the month one major faunal survey was conducted at Thattekkad Bird Sanctuary from 19th to 23rd September under the leadership of Dr. Md. Jafer Palot, Assistant Zoologist and representative faunal samples collected.

K.G. Emiliyamma, Scientist-D, identified 14 images of Odonata as 4 species under 4 genera to Ms. Pallavi, M. Sc. Zoology, Sree Krishna College, Guruvayur for her dissertation work. Dr. Mohamed Jafer Palot, identified 180 faunal images received from Dr. Ramakrishna, former Director, Zoological Survey of India, Kolkata. He also rendered identification & advisory services to Ms. K. Shruti, M.Sc. (Applied Zoology), Mananthavady Centre of Kannur University for her project work. Dr. Girish Kumar, P., Sr. Zoological Assistant, identified 10 specimens of wasps for Mrs. Lobeno, Ph.D. student of Nagaland University for her thesis work. He also identified 14 specimens of wasps for Mrs. Sahila, M.Sc. Zoology student of the Department of Zoology, Kannur University, Mananthavady Campus for her final dissertation work. Dr. Dhruba Chandra Dhali, Post Doctoral Fellow, identified 15 species of spiders for Ashalatha, a Ph.D. student of Kannur University.

Dr. Muhammed Jafer Palot delivered a talk on 'Faunal wealth of Kerala & Indian Wildlife

(Protection) Act for the Officers & Staff of Thattekkad Bird Sanctuary at the Forest Interpretation Centre, Thattekkad on 23rd September 2016.

Ph.D. Open Defence Viva voce of Mr. Abhilash Peter, C. Bijoy and Mrs. Dhanya Balan were conducted during this month for the award of Doctoral degree under the University of Calicut.

Sri. Saryu Roy, Hon'ble Minister for Parliamentary Affairs, Food, Public Distribution & Consumer Affairs of Jharkhand government visited the center on 24th Sept. 2016.

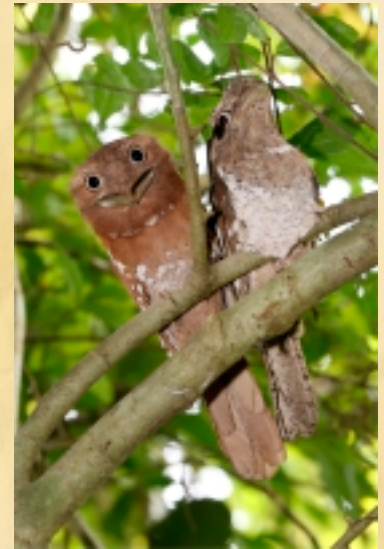
During the month, WGRC museum had 202 visitors.

Publications:

- Dipanwita Das and P. Girish Kumar (2016). Velvet ants (Hymenoptera: Mutillidae) from Chhattisgarh, India. *Records of Zoological Survey of India*, 116(Part-1): 89-92.
- Rajkumar, K.P., Muhamed Jafer Palot, Pramod P., Karthik Thamizharasu and Thenmozhi J.V. 2016. A sight record of Slender Coral Snake, *Calliophismelanurus* Shaw 1802 from Dhoni Hills, Northern Rim of Palghat Gap, Western Ghats, India. *Malabar Trogon*, 13 (2&3): 11-13.



Cochin Cane turtle from Thattekkad Bird sanctuary, Kerala.



Sri Lankan frogmouth from Thattekkad Bird sanctuary, Kerala.



Sri. Saryu Ray, Hon'ble Minister of Jharkhand at WGRC museum.

ESTUARINE BIOLOGY REGIONAL CENTRE, GOPALPUR-ON-SEA

During the month one local survey was conducted at Rushikulya Estuary from 14th to 17th and also another on 19th. This was the 2nd survey of the project entitled "Current Status of Faunal Diversity of Rushikulya estuary". A total of 563 specimens were collected pertaining to different faunal groups during

this survey. Numerical values of physiochemical parameters of four sites of Rushikulya Estuary have been collected. A total of 26 examples (Gastropods and Bivalves) of molluscs belonging to 11 species under 09 genera and 07 families have been identified from Rushikulya Estuary Survey.

Moreover 19 specimens under 6 families, 6 genera and 6 species of fishes were identified from the collection of Rushikulya Estuarine Survey. Along with that 5 specimens under 1 family, 1 genus and 1 species of Brachyuran

crab and 16 specimens of Aquatic Insects under 2 families, 3 genus and 4 species were also identified from the collection of Rushikulya Survey.



Limnogonus fossarum fossarum (Fabricius)



Murex carbonnieri (Joussaeume)



Salmacis virgulata (L. Agassiz and Desor)



Terapon jarbua (Forsskal)

SUNDERBANS REGIONAL CENTRE, CANNING

One day tour was conducted in and around Sunderbans by Dr. Suresh Chand, Sci.D, with Assistant Secretaries from MoEF & CC.

The identification for the month includes eleven examples of shark and ray fishes. It includes 1 species of shark and 6 species of ray fishes from 10 examples belonging to 2 families and 5 genera.



Assistant Secretaries from MoEF&CC at the Centre.

NORTHERN REGIONAL CENTRE, DEHRADUN

A total of 997 examples from the Valley of Flowers, Samaspur Wildlife Sanctuary, Sonanadi Wildlife Sanctuary, Rajaji National Park and Govind Pashu Vihar were identified and registered belonging to herpetofauna, Lepidoptera, Orthoptera and nematodes. One faunistic survey to the Valley of Flowers was conducted from 26th August to 4th September. A total of 427 examples were collected belonging to 8 groups with sighting of 10 mammalian species and 29 avian species and one species of snake. Red fox, *Vulpes vulpes* was camera trapped during the survey. Digitization of amphibia (30 metadata entries with 60 photographs, dorsal & ventral) was done.

Dr. Archana Bahuguna, Scientist-D, attended the Annual Research Seminar of Wildlife Institute of India on 29th & 30th September. She also attended TRAC meeting of Wildlife Institute of India on 30th September.

A day long seminar was organized on 9th September on the occasion of Himalayan Day on theme services of Himalaya. Dr R.K. Jahuri, Head of the Department of Zoology visited the Center as Chief Guest on Himalayan Day and delivered an invited lecture. Presentations were also given by the scientists of NRC.

The Centre also celebrated Hindi Pakhwara from 15th - 30th September.



Hindi Pakhwara celebration at NRC, ZSI.



Invited lecture delivered by Dr. R.K. Jahuri during celebration of Himalayan Day.



Red fox, *Vulpes vulpes* camera trapped during survey to the Valley of Flowers.



Red headed Bullfinch, *Pyrrhula erythrocephala* Vigors

MARINE AQUARIUM & REGIONAL CENTRE, DIGHA

During the month a total of 97 fish specimens belonging to 13 species and 45 molluscs specimens belonging to 16 species were identified. The marine aquarium of the Centre received a total number of 10,257 visitors during this month. Among the aquarium exhibits *Gymnothorax tile* (Hamilton, 1822), the Indian mud moray eel, Guitar fish and stingrays were the major attractions for the tourists.



Gymnothorax tile (Hamilton, 1822) in the Aquarium.

FRESHWATER BIOLOGY REGIONAL CENTRE, HYDERABAD

The scientists of the Centre identified 45 specimens of fishes as 8 species and 11 specimens of aquatic insects as 4 species from the recent collections of Sasthamcotta Lake, Kerala. One local faunistic survey was conducted to Himayathsagar and Osmansagar, Hyderabad on 22nd September. As part of the digitization of the National

Zoological Collections of the centre, 8 species of fishes and 4 species of aquatic insects were digitized.

Dr. Deepa Jaiswal, Sci-D, attended the training programme on "Service Matter" from 19th to 23rd September at the Institute of Government Accounts and Finance, Kolkata.

ARUNACHAL PRADESH REGIONAL CENTRE, ITANAGAR

During the month, 50 examples of amphibians collected from earlier surveys have been identified under the amphibians of Arunachal Pradesh programme and were

found to belong to 3 families, 8 genera and 9 species. The identified fishes have been registered under 14 registration numbers and the data has been computerized and

digitized.

Dr. Bikramjit Sinha, Sci.D & Officer-in-charge of the centre led the 3rd survey to Talle Valley Wildlife Sanctuary in the Eastern Himalayas from 16th-28th September, and collected more than 500 representative examples of different faunal groups from different ecosystems within the sanctuary.

Dr. B. Sinha attended the 28th Annual Day seminar of GBNIHESD in their NE Unit at Itanagar on 10th September. He also attended the meeting of the Arunachal Forest Research

Committee on 14th September for scrutiny and approval of research proposals received from various organisations.

Around 47 visitors visited the museum of the centre during the month.

Publications

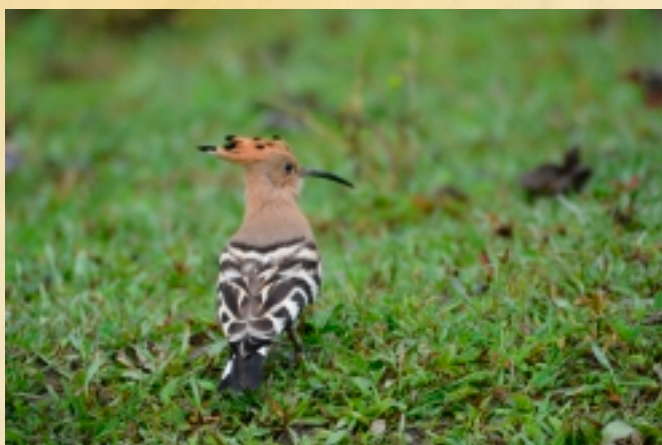
- Ghosh SK & Sinha B. 2016. First record of two species of *Cybister* Curtis, 1827 (Coleoptera: Dytiscidae) from Arunachal Pradesh, India. *Rec. zool. Surv. India* 116 (1): 97-98.



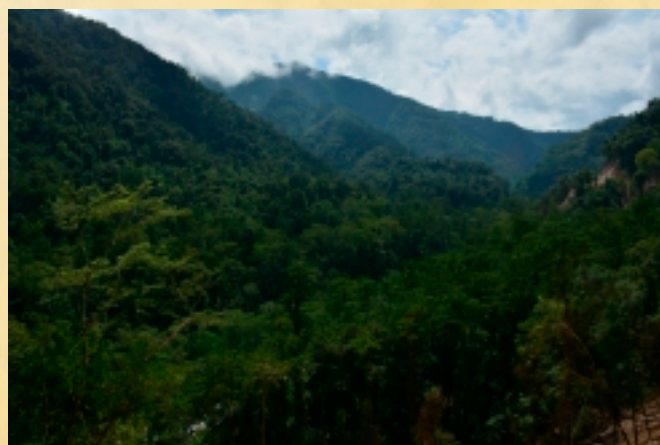
APRC survey team camping in the North eastern side of Talle Wildlife Sanctuary.



Blue bronzeback, *Dendrelaphis cyanochloris*



Common Hoopoe, *Upupa epops*



Tropical wet evergreen forests of Talle Wildlife Sanctuary.

DESERT REGIONAL CENTRE, JODHPUR

During the month, 5 species of butterflies & 3 species of fishes were identified and registered. 39 specimens from NZC were digitized for RFD. Under the research programme, “Studies on Faunal Diversity of Dry Grasslands of the Thar Desert”, Dr. H.S. Banyal, Sci.D, conducted survey of the grasslands in Ajmer, Bikaner, Sri Ganganagar and Hanumangarh districts of Rajasthan from 18th August to 4th September. 39 localities were surveyed from Grasslands of aforesaid districts & 176 lots comprising of 1564 examples of various faunal groups were collected, sorted out & registered.

Dr. Sanjeev Kumar, Scientist-D attended & delivered a lecture as a resource person in the National Seminar organized by CSTT, Ministry of HRD (Deptt. of Higher Education), New Delhi at Shri Govind Guru Govt. College, Banswara, Rajasthan on 16th September. Dr. Kumar also presided over the closing ceremony of the National Seminar as a distinguished guest on 17th September. As a special invitee he also attended the Farmers' Fair & Innovation Day organized by CAZRI, Jodhpur on 21st September. A stall depicting faunal diversity of the jurisdiction area was also installed by DRC, ZSI Jodhpur at the exhibition, on the occasion of the said event.

Dr. H.S. Banyal, Sci.D participated in a training programme on NPS organized by Crux Management PVT. Ltd. (authorized by

PFDR) at Jodhpur on 16th September. He also attended a training programme on “Service Matter” organized by INGAF, RTC at Kolkata from 19th – 23rd September.

A project entitled “Assessment of avian and fish populations including selected arthropod taxa in north-western arid zone - A climate change perspective”, was prepared and submitted to Director, ZSI, Kolkata for its onward submission to MoEF&CC, New Delhi under (LTEO Plan) (India) for approval and sanction.

Dr. Sanjeev Kumar conducted a Quarterly Workshop on Official Language Hindi on 6th September, 2016 at the Centre. The Centre witnessed Hindi Diwas and Hindi Week celebrations from 14th-21st September in which all the officers and staff participated.



A stall depicting faunal diversity at the exhibition on the occasion of Farmers Fair & Innovation Day organized by CAZRI, Jodhpur.



Dr. Sanjeev Kumar, delivering a lecture in the National Seminar at Shri Govind Guru Govt. College, Banswara, Rajasthan.



Hindi Diwas and Hindi Week celebrations.

CENTRAL ZONE REGIONAL CENTRE, JABALPUR

During the month, scientists of the Centre conducted faunistic survey covering Mhow tehsil of Indore district, Madhya Pradesh. 17 species of Lepidoptera and 1 species of Rodentia (Mammalia) were identified and registered from districts Raipur and Singrauli of Madhya Pradesh and Chhattisgarh.

Identification and advisory services rendered to the officer-in-charge, Vertebrate Pest Management, Indira Gandhi Krishi Vishwa Vidyalaya, Raipur (Chhattisgarh) for identification of two rat specimens- which were identified into one species and one genus. Identification and advisory service

was also rendered to the officer-in-charge, All India Network Project on Agricultural Ornithology, College of Horticulture, Kerala Agricultural University, Thrissur for identification of six specimen of rats which were identified into three species and three genera. One research paper was published during the period.

Publications

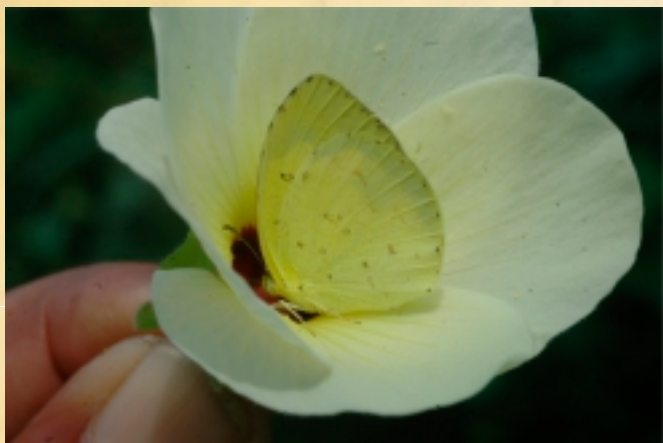
- Rathod, D.M., Parasharya, B.M. and Talmale, S.S. 2016. Odonata (Insecta) diversity of southern Gujarat, India. *Journal of Threatened Taxa* 8(11): 9339–9349.



A view from Janapav Hill, Mhow, Indore.



A view of Choral dam near Bargonda, Mhow tehsil, Indore.



Eurema brigitta (Cramer) on wild flower.



Maruca vitrata (Fabricius)

MARINE BIOLOGY REGIONAL CENTRE, CHENNAI

A total of 138 examples were identified during the month in the Centre, under various projects, which included 6 species of nematodes from 22 examples, 13 species of Mollusca from 111 examples, 1 species of Crustacea from 1 example, and 4 species of fishes from 4 examples.

Dr. Rajkumar Rajan, Sci.D, Ms. Nina

Thabitha Simon, JRF, Ms. Fathima Thasnia, JRF, and Shri. Adwaita Banerjee, JRF, participated in the seminar “Securing our coastal assets and communities for a sustainable future”, organized by PondyCAN – Priority Citizens Action Network, at Chennai on 17th September.

Ms. J. Vanishree, JRF of this centre

participated in the one day “International seminar on Recent Trends in Crustacean Research”, organized by Department of



Cantharus melanostoma (Sowerby I, 1825)

Aquatic Biology and Fisheries, University of Kerala, Karyavattom, Thiruvananthapuram on 20th September.



Meretrix lusoria (Roding, 1798)

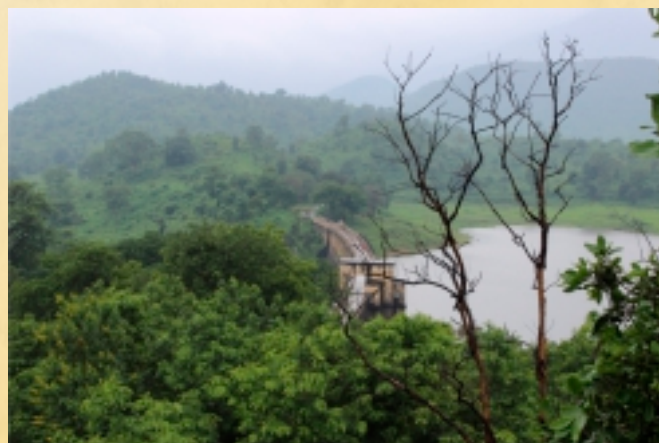
GANGETIC PLAINS REGIONAL CENTRE, PATNA

During the month a survey tour was conducted to the state of Jharkhand from 1st - 11th September. Localities like Hazaribagh WLS, Lawalong WLS, Topchanchi WLS were covered and 470 examples of Lepidoptera have been collected. 11 species under 59 examples of Mollusca and Annelida have been identified during the month.

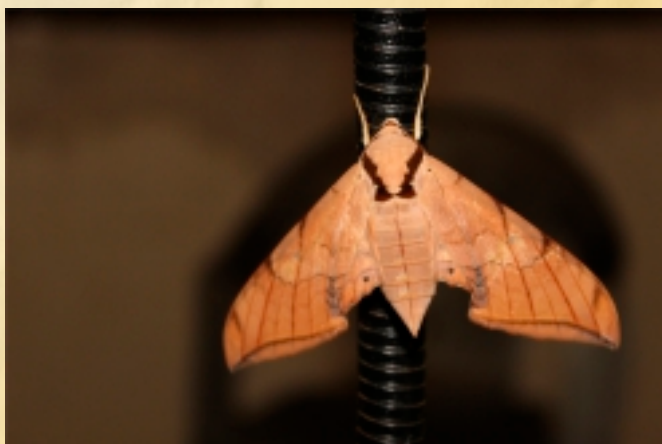
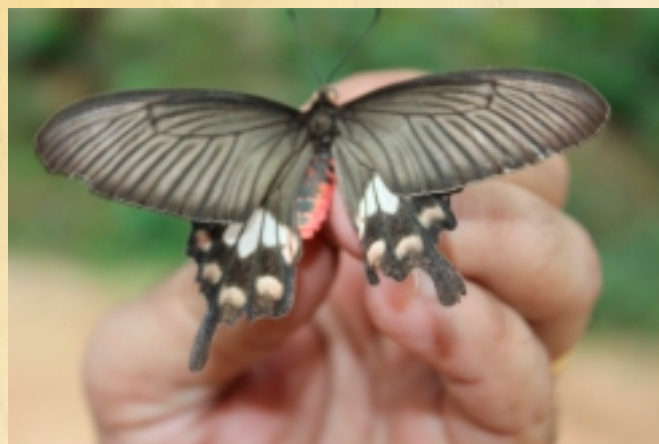
Dr. Gopal Sharma, Sci.D attended a meeting for finalization of Management plan with the CCF Wildlife Dept of Environment and Forests Govt. of Bihar on 22nd September.

Hindi Pakhwara was celebrated from 1st to

14th September and Hindi Diwas celebrated on 14th September at the Centre.



Topchanchi WLS.

*Ambulyx substrigilis**Papilio polytes*

WESTERN REGIONAL CENTRE, PUNE

During the month 9 species of Araneae, 3 species of Coleoptera (Hydrophilidae), 3 species of Lepidoptera (Noctuidae) and 28 species of freshwater fishes were identified. Identification and advisory services were rendered to Ms. Rashmi Mahobia, Research Student, Jabalpur, Madhya Pradesh, for freshwater fish and to Maharashtra Police for wildlife skins.

Dr. P.S. Bhatnagar, Sci.D & Officer-in-Charge attended 4th BoG meeting of Kundal Academy of Development, Administration and Management (Forest) on 14th September at Mantralaya, Mumbai. Dr. R. Bano, Sci.D delivered an invited lecture on "An Outline of Medical Entomology" under the skill development course "Diversity & Taxonomy" at Modern College of Arts, Science & Commerce, Ganeshkhind, Pune on 3rd September.

Dr. Sameer Kumar Pati, Senior Zoological Assistant attended "International Training Workshop on Crustacean Taxonomy" at Department of Aquatic Biology & Fisheries, University of Kerala, Kariavattom, Thiruvananthapuram from 20th - 23th September 2016.

Hindi fortnight (हिंदी पखवाड़ा) was observed at the centre in which various competitive events were organized and prizes were distributed to the winners. Smt. Harsha Banthia, Principal, Little Flower Junior College, Pune conducted a workshop on "शब्द भेद". Dr. P. Lakshminarasimhan, Scientist-E & Officer-in-Charge, Botanical Survey of India, Western Regional Centre, Pune gave away the prizes in a separate prize distribution ceremony held at the Centre.

A total number of 359 students from various schools and colleges visited the museum.

Publications

- Bano Ruquaeya. 2016. The Collembola (Arthropoda: Entognatha: Collembola) of North of Western Ghats. *Rec. zool. Surv. India* 116 (Part-1): 53-66.



Hindi Fortnight Celebrations



NORTH EASTERN REGIONAL CENTRE, SHILLONG

During the month, 7 species of fishes, 22 species of molluscs, 2 species of bats and 1 species of snake were identified. The identified species of fish and bats were digitized. Identity of 19 species of fish was provided to Dr. J. Sarmah, Department of Biotechnology, Bodoland University, Kokrajhar, Assam.

Two local surveys were conducted in BSI campus at Umiam, Ri-Bhoi district, Meghalaya and a total of 34 examples of various faunal elements were collected.

Hindi Diwas was observed by the Centre

from 2nd to 14th September and various competitions amongst the staff were organized.

A research scholar from the department of Ecology, School of Environmental Sciences, Assam University, Silchar visited the Centre on 21st September for library consultation and advisory services on edible insects. Another research scholar from the department of Aquaculture, ICAR-CIFE visited the Centre on 5th & 6th September for obtaining information on some fishes of Meghalaya.



Hindi Diwas at the Centre

HIGH ALTITUDE REGIONAL CENTRE, SOLAN

An extensive survey of Sainj Wildlife Sanctuary, district Kullu was undertaken from 22nd to 28th September. During the survey 35 kms of tough landscape of the sanctuary has been covered on foot for observing and collecting the faunal groups. Various habitats such as deodar and kayal forests, walnut plantations, agriculture fields, riverine habitats, disturbed areas around hydroelectric projects and wild vegetation have been surveyed. A total of 791 examples referable to 18 faunal groups have been collected during the survey. Faunistic identification from the Centre includes 4

species of butterflies (out of 20 examples), 4 species of Orthoptera (out of 7 examples) from Sainj Wildlife Sanctuary, district Kullu. 1 species of Pisces (out of 1 example), 1 species of Amphibia (out of 4 examples) from Cold Desert of Spiti Valley, district Lahaul & Spiti, and 2 species of butterflies (out of 4 examples) and 3 species of Pisces (out of 4 examples) from Govind Sagar Wetland have been identified.

The registration and digitization of 52 examples of butterflies from Cold Desert of Spiti Valley, district Lahaul & Spiti and 3 examples of Pisces from district Kangrahas

were done and the information on registered specimens has been entered in the Research Framework Document Formats.

Dr. Avtar Kaur, Sci.D of the Centre has identified outside material *viz.* 10 examples referable to 1 species of the butterflies from Middle Eastern Ghat Survey of Southern Regional Centre, Zoological Survey of India, Chennai and 8 species of butterflies from Surguja district of Chhattisgarh for Ph.D. student of Loyola College, Chennai.

A research paper on Orthoptera in National Journal has been reviewed by a scientist of the centre. The Report on Fauna of Ladakh, Jammu and Kashmir as per directives of the scientific committee has been compiled and submitted to HQs, Kolkata.

Hindi Divas and Hindi Pakhwara have been celebrated in the Centre. The Inaugural Session of Hindi Pakhwara of TOLIC at Urdu teaching Centre, Solan was attended by Officer-in-Charge and Dr. Indu Sharma, Sci.D on 14th September and Officer-in-Charge

addressed the TOLIC members on the importance of use of Hindi in day-to-day office works. In Hindi Pakhwara celebrations in collaboration with Town Official Language Implementation Committee (TOLIC), a Samanya Hindi Gyanvardhan competition was organized at the centre on 20th September in which various Central Government officials took part. Under Hindi Pakhwara celebrations, various competitions were organized among the staff and prizes were distributed to the winners of the competitions.

During the month a total of 127 visitors visited the museum gallery of HARC, ZSI, Solan. Dr. Avtar Kaur delivered a lecture to 52 students from S.D. College, Chandigarh on "Role of Zoological Survey of India in Taxonomy and study of Biodiversity". The renovation of museum and construction work of Himalayan Repository are under progress.



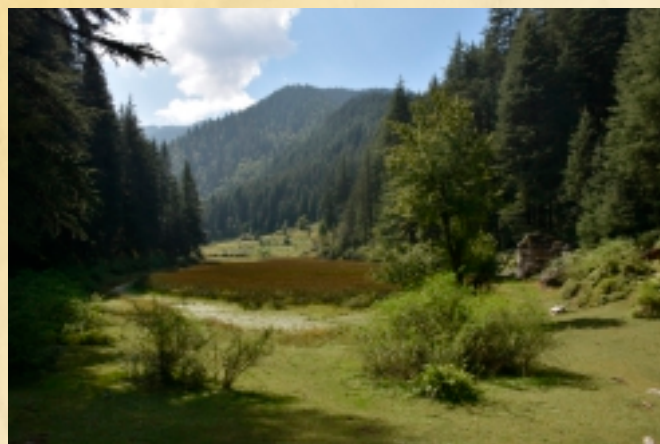
Samanya Hindi Gyanvardhan competition of TOLIC organized at HARC, ZSI, Centre.



Students visiting Museum Gallery.



Terrain near Changa site in Sainj WLS.



View of Dalogi site at Sainj WLS.

SOUTHERN REGIONAL CENTRE, CHENNAI

During the month Dr. R. Babu, Sci.D undertook one faunal survey tour to the parts of Kodaikanal Wildlife Sanctuary and Megamalai Wildlife Sanctuary and Reserve forests in the Western Ghats of Dindigul and Theni Districts of Tamil Nadu State from 8th to 24th September to explore the diversity of Stoneflies, Mayflies and Caddisflies and other faunal groups. 1,522 examples of specimens belonging to various faunal groups were collected. Another survey was undertaken by Dr. Prabakar, Sci.B, from 15th to 30th September as per the two approved survey programmes namely Lesser known Fauna of Cauvery Estuary, Tamil Nadu; and Fauna of Kodiyakkarai (Point Calimere) Wildlife and Bird Sanctuary, Tamil Nadu. A total of 3,185 examples of faunal specimens belonging to various fauna groups were collected.

During the month Dr. R. Babu identified 15

species of odonates received from High Altitude Regional Centre, Zoological Survey of India, Solan. Dr. S. Prabakar identified 66 examples of Caddisflies belonging to Hydropsychidae family, that were collected from the Southern Western Ghats. Dr. R. Aengals identified 17 amphibian specimens into 5 species under 5 genera belonging to 5 families. They were collected from Tropical rainforests of Western Ghats in Tamil Nadu. Shri D. Prabakar identified 12 specimens of the superfamilies namely Acridoidea, Pyrgomorphae and Tetrigoidea, as 6 species under 6 genera belonging to 6 subfamilies and 3 families. They were collected during the faunistic survey to Viluppuram and Thiruchirappalli districts of Tamil Nadu in the year, 2012. Dr. V.M. Sathish Kumar, Assistant Zoologist completed the DNA extraction and PCR for

the following species, *Polypedates maculatus* (J.E. Gray, 1830) and *Hemidactylus brookii* Gray, 1845. Dr. A. Gokul, Assistant Zoologist, identified 3 specimens of decapods from the collections of Cauvery Estuary and point Calimere Survey. Vimala. D, JRF digitalized 272 examples of insects. Two papers and two abstracts were published during the month.

Dr Subramanian, Sci-D and officer in charge attended the Board of Trustees Meeting at Chennai Snake Park on 24th September, and ABS Meeting at NBA, Chennai on 26th September. He also conducted PhD Viva of Ms. Dhanya Balan at WGRC, ZSI, Kozhikode

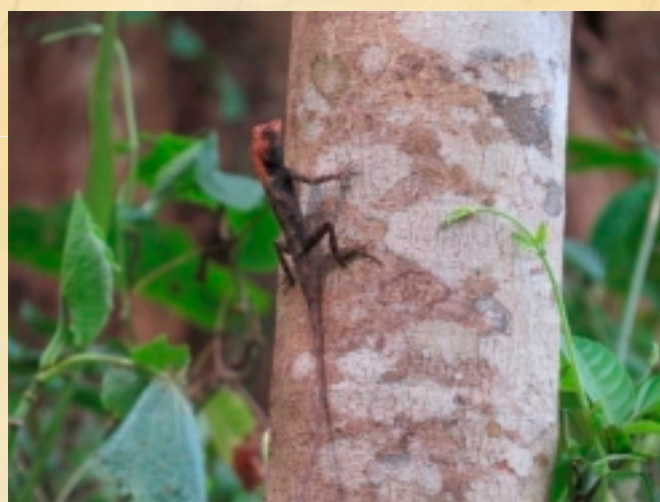
on 29th September.

Publications

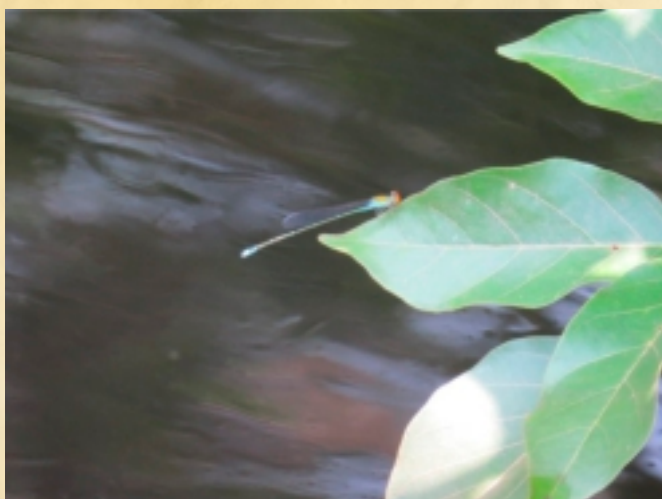
- Srimoyee Basu, K.A. Subramanian and Goutam Kr. Saha. Aquatic and Semi-aquatic Heteroptera (Insecta: Hemiptera) of Terai-Dooars region of West Bengal, India (PDF) [doi: 10.5281/zenodo.61516](https://doi.org/10.5281/zenodo.61516). Halteres.
- D. Vimala, R. Sundararaj, S. Prabakaran, K. Ilango and K. Revathi. 2016. Status of whiteflies (Hemiptera: Aleyrodidae) infesting *Ficus religiosa* Linn. in India and their coexistence. *Biolife*, 4(3):582-58.



Common Hawk Cuckoo



Elliot's forest lizard



Pseudagrion rubriceps



Red Whiskered bulbul

ANIMAL OF THE MONTH*Poecilotheria striata* Pocock, 1895

Common Name(s): Mysore Ornamental / Striated Parachute / Striped Parachute Spider

Poecilotheria Simon is an old-world genus, of the tarantula family Theraphosidae and is represented by 14 species in the World. Seven species are endemic to India, five to Sri Lanka and two are recorded from both the countries, as per the World Spider Catalog, 2016. It is the

only genus of Theraphosidae in India that is exclusively arboreal.

P. striata Pocock, 1895 is an Indian endemic species, with distribution restricted to Kerala, Tamil Nadu and Karnataka. It is the second most commonly found theraphosid in the Western Ghats, after *P. regalis* Pocock. The species is known to occur in dry and moist deciduous forests and also shares the same



habitat with *P. regalis* in its distributional range. However, the species is distinguished from *P. regalis* Pocock, by the absence of a band on its venter, presence of yellow band on leg femora and spermathecae simple and fused.

It's total body length 48.15 mm. width of carapace and abdomen 20.00 mm.

The species is facing threats due to pet trade, habitat loss and fragmentation and has been listed as Vulnerable as per the IUCN Red List, 2008.

Contributed by Dr. Dhruva Chandra Dhali,
Post-Doctoral Fellow, WGRC, Calicut