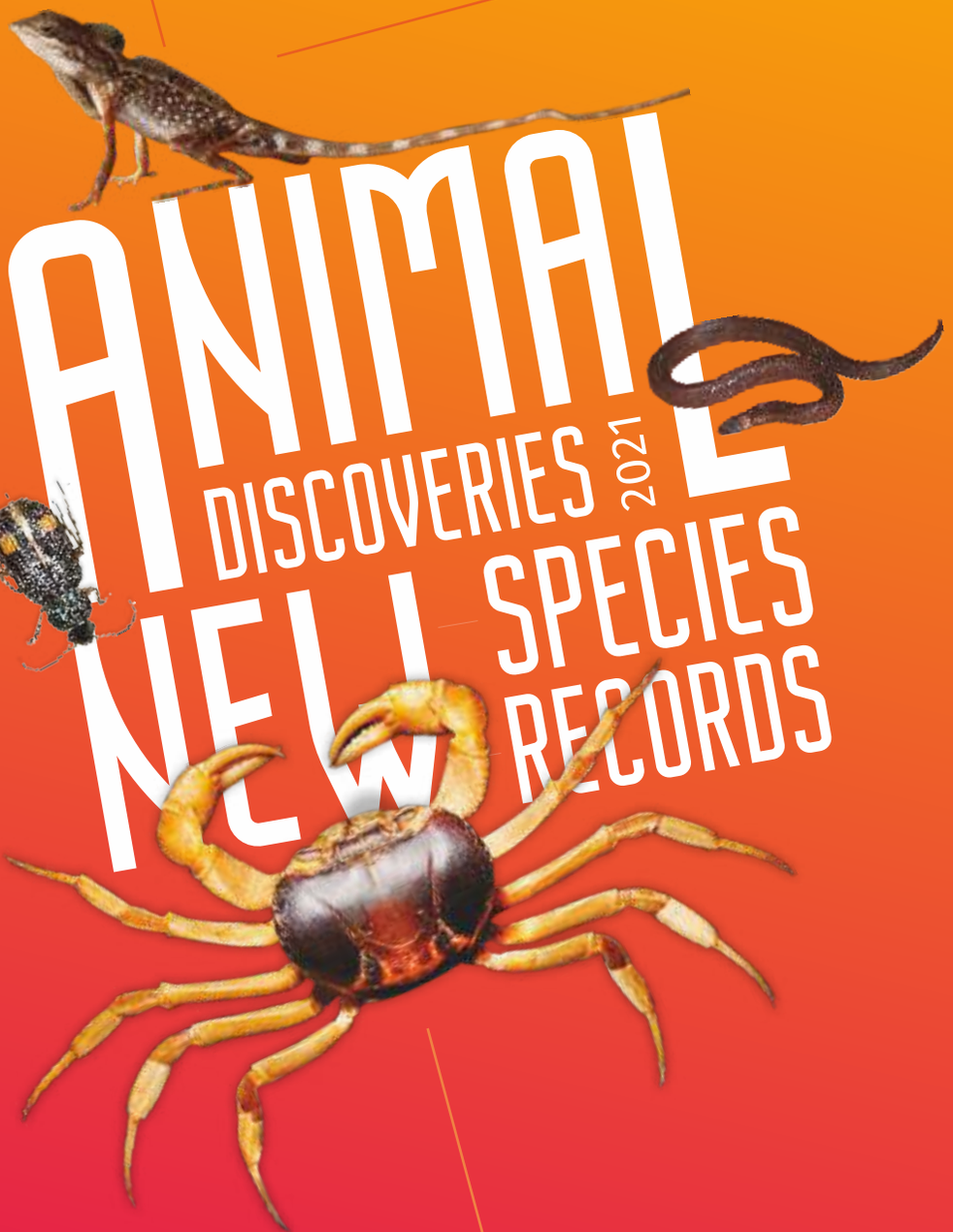
आज़ादी का अमृत महोत्सव

सत्यमेव जयते

Ministry of Environment, Forest and Climate Change



ANIMAL DISCOVERIES 2021

NEW SPECIES RECORDS

Zoological Survey of India,1916

ZOOLOGICAL SURVEY OF INDIA

सत्यमेव जयते

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ZOOLOGICAL SURVEY OF INDIA
Ministry of Environment, Forest and Climate Change
Government of India

About Animal Discoveries

Greater biodiversity leads to greater stability in ecosystems, species, and individuals. The discovery of new species broadens our understanding of biodiversity. It is significant because it helps to protect them now and in the future. It also enables the general public to understand the existence of all species worldwide, as well as our ability to shape the social, political, and financial forces that influence conservation efforts. Zoological Survey of India is playing major role in the exploration of the fauna of our country. Since 2007, ZSI has stepped forward to collate information of faunal discoveries in India and publish them as a document entitled "Animal Discoveries- New Species and New Records" every year. The present book for the year 2021 deals with 540 new discoveries which include 406 new species and 134 newly recorded species to India. As a result of it, the faunal diversity of India has been enhanced to 1,03,258 species which is equivalent to 6.1 per cent of the Global faunal diversity.

ANIMAL DISCOVERIES 2021 NEW SPECIES RECORDS

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Bhupender Yadav

Union Minister
Ministry of Environment,
Forest and Climate Change
Government of India

The biological diversity of life on earth is the foundation of human existence and well-being. It protects us from natural disasters, regulate the climate and provide us food. The plants and animals which currently live on earth have continued to evolve over the 65 million years since the last mass extinction.

Despite the fact that awareness around the importance of biodiversity is increasing, the exact nature and extent of biodiversity at local, regional and national levels remains difficult to evaluate for several reasons. Overall, there is very little detailed recording of biodiversity, and this varies globally and also within countries.

Discovering new species is important as it helps to protect them. Furthermore, new species can also produce compound that could lead to the development of new medicines. It is estimated that 15 million different species live on our planet, but only 2 million of them are currently known.

India is one of the biodiversity rich countries in the world which shares about 7 percent of global biota with a high degree of endemism to the tune of about 30 percent. Thirty percent of the Indian biodiversity is concentrated in the Himalayan Mountains, 20 percent in the Coastal and Marine, 18 percent in the North-East, 17 percent in the Western Ghats and 11 percent in the Islands.

Zoological Survey of India is one of the pioneer organizations in the country, continuously exploring and discovering the faunal wealth of India over the past 106 years and systematically documenting them for their conservation, management and sustainable utilization of bioresources.

In this context the present book entitled, 'Animal Discoveries – 2021: New species and New Records' provides the comprehensive details of 540 species including 406 newly described and 134 newly recorded faunal species from India along with their distribution pattern. I consider this as a very significant contribution to the biodiversity accounting not only of India but also of the world.

I congratulate the entire fraternity of Zoological Survey of India for bringing out this breakthrough document to update Indian biodiversity and also to formulate effective managerial practices to conserve the rich bioresource of our country.

Best wishes.

[Bhupender Yadav]

27 May 2022
New Delhi

MESSAGE

सत्यमेव जयते

अश्विनी कुमार चौबे

Minister of State
Environment, Forest and Climate Change,
Consumer Affiairs, Food & Public Distribution,
Government of India

विश्व का 2.3 प्रतिशत भौगोलिक क्षेत्रफल होने के बावजूद भार में विश्व की जैवविविधता का लगभग 8 प्रतिशत मौजूद है। 26 वैश्विक जैवविविधता वाले प्रमुख स्थलों में से 4 भारत में जाए जाते हैं। विश्व की 70 प्रतिशत प्रजातियां केवल 12 देशों में पाई जाती हैं, जिसमें से भार भी एक है।

जैव विविधता के बारे में जागरूकता बढ़ी है, किन्तु अभी भी पृथ्वी पर पाई जाने वाली प्रजातियों के संबंध में ज्ञान सीमित है। मेरा मानना है कि, जैवविविधता को संरक्षित और संवर्धित करने के लिए इनका वर्गिकी विवरण, आकलन एवं संकलन अत्यधिक महत्वपूर्ण है।

विश्व में प्रजातियों के विवरण की मौजूदा दर 17,000 से 20,000 नई प्रजातियां प्रति वर्ष है। इस तरह वर्तमान में मौजूद सभी प्रजातियों का विवरण प्राप्त करने में करीब 500 वर्ष लग जाएंगे। तथापि, यह कार्य एक चुनौती बनता जा रहा है, क्योंकि प्राकृतिक और मानवजनित जलवायु परिवर्तन के कारण पृथ्वी पर प्रजातियां, उनका विवरण प्राप्त करने की तुलना में अधिक तेजी से विलुप्त हो रही हैं।

इस विषय के लिए पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार की एक नोडल एजेंसी है, जिसका मुख्य सरोकार भारत के प्राकृतिक संसाधनों, इसकी जैवविविधता, बनों और वन्यजीवों का संरक्षण एवं संवर्धन करना है।

इस मंत्रालय के अंतर्गत भारतीय प्राणी सर्वेक्षण, देश के जीव जन्तु संबंधी संसाधनों का वर्गिकी विवरण करने और इसके प्रकाशन के माध्यम से सूचना का प्रसार करने में महत्वपूर्ण भूमिका निभाता है। इसी श्रृंखला में भारती प्राणी सर्वेक्षण ने अपनी पुस्तक 'एनिमल डिस्कवरिज़–2021: न्यू स्पिशीज़ एंड न्यू रिकॉर्ड्स' प्रकाशित की है, जिसमें भारत में पाई गई 540 नवीन जीव प्रजातियों का विवरण प्रदान किया गया है।

मैं, इस महत्वपूर्ण प्रकाशन के लिए एवं इसमें बहुमूल्य योगदान देने के लिए निदेशक, भारतीय प्राणी विज्ञान सर्वेक्षण और उनके वैज्ञानिक सहकर्मियों के अथक प्रयासों की सराहना करता हूँ। मुझे विश्वास है कि, यह पुस्तक न केवल वन्यजीव प्रबंधकों के लिए, अपितु शिक्षाविदों एवं शोधकर्ताओं के लिए बहुत उपयोगी सिद्ध होगी।

अश्विनी कुमार चौबे

आज़ादी का अमृत महोत्सव

MESSAGE

Leena Nandan, IAS

Secretary,
Ministry of Environment, Forest and Climate Change
Government of India

Biodiversity is of paramount importance for supporting all forms of life, as a wide range of animals, plants and microorganisms are essential for a healthy and thriving ecosystem. Approximately 9 million types of plants, animals, protists and fungi inhabit the Earth. Since living organisms interact in a dynamic and inter-dependent manner, the disappearance of even one species can have a far-reaching impact on the food chain.

Biodiversity loss is attributable to several causes, but by far the biggest reasons are habitat destruction and over-exploitation of species. Ecological imbalance makes the environment unfavourable, and this is why biodiversity conservation is at the heart of Sustainable Developmental Goals.

Discovering new species or new populations of species has obviously broadened conservation measures in the wider world. Taxonomy provides basic understanding about the components of biodiversity which is necessary for effective decision making with regard to sustainable use of natural resources. Although there is extensive taxonomic works on groups such as birds, mammals and higher animals, little is known of their distribution, biology and genetics. It is estimated that while only 10 percent of the vertebrates remain to be described, more than 50 percent of arthropods and up to 95 percent of protozoa are as yet undescribed.

In order to fulfil the gaps in taxonomical research in India, the scientist are exploring and discovering species with an average of 400 - 500 species per year and ZSI is publishing the reports periodically. I am glad to note that the present book on 'Animal Discoveries-2021: New Species and New Records' provides consolidated information of 540 faunal species reported from India in the year 2021.

I commend the Director, ZSI and indeed the entire team, for their noteworthy contributions to this publication, which will undoubtedly create awareness about the need for conservation of India's faunal wealth.

[Leena Nandan]
May 2022
New Delhi

FOREWORD

Zoological Survey of India,1916

Dr. Dhriti Banerjee

Director
Zoological Survey of India

Healthy and vibrant biodiversity can only profess a sustainable resources of the world for the future generation. In addition, biodiversity is of fundamental social, ethical, cultural and economic value. The survival of the human race is completely dependent on nature as we directly use more than 40% of biological resources.

Presently, the global biodiversity is under grievous challenges due to everincreasing anthropogenic threats whereas natural calamities are also contributing notably to creating declining threats in a greater extent. Rough estimates suggest that we are currently undergoing not only unprecedented, but accelerating rates of biodiversity loss due to destruction of natural habitats.

India is endowed with one of the greatest forms of nature and natural resources coupled with geo-climatic conditions, stands 8th position out of 17 Mega-biodiverse countries of the world. The diversified landscape, terrain, topography, habitat, and ecological features in terrestrial and aquatic zones including the ocean provide the scope and capability to endure assorted life forms.

Knowledge of the kind of variety of organisms and ecosystems that exist and the way they relate to each other and to humans must be a foundation of any conservation action. The Zoological Survey of India under the Ministry of Environment, Forest and Climate Change is continuously exploring and examining the faunal wealth of the country and address their importance, particularly in terms of their ecosystem services and goods and services they provide to humans.

The purpose of the present book, Animal Discovereis-2021: New Species and New Records is to focus on the documentation of new additions of the Indian biodiversity in global context and to create an awareness for concerted efforts to safeguard them.

I am glad that the present publication during the year of Azadi Ka Amrit Mahotsav depicts the consolidated information for 540 species of newly found fauna which enhanced the India's faunal diversity to 1,03,258 species which is equivalent to 6.1 % of world's faunal diversity.

I congratulate the ZSI fraternity and the animal taxonomists of India for their significant contributions to bring out this document lucidly.

[Dhriti Banerjee]
Kolkata
23 May, 2022

आज़ादी का अमृत महोत्सव

ABBREVIATIONS USED

ADSH	Division of Arachnology, Department of Zoology, Sacred Heart College, Thevara, Cochin, Kerala, India.
AIMB	ATREE Insect Museum, Bangalore, India.
AMC	Collection of Andreas Weigei, Wernburg, Germany.
AMU	Aligarh Muslim University, Aligarh, Uttar Pradesh, India.
AMU-ZD-NC	Department of Zoology, Aligarh Muslim University, India.
ATREE-AIMB	Ashoka Trust for Research in Ecology and the Environment Insect Museum, Bengaluru, India.
BCKV	Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India.
BNHS	Bombay Natural History Society, Mumbai, Maharashtra, India
CATE	Centre for Animal Taxonomy and Ecology, Christ College, Irinjalakuda, Kerala, India.
CES, IISc	Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India
CIARI-FF	Central Island Agricultural Research Institute, Freshwater fish collection, Port Blair, India.
CKC	Private collection of Karel
CMLRE	Centre for Marine Living Resources and Ecology, Kochi, Kerala, India.
CUSAT	Cochin University of Science and Technology, Kochi, Kerala.
DABFUK	Department of Aquatic Biology and Fisheries, University of Kerala, India.
DHSGV-ZDM	Dr. Harisingh Gour Vishwavidyalaya, Zoology Department Museum, Sagar, Madhya Pradesh, India.
DNGC	Dera Natung Government College, Itanagar.
DZUC	Department of Zoology, University of Calicut, Malappuram, Kerala, India.
EDAU	Entomology Department, Annamalai University, Chidambaram, Tamil Nadu, India.
GKVK	Gandhi Krishi Vignana Kendra, Bengaluru.
GUMF	Gauhati University Museum of Fisheries, Assam, India.
ICAR-CMFRI	Indian Council of Agricultural Research, Central Marine Fisheries Research Institute, Kochi, Kerala.
ICAR-IARI	Indian Council of Agricultural Research, Indian Agricultural Research Institute, New Delhi.
ICAR-IINRG	Indian Council of Agricultural Research, Indian Institute of Natural Resins and Gums, Ranchi, Jharkhand, India.
ICAR-NBAIR	Indian Council of Agricultural Research, National Bureau of Agricultural Insect Resources, Bengaluru, India.
ICAR-NBFGR	National Fish Museum and Repository of the Indian Council of Agricultural Research, National Bureau of Fish Genetic Resources, Lucknow, India.
IPUM	Indraprastha University Museum, New Delhi.
IRRA	Indian Wildlife Rescue and Research Association.
JNCASR	Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, India.
KFRI	Kerala Forest Research Institute, Peechi, Thrissur, India
KUFOS	Kerala University of Fisheries and Ocean Studies, Kochi, India.
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, United States.
MDZUK	Museum Department of Zoology, University of Kashmir.
MSNM	Museo Civico di Storia Naturale, Milan, Italy.
MUMF	Manipur University Museum of Fishes, Manipur, India.
MWM-ZSM	Museum Witt Munich in the Bavarian State Collection of Zoology (Museum Witt München / Zoologische Staatssammlung München) Munich, Germany.
MZMU	Departmental Museum of Zoology Mizoram University, India.
NCBS	National Centre for Biological Sciences, Bengaluru, India.
NFIC-FRI	National Forest Insect Collection, Forest Research Institute, Dehradun, India.
NHMUK	Natural History Museum, London.
NMNH-NASU	National Museum of Natural History of the National Academy of Sciences of Ukraine, Kyiv, Ukraine.

NPC	National Pusa Collection, Division of Entomology, Indian Council of Agricultural Research, Indian Agricultural Research Institute, New Delhi, India.
NPC-IARI	National Pusa Collection, Indian Agricultural Research Institute, New Delhi.
NRCB	National Research Centre for Banana, Tamil Nadu, India.
NZC	National Zoological Collections.
NZCI	National Zoological Collections, Kolkata.
NZC-ZSI	National Zoological Collections, Zoological Survey of India, Kolkata.
NZSI	National Zoological Collections of the Zoological Survey of India.
PUAC	Punjabi University Patiala Ant Collection, Punjab, India.
PUCMF	Pachhunga University College Museum of Fishes, Mizoram.
RGUMF	Rajiv Gandhi University Museum of Fishes, Itanagar, Arunachal Pradesh, India.
UASB	University of Agricultural Sciences, Bengaluru, India.
UOMI	University of Mysore, Mysore, Karnataka, India.
USDA	Mycology and Nematology Genetic Diversity and Biology Laboratory, USDA, ARS, Northeast Area, Beltsville, Maryland, USA.
WII	Wildlife Institute of India, Dehradun, India.
ZDAMU	Department of Zoology, Aligarh Muslim University, Aligarh, Uttar Pradesh, India.
	Zoological Institute of the Russian Academy of Sciences, St Petersburg, Russia.
ZKJSSC	Zoology Department, K.J. Somaiya College, Mumbai, India.
ZSI-ANRC	Zoological Survey of India, Andaman and Nicobar Research Centre, Port Blair, Andaman & Nicobar Islands, India.
ZSI-APRC	Zoological Survey of India, Arunachal Pradesh Regional Centre, Itanagar, Arunachal Pradesh, India.
ZSIC	National Zoological Collection, Southern Regional Centre of the Zoological Survey of India.
ZSI-CEL	Central Entomology Laboratory, Zoological Survey of India, Kolkata, West Bengal, India.
ZSI-CZRC	Zoological Survey of India, Central Zone Regional Centre, Jabalpur, Madhya Pradesh, India.
ZSI-DRC	Zoological Survey of India, Desert Regional Centre, Jodhpur, Rajasthan, India.
ZSI-EBRC	Zoological Survey of India, Estuarine Biology Regional Centre, Gopalpur-on-Sea, Odisha, India.
ZSI-HARC	Zoological Survey of India, High Altitude Regional Centre, Solan, Himachal Pradesh, India.
ZSI-HQ	Zoological Survey of India, Head Quarter, Kolkata, West Bengal, India.
ZSIK (WGRC)	Zoological Survey of India, Western Ghat Regional Centre, Kozhikode, India.
ZSIK	Western Ghat Regional Centre, Zoological Survey of India, Kozhikode.
ZSIK-NZC	National Zoological Collections, Zoological Survey of India, Kolkata, India.
ZSI-MARC	Zoological Survey of India, Marine Aquarium and Regional Centre, Digha, West Bengal, India.
ZSI-MBRC	Zoological Survey of India, Marine Biological Research Centre, Chennai, Tamil Nadu, India.
ZSI-NERC	Zoological Survey of India, North Eastern Regional Centre, Shillong, India.
ZSI-NZC	National Zoological Collections, Zoological Survey of India.
ZSI-SRC	Zoological Survey of India, Southern Regional Centre, Chennai, Tamil Nadu, India.
ZSI-WGRC	Zoological Survey of India, Western Ghat Regional Centre, Kozhikode (Calicut), Kerala, India.
ZSI-WRC	Zoological Survey of India, Western Regional Centre, Pune, Maharashtra, India.
ZSM	Zoologische Staatssammlung Munich, Germany.

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EXECUTIVE SUMMARY

India is one of the world's recognized mega-diverse countries, home to approximately 7-8 percent of the world's documented biota and four of the 36 globally recognized biodiversity hotspots (Himalaya, Indo-Burma, Western Ghats and Sri Lanka, Sundaland). In addition to biological resources, India has a rich repository of traditional knowledge. Through regular surveys and research, inventories of floral and faunal diversity are being gradually updated with various new discoveries. Zoological Survey of India (ZSI), is involved in the taxonomical studies of fauna since its inception in 1916. Scientists of ZSI are describing new species at the rate of 125 to 135 per year. Till December 2021, a total of 5392 species have been described as new to science by the scientists of ZSI. Since 2007, ZSI is publishing every year the compiled information on the published new species and new records from India in the Book "Animal Discoveries of India - New species and New Records". During 2021, a total 540 (106 new species and 134 new records to India, 13 new genera and one new subspecies) new discoveries have been published from India (Table1).

Table 1.
The species under different faunal groups described as new species as well as new record during 2021

Sl.No.	Faunal Group	New genus	New Species	New Subspecies	New Record to India
1.	Mammalia		1		1
2.	Aves				1
3.	Reptilia		35		1
4.	Amphibia		9		1
5.	Pisces		18		6
6.	Echinodermata				1
7.	Mollusca		6		9
8.	Bryozoa				12
9.	Diplopoda		2		
10.	Diptera		8		6
11.	Lepidoptera	1	14	1	22
12.	Trichoptera		3		10
13.	Neuroptera		3		
14.	Coleoptera		23		5
15.	Hymenoptera	1	80		13
16.	Hemiptera	4	45		6
17.	Thysanoptera		4		9
18.	Psocoptera		1		1
19.	Orthoptera		11		
20.	Blattodea		3		
21.	Odonata		3		5
22.	Ephemeroptera		21		7
23.	Crustacea	2	22		4
24.	Arachnida	3	48		4
25.	Annelida		6		
26.	Nematoda	2	26		1
27.	Tardigrada		1		
28.	Acanthocephala		1		
39.	Platyhelminthes		6		1
30.	Cnidaria		1		1
31.	Protozoa		5		5
32.	Chromista				2
	Total	**13**	**406**	**1**	**134**

India constitutes 6.1 % Fauna to the total faunal wealth of the world

Table 2. Number of Animal species known from India (updated December 2021)

Kingdom	Phylum	Number of species World (approx)	Number of species India	2021 additions
Protista	Phylum Protozoa	50,012	3,557	12
Animalia	Phylum Mesozoa	122	10	
	Phylum Porifera	8,550	571	
	Phylum Cnidaria	11,99,35	1,461	2
	Phylum Ctenophora	199	20	
	Phylum Platyhelminthes	29,495	1,800	7
	Phylum Rotifera	2200	467	
	Phylum Gastrotricha	790	163	
	Phylum Kinorhyncha	315	10	
	Phylum Nematoda	30,027	3017	27
	Phylum Acanthocephala	1,308	308	1
	Phylum Sipuncula	162	41	
	Phylum Echiura	198	47	
	Phylum Annelida	20,006	1,051	6
	Phylum Onychophora	183	1	

Kingdom	Phylum	Number of species World (approx)	Number of species India	2021 additions
	Phylum Arthropoda	12,04,015	77,270	
	Subphylum Chelicerata	61,592	6,172	
	Class Arachnida	60,052	6,134	52
	Class Merostomata	200	2	
	Class Pycnogonidia	1,340	36	
	Subphylum Crustacea	67,735	3,972	26
	Subphylum Hexapoda	1,063,834	66,741	
	Class Collembola	8,162	340	
	Class Diplura	975	18	
	Class Protura	816	20	
	Class Insecta	10,53,881	66,363	303
	Subphylum Myriapoda	1,1,155	385	
	Class Chilopoda	3,112	101	
	Class Diplopoda	7,839	274	2
	Class Symphyla	204	10	
	Phylum Phoronida	12	3	
	Phylum Bryozoa (Ectoprota)	5,434	350	12
	Phylum Entoprocta	150	10	
	Phylum Brachiopoda	392	8	
	Phylum Chaetognatha	170	44	
	Phylum Tardigrada	1,381	32	1
	Phylum Mollusca	85,015	5,249	15
	Phylum Nemertea	1,368	6	
	Phylum Echinodermata	7,551	788	1
	Phylum Hemichordata	139	14	
	Phylum Chordata	1,10,394	6,960	
	Subphylum Cephalochordata	33	6	
	Subphylum Urochordata	2,804	531	
	Subphylum Vertebrata [= Craniata]	1,07,557	6,423	
	Class Pisces	70,449	3,496	24
	Class Amphibia	8,445	443	10
	Class Reptilia	11,733	706	36
	Class Aves	10,357	1,346	1
	Class Mammalia	6,500	432	2
	Total (Animalia)	**16,29,511**	**99,701**	
	Grand Total (Protista + Animalia)	**16,79,523**	**1,03,258**	**540**

According to the database of ZSI as on 1st January 2022, the faunal diversity of India is 1,03,258 species with the addition of 540 species to the Indian fauna (including 406 new species and 134 new records to India), which accounts to 6.1% of Global faunal diversity (Table 2).

The definition of species is the most fundamental in the field of biological science. The most widely accepted definition focuses on interbreeding, stating that a species is a group in which two individuals can breed to produce fertile offspring. Taxonomy is the branch of biology concerned with the science of naming, describing, and classifying organisms, which encompasses all plants, animals, and microorganisms on the planet. Every year, taxonomists describe the tens of thousands of living things on the planet. Sometimes these species are completely new to science and have never been studied before, and other times a species and its subspecies are examined more closely and it is determined that they should be considered separate species.

Life on Earth first appeared 4.28 billion years ago, shortly after the formation of the oceans (4.41 billion years ago) and not long after the formation of the Earth (4.54 billion years ago) (Dodd *et al.*, 2017). Bacteria are the earliest known life forms (Schopf *et al.*, 2018). Our planet is home to millions of species, with roughly 86 percent of life occurring on land, 13 percent in the deep subsurface and only 1 percent in the ocean. Each species has adapted to a different environment, such as tropical, temperate, polar, terrestrial, freshwater, marine, high or low altitude, dry, wet, or a combination of the two. Most places on Earth have at least one unique species, but the density of biodiversity varies greatly between continents (Hannah and Max, 2021). An estimated data documented our planet had more than 99 percent of all species that ever lived on Earth are expected to be extinct. Scientists and taxonomists are predicted after some data validation against well-known taxa, and when applied to all domains of life, it revealed approximately 8.7 million eukaryotic species, give or take 1.3 million. Of which approximately 2.2 million species, give or take 0.18 million eukaryotic species are marine (Mora *et al.*, 2011). The most recent biodiversity estimate, based on a new prediction method, significantly narrows the range, which was previously between 3 million and 100 million. This means that 86 percent of land species and 91 percent of marine species are still unknown (Sweetlove, 2011; Catalogue of Life, 2018).

INTRODU

After 264 years of taxonomic classification described by 1758 by Swedish scientist, Carl Linnaeus, approximately 14 percentages of terrestrial species and approximately 9 percentages of marine species have been indexed in central database. According to the Mora *et al.* (2011), present rate of new species description is 6,200 species per year give or take 811 eukaryote species in the last 20 years. The average number, 24.8 new species described per taxonomist's and the estimated average cost to describe animal species is about US$48,500 per species (Carbayo and Marques, 2011). Assuming those above values remain constant and are general among taxonomic groups, describing Earth's remaining species may take as long as 1,200 years and would require 303,000 taxonomists at an approximated cost of US$364 billion (Mora, 2011). Even though there will not be a chance to describe all species the present rate of speed and there are chance that species extinct before we know they even existed (Pimm *et al.*, 1995).

The diversity of life on our planet is one of its most striking features, and species discovery and classification into their systematic hierarchy are important features in biology, with documentation notes on ecosystem series, biological sources, and social benefits. In terms of species diversity, all plants and animals followed an intriguing pattern, namely, latitudinal and longitudinal gradients with greater diversity near the equator and decreasing towards the poles. Biological diversity is important for humans through ecosystem services and goods. Ecosystem services are broken down into regulating services such as air and water

purification, goods services such as fuel and food, cultural services, and supporting services such as pollination and nutrient cycling.

The Indian subcontinent is the seventh-largest country in the world and the 8th megadiverse country out of 17 megadiverse countries in the world, and it falls under the Indo-Malayan biogeographic region, one of eight biogeographic regions in the world. It has a total area of 3,287,263 square kilometers, a land boundary of about 15,200 km, and a coastline of 7,516.6 km. India represents two realms (Palearctic Realm and Indo-Malayan Realm), five biomes (Tropical Humid Forests, Tropical Dry or Deciduous Forests, Warm Deserts and Semi-deserts, Coniferous forests, and Alpine meadows), and 10 biogeographic zones (Trans-Himalayas, Himalayas, Desert, Semi-arid, Western Ghats, Deccan Peninsula, Gangetic plain, North-east India, Islands, and Coasts) with 25 biogeographic provinces and four biodiversity hotspots (Eastern Himalayas, Western Himalayas, Western Ghats, and Andaman and the Nicobar Islands). In addition, nearly 5% of India's total land area is formally designated as protected. The Indian subcontinent's diverse biomes, including desert, high mountains, highlands, tropical and temperate forests, swamplands, plains, grasslands, and areas surrounding rivers, as well as the island archipelago, cover 23.39 percent of its geographical area. This provides a home for thousands of species that have been described and those that have yet to be discovered through extensive surveys and exploration to better understand Indian biodiversity. As a result, high rates of biodiversity loss provide an urgent incentive to improve our understanding of the Earth's remaining species.

2

CTION

The Zoological Survey of India (ZSI) was established on 1st July, 1916 and one of the pioneer institutes in India to study Faunal Taxonomy in the country. ZSI is one of the largest faunal repositories in the world, and it maintains voucher specimens for reference to the taxonomists. ZSI has a total holding of more than 5.6 million specimens maintained since 1810 and from 46 countries. The institute mainly focus on exploration, survey, inventorying and monitoring of faunal diversity in various states, periodic review of the status of threatened and endemic species, ecosystems and protected areas of India, bio-ecological studies, and training, faunal identification, advisory services for forest department and maintenance & development of National Zoological Collections. The explorations and the collections of ZSI publications gives the basic profile on country biodiversity profile.

The year 2021 witnessed a total of 540 new discoveries from India (406 new species and 134 new records). This year also the majority of the species are recorded from invertebrates with 467 species, whereas only 73 species belong to vertebrates. Among invertebrates, insects dominated with 304 species, whereas Reptiles dominated among vertebrates, followed by Pisces. A severe lack of taxonomic competence and resources has resulted in a lack of global biodiversity knowledge and databases, particularly in developing countries. Diversity of species discovery in different faunal groups is represented in Figure 1.

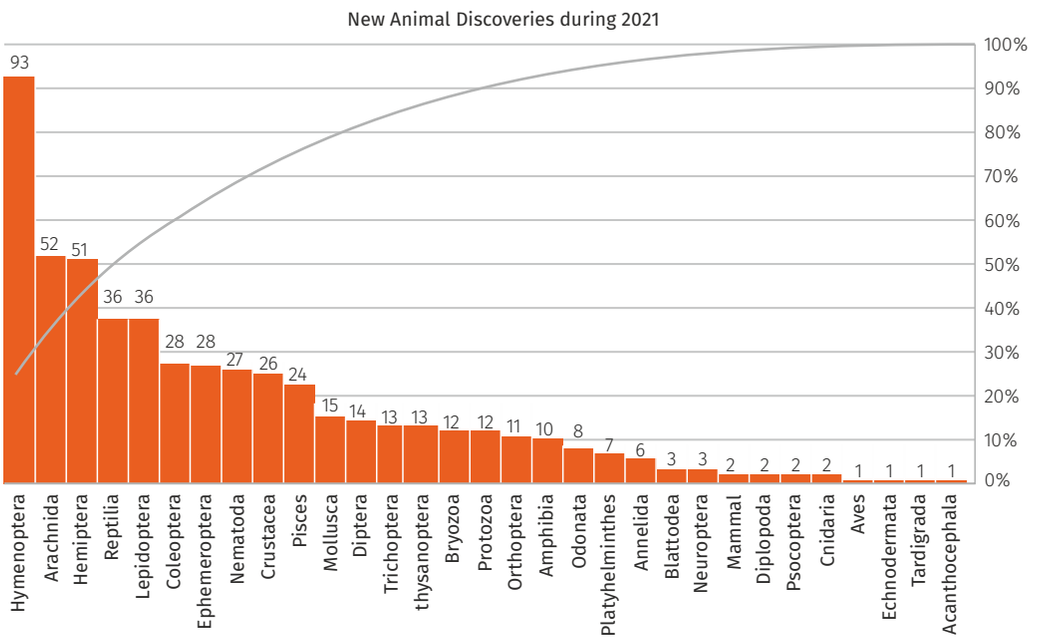


Figure 1. Trend of occurrence of New Species in different Faunal Groups during 2021

The lack of a system to organize previous taxonomic knowledge, as well as frequent contemporary taxonomic modifications, have hampered species identification. As a result, the Global Taxonomy Initiative (GTI), a UN Convention on Biological Diversity (CBD) cross-cutting issue, was established to address the lack of taxonomic information and expertise available in many parts of the world, and thus to improve decision-making in conservation, sustainable use, and equitable sharing of the benefits derived from genetic resources.

The data analysis of last 12 years (2010-2021) reveals that a total of 4, 652 species (3,206 new species; 1,446 new records) have been added to the Indian fauna. As regards new species maximum of 407 species are described in the year 2020 and minimum of 28 species in 2010, whereas, maximum new records were 257 species in 2010 and lowest of 54 species in 2013 (Fig. 2). It is also important to state that scientists of ZSI alone have contributed nearly 33.65% (1079 species) of total newly described and 69% (1000 species) of newly recorded species during the last 12 years (Fig. 2).

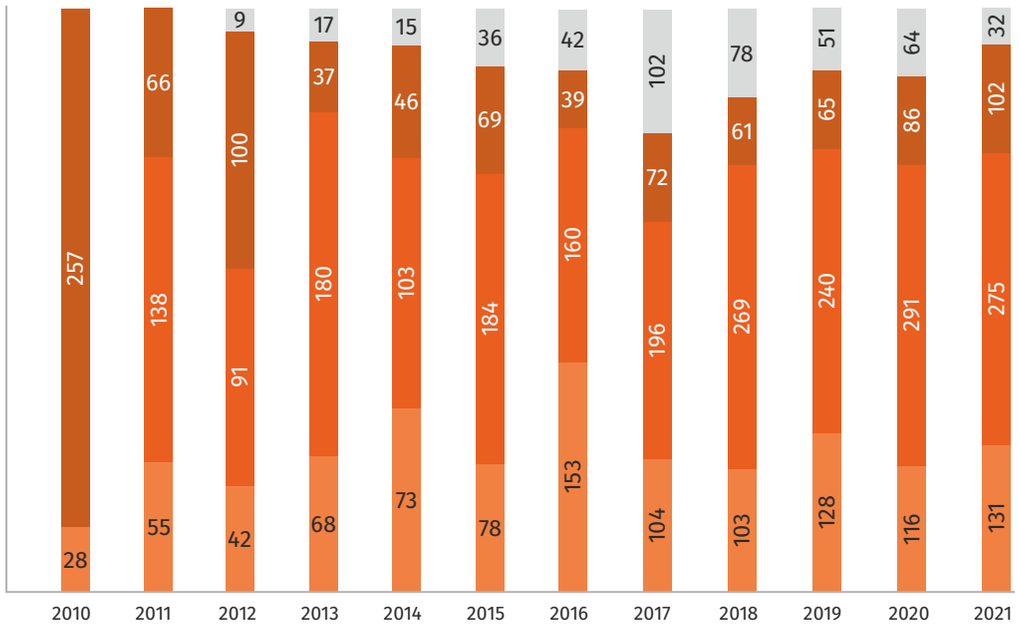
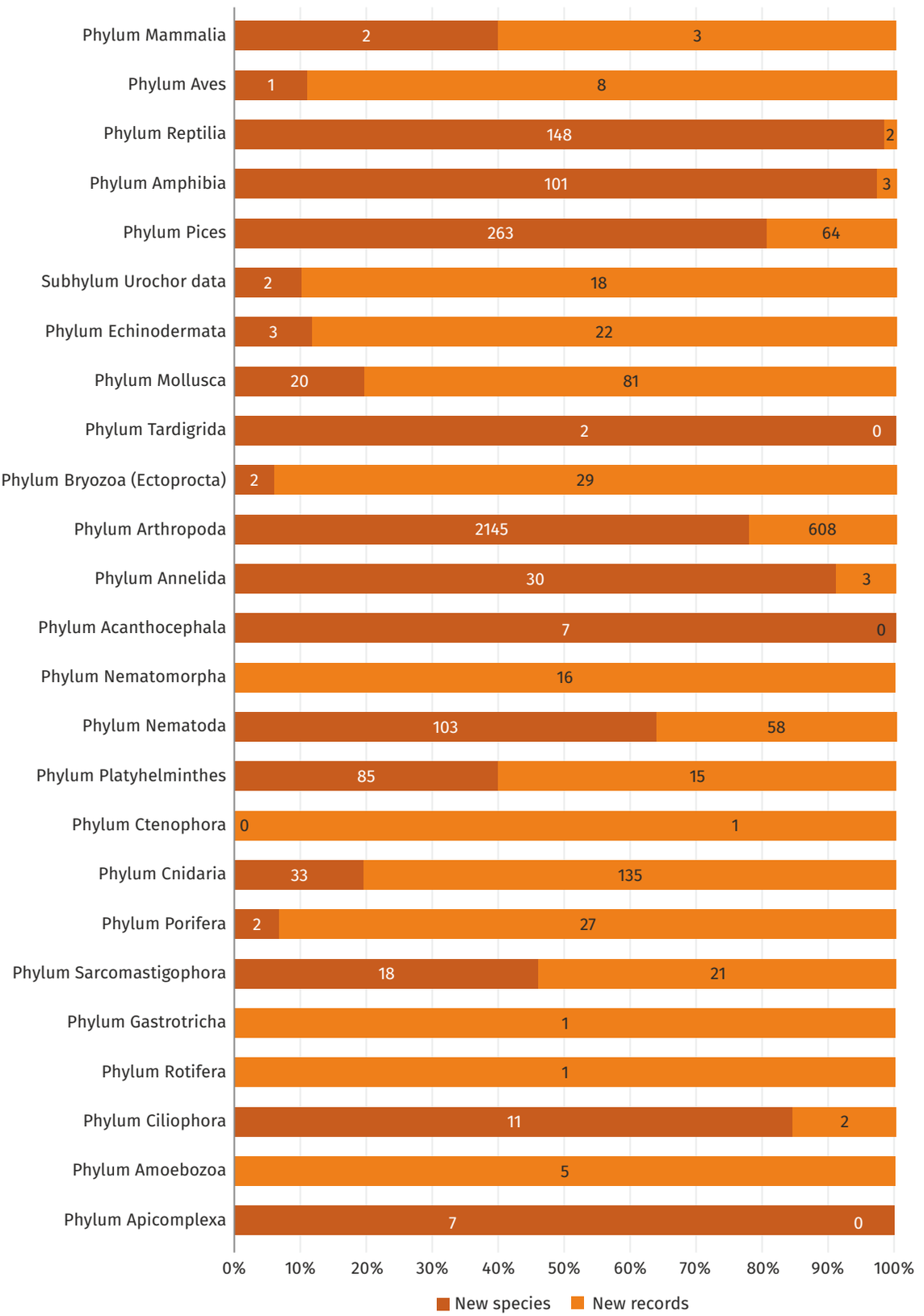


Figure 2:
Addition of new species and new records of fauna in India during last 12 years.

The group-wise faunal inventory during the last 12 years (2010-2022) suggested that maximum of 2145 species are newly described under the Phylum Arthropoda while only two species each is described under the Phyla Porifera, Bryozoa, Tardigrada and Urochordata among the invertebrates. Among the vertebrates maximum of 263 species of fishes and minimum of only two species of mammals are described (Fig. 2). Among the new distributional records, maximum of 608 species of arthropods are recorded from India (Fig. 3).

Figure 3:
Addition of group-wise new species and new records of fauna in India during last 12 years



States	Number of New Species	Number of New Records
Andaman and Nicobar	18	14
Andhra Pradesh	11	4
Arunachal Pradesh	30	14
Assam	5	4
Bihar	1	1
Chhattisgarh	3	2
Dadra & Nagar Haveli	1	
Goa	5	1
Gujarat	1	3
Himachal Pradesh	9	4
Jammu & Kashmir	16	4
Jharkhand	1	3
Karnataka	36	9
Kerala	86	11
Lakshadweep	2	6
Leh		1
Madhya Pradesh	3	
Maharashtra	22	5
Manipur	5	
Meghalaya	24	6
Mizoram	11	7
Nagaland	7	
Odisha	7	5
Rajasthan	1	3
Sikkim	9	2
Tamil Nadu	41	6
Telangana	1	
Tripura	2	
Uttar Pradesh	8	2
Uttarakhand	9	6
West Bengal	47	13
Gulf of Mannar		4
Manali Putti Island		5

Table 1.
State wise list of new species and new records during 2021

It may be concluded (Table 1) that maximum new discoveries are recorded from Kerala (89 new species; 11 new records); followed by West Bengal (47;13), Tamil Nadu (41;6), Karnataka (36;14), Arunachala Pradesh (30;14), Meghalaya (24;6), Maharashtra (22;5) , while single new species reported from Bihar, Dadra & Nagar Haveli, Telangana, Rajasthan and Gujarat .In general during 2021, more new discoveries are reported from the southern part of India followed by West Bengal and North East region.

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3

NEW SPECIES

MAMMALS

3.1

Mammals as an astonishing group show remarkable biodiversity of species, life histories and behaviors, which are also treated as indicators for ecosystem health. Although mammals represent a very small fraction of biodiversity, the world is overused for conservation planning since their protection also conserves key habitats for many other taxa. They are also taxonomically well known in comparison to other taxa. Global mammals account for more than 6500 species, of which 434 species (8 %) belong to 48 families of 13 orders found in India. Out of 434 Indian mammalian species, 403 species are terrestrial and 31 species are marine form. A total of 45 species of mammals are considered endemic to India. Of which, three genera such as *Anathana*, *Latidens* and *Nilgiritragus* are monotypic and found only in the Western Ghats of India. Scientists of the Zoological Survey of India recently discovered a new insectivorous mammal species from India after 43 years by using both morphological and molecular approaches. This year one new species of mammal has been described by the scientists of ZSI.

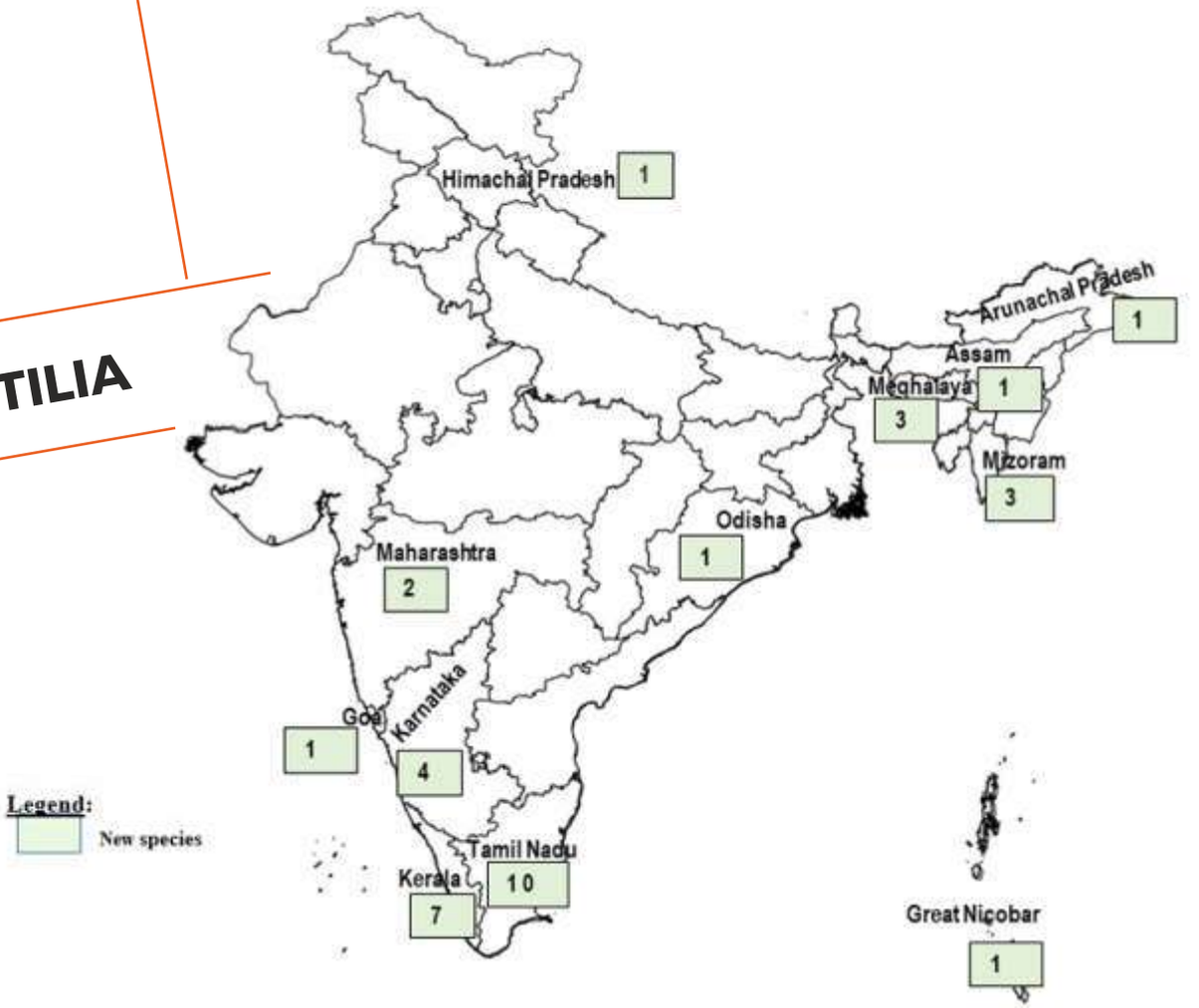
Crocidura narcondamica Kamalakannan, Sivaperuman, Kundu, Gokulakrishnan, Venkatraman & Chandra. *Scientific Reports*, 11: 9416, 2021

Phylum: CHORDATA
Class: MAMMALIA
Order: EULIPOTYPHLA
Family: SORICIDAE
Genus: *Crocidura* Wagler, 1832

The species *Crocidura narcondamica* was described by Manokaran Kamalakannan, Chandrakasan Sivaperuman, Shantanu Kundu, Govindarasu Gokulakrishnan, Chinnadurai Venkatraman and Kailash Chandra based on a Holotype collected from Andaman and Nicobar Archipelago, Narcondam Island (13°27.290'N and 94°16.436'E, 11 m). The type specimens have been deposited in ZSI-NZC of Andaman & Nicobar Regional Centre. The new species is named for the type locality, Narcondam Island, where the type specimens were collected. The specific epithet is feminine latinized adjective. This is 435th species of mammal from India.

Crocidura narcondamica Kamalakannan *et.al.*, 2021

3.2 REPTILIA



Reptiles are one of the most diverse vertebrates and they first appeared during the Mesozoic era, about 250 million years. Reptiles have adapted to a variety of habitats ranging from temperate to hot and moist to arid regions. Reptiles are vulnerable to habitat degradation, poaching, pollution, climate change, etc. The class Reptilia comprises chelonians (turtles & tortoises), crocodilians, snakes, lizards, tuatara and their extinct relatives. Out of nearly 11,733 species of extant reptiles recorded worldwide, more than 728 species are distributed in India. The reptilian diversity of India is represented by 03 species of crocodiles, 39 species of turtles and tortoises, more than 343 species of lizards and more than 343 species of snakes. Other than maintaining balance in the ecosystem, reptiles are used to produce medicine, food, clothing, etc. and some of them are also potentially dangerous to humans, affecting millions of lives each year, in conflicting situations. However, economic value is not the only reason to conserve biodiversity. Reptiles serve as an important source of protein for humans globally. Among all the reptiles, turtles are the most heavily exploited. In some parts crocodilians, lizards and snakes are also consumed as a source of protein. Many reptiles are used in traditional medicines as well as in modern research. They are also poached for their skin and other body parts. Among the indirect services, reptiles such as snakes and monitor lizards help in controlling the rodent pest which affects our crop production, without them, there would have been a huge loss in agriculture. Global Reptile diversity comprises11733 species, while 728 species are recorded from India, of which 390 species are endemic. Out of 728 species reported from India, 629 species are assessed by IUCN, of which 107 species are in the threatened category, 37 are Near Threatened, 360 are Least Concerned and 125 species are in the Data Deficient category. The threatened list includes 26 Critically Endangered, 48 Endangered and 33 species under the Vulnerable category. This year one new genus and 35 new species of reptiles have been published from several states and UTs. of India, namely, Tamil Nadu (10), Kerala (7), Karnataka (4), Mizoram (3), Meghalaya (3), Maharashtra (2), Arunachal Pradesh (1), Assam (1), Goa (1), Great Nicobar (1), Himachal Pradesh (1) and Odisha (1).

Sitana sushili Deepak *et al.*, 2021

Genus: *Sitana* G. Cuvier, 1829

Sitana sushili Deepak, Tillack, Kar, Sarkar & Mohapatra. *Zootaxa*, 4948(2): 261-274, 2021

The species *Sitana sushili* was described by V. Deepak, Frank Tillack, Nilabri B. Kar, Vivek Sarkar and Pratyush P. Mohapatra based on a Holotype collected from Odisha, Sambalpur district, Chiplima (21.3501°N and 83.9137°E) and two Paratypes collected from Brooks hill, Sambalpur district, Odisha (21.483°N and 83.766°E). The type specimens have been deposited in BNHS. The species is named in honor of Professor Sushil Kumar Dutta from Odisha, India, for his continued support in promoting herpetology in India through the "School in Herpetology".

Class: REPTILIA
Order: SQUAMATA
Family: AGAMIDAE
Genus: *Agasthyagama* Srikanthan, Adhikari, Ganesh, Deuti, Das, Kulkarni, Gowande & Shanker, 2021

Agasthyagama Srikanthan, Adhikari, Ganesh, Deuti, Das, Kulkarni, Gowande & Shanker . *Zootaxa*, 5016(2):205-228, 2021

The genus *Agasthyagama* (Type species: *Otocryptis beddomii* Boulenger, 1885) was described by Achyuthan N. Srikanthan, Omkar Dilip Adhikari, Sumaithangi Rajagopalan Ganesh, Kaushik Deuti, Kalpana Das, Vidisha M. Kulkarni, Gaurang G. Gowande and Kartik Shanker based on a Syntype collected from Tamil Nadu, Sivagiri Ghat (9.14°N and 77.24°E). The type specimens have been deposited in ZSI-NZC. The new genus is named after its distribution range in the Agasthyamalai, that in turns gets its name from the Vedicsage Agathya—a sage in Hindu tradition—suffixed with the nomen "agama", commonly used to refer to agamid lizards, a term believed to have been brought to Dutch Guiana (Suriname) by West African slaves, whose term for chameleons was 'agama' in their native Gbe language (Arends 2017). The gender is masculine.

Family: COLUBRIDAE
Genus: *Boiga* Fitzinger, 1826

Boiga whitakeri Ganesh, mallik, Achyuthan, Shanker & Vogel. *Zootaxa*, 4981(3): 449-468, 2021

The species *Boiga whitakeri* was described by S.R. Ganesh, Ashok Kumar Mallik, N.S. Achyuthan, Kartik Shanker and Gernot Vogel based on a Holotype collected from Tamil Nadu, Tirunelveli district, in Periyar plateau of the Southern Western Ghats, Devar Malai (9.173N and 77.261E, 1020 m) and one Paratype collected from Kerala, Ernakulam district, Pullompara. The type specimens have been deposited in BNHS. Patronym named in genitive singular case honoring Romulus Whitaker, for his pioneering and substantial efforts to study and conserve Indian reptiles, especially snakes. Suggested common name: Whitaker's cat snake.

Boiga whitakeri Ganesh *et al.*, 2021

Genus: *Oligodon* Fitzinger, 1826

Oligodon churahensis Mirza, Bhardwaj & Patel. *Evolutionary Systematics*, 5(2021): 335-345, 2021

The species *Oligodon churahensis* was described by Zeeshan A. Mirza, Virender Kumar Bhardwaj and Harshil Patel based on a Holotype and one Paratype collected from Himachal Pradesh, Chamba district, Churah Valley, near Thanei Kothi village (32.835467 and 76.119381, 1864 m). The type specimens have been deposited in NCBS and BNHS. The specific epithet refers to the Churah Valley where the new species was collected. Suggested common name: Churah Valley Kukri.

Oligodon churahensis Mirza *et al.*, 2021

Genus: *Platyceps* Blyth, 1860

Platyceps josephi Deepak *et al.*, 2021

Platyceps josephi Deepak Narayanan, Mohapatra, Dutta, Melvinselvan, Khan, Mahlow & Tillack. *Vertebrate Zoology*, 71: 253-316, 2021

The species *Platyceps josephi* was described by V. Deepak, Surya Narayanan, Pratyush P. Mohapatra, Sushil K. Dutta, Gnanaselvan Melvinselvan, Ashaharraza Khan, Kristin Mahlow and Frank Tillack based on a Holotype collected from Tamil Nadu, Tuticorin (8.75442° N and 78.18482° E) and three Paratypes collected from different localities of Tamil Nadu state. The type specimens have been deposited in BNHS, NCBS and ZSI-CZRC. The species is named after late Mr Naveen Joseph who was a naturalist from Tuticorin, well known for his research on reptiles, particularly snakes in that region.

Genus: *Rhabdophis* Fitzinger, 1843

Rhabdophis bindi Das, Smith, Sidik, Sarker, Boruah, Patel, Murthy and Deepak. *Zootaxa*, 5020(3): 401-433, 2021

The species *Rhabdophis bindi* was described by Abhijit Das, Eric N. Smith, Irvan sidik, Goutam C. Sarker, Bitupan Boruah, Naitik G. Patel, B.H.C.K. Murthy and V. Deepak based on a Holotype collected from Assam, Cachar district, Maruacherra (24.97354N and 92767E) and four Paratypes collected from different localities of Cachar district, Assam. The type specimens have been deposited in WII. The species epithet, 'bindi', is an invariable feminine noun derived from the Sanskrit word 'bindu' (meaning a bright spot), referring to the unique "red marking on the nape region of the new species and reminiscent of the "red beauty spot adorning the foreheads of Indian women and signifying the point of creation of the comos".

Rhabdophis bindi Das *et al.*, 2021

Family: GEKKONIDAE
Genus: *Cnemaspis* Strauch, 1887

Cnemaspis balerion Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

The species *Cnemaspis balerion* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Karnataka, Baba Budan Hills, d from the buttress of a tree inside the forest, Dattathreyapeeta (13.450°N and 75.751°E, 1410 m). The type specimens have been deposited in BNHS and CES, IISc. The species is named after "Balerion", a famous dragon from George R. R. Martin's epic fantasy novel series, 'A song of Ice and fire'. The dragon was also known as 'the black dread' due to presence of black scales. Like Balerion, this new species shows the presence of distinct clusters of black scales forming spots on the dorsum. Suggested Common Name: Balerion forest gecko.

Cnemaspis balerion Pal *et al.*, 2021

Cnemaspis flavigularis Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

The species *Cnemaspis flavigularis* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and six Paratypes collected from Kerala, from the trunk of a tree, Mathikettan Shola National Park, Cardemom Hills (9.973°N and 77.245°E, 1340 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived from the combination of the Latin word 'flavus' meaning yellow and '*gularis*' meaning throat, referring to the distinct yellow colouration of the throat in males of the new species. Suggested Common Name: Yellow throated day gecko.

Cnemaspis flavigularis Pal *et al.*, 2021

Cnemaspis galaxia Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

The species *Cnemaspis galaxia* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Tamil Nadu, from a rock in a low elevation riparian forest, Srivilliputhur (9.566°N and 77.559°E, 290 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived from the word '*galaxy*' due to the dorsum colouration with the sun's haze like yellow on the anterior and bluish white star like spots on a black background towards the posterior end, in the male of this species. Suggested Common Name: Galaxy day gecko.

Cnemaspis galaxia Pal *et al.*, 2021

Cnemaspis jackieii Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis jackieii Pal *et al.*, 2021

The species *Cnemaspis jackieii* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from a boulder next to a stream, near Karuppanadhi dam, Vairavankulam Reserve Forest, Tamil Nadu (9.170° N and 77.277° E, 750 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is a patronym as a tribute to the famous actor and martial artist Jackie Chan. Suggested Common Name: Jackie's day gecko.

Cnemaspis krishnagiriensis Agarwal, Thackery & Khandekar. *Zootaxa*, 4969(2): 351-366, 2021

Cnemaspis krishnagiriensis Agarwal *et al.*, 2021

The species *Cnemaspis krishnagiriensis* was described by Ishan Agarwal, Tejas Thackeray and Akshay Khandekar based on a Holotype and two Paratypes collected from Tamil Nadu, Krishnagiri district, from behind Kugai Periya Mariamman Temple, near Krishnagiri fort (12.544 and 78.224E, 550 m). The type specimens have been deposited in NRC-AA and BNHS. The specific epithet is a toponym for Krishnagiri in Krishnagiri district of Tamil Nadu, the type and only known locality for this species. Suggested Common Names: Krishnagiri dwarf gecko.

Cnemaspis lithophilis Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis lithophilis Pal *et al.*, 2021

The species *Cnemaspis lithophilis* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Karnataka, Mookambika Wildlife Sanctuary, from a boulder next to a stream near Kollur (13.893° N and 74.833° E, 450 m) and one Paratype collected from Karnataka, Central Western ghats, from the crevice of a tree trunk near Jog falls. The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived from the combination of the Greek word '*lithos*' meaning stone and '*philia*' meaning fondness, due to the close association of this species with rocks. Suggested Common Name: Sharavati rock gecko.

Cnemaspis nigriventris Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis nigriventris Pal *et al.*, 2021

The species *Cnemaspis nigriventris* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Kerala, from gaps between rocks along a forest trail, Achankovil Reserve Forest (9.127° N and 77.177° E, 207 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived from the combination of Latin word '*niger*' meaning black and 'venter' meaning belly, due to the distinct black ventral colouration in the male of this species. Suggested Common Name: Black bellied day gecko.

Cnemaspis nimbus Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis nimbus Pal *et al.*, 2021

The species *Cnemaspis nimbus* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Kerala, from a boulder in an evergreen forest, Mathikettan Shola National Park, Cardamom Hills (10.008° N and 77.248° E, 1630 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived from the Latin word 'nimbus' meaning cloud; referring to the prominent clouded pattern on the dorsum and flank. Suggested Common Name: Clouded Forest gecko.

Cnemaspis palanica Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis palanica Pal *et al.*, 2021

The species *Cnemaspis palanica* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and three Paratypes collected from Tamil Nadu, from the trunk of a tree, near Kookal, Palani Hills (10.298° N and 77.364° E, 1550 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet refers to the 'Palani Hills' in the SWG of Tamil Nadu, from where this species is described. Suggested Common Name: Palani Hills day gecko.

Cnemaspis regalis Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis regalis Pal *et al.*, 2021

The species *Cnemaspis regalis* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and six Paratypes collected from Tamil Nadu, from a rock along stream in a low elevation forest patch in Mundanthurai, Kalakkad Mundanthurai Tiger Reserve (8.656°N and 77.331°E, 216 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is based on the Latin word '*regalis*' meaning kingly or royal, due to the head ornamented with golden yellow crown like pattern in the males of this species. Suggested Common Name: Golden crowned day gecko or Royal day gecko.

Cnemaspis rubraoculus Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis rubraoculus Pal *et al.*, 2021

The species *Cnemaspis rubraoculus* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and two Paratypes collected from Kerala, Megamalai, from a tree trunk in an evergreen forest in Upper Manalar, Periyar Tiger Reserve (9.571°N and 77.334°E, 1552 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is derived by combining the Latin word '*rubrum*', meaning red, and '*oculus*' meaning eye; referring to the prominent red iris. Suggested Common Name: Ruby eyed forest gecko.

Cnemaspis schalleri Khandekar, Thackery & Agarwal. *Zootaxa*, 4950(3): 501-527, 2021

Cnemaspis schalleri Khandekar *et al.*, 2021

The species *Cnemaspis schalleri* was described by Akshay Khandekar, Tejas Thackeray and Ishan Agarwal based on a Holotype and seven Paratypes collected from Karnataka, Hassan district, from the vicinity of Mookanana resort, Hongadahalla village, Sakleshpur (12.781°N and 75.708°E, 850 m). The type specimens have been deposited in NRC-AA and BNHS. The specific epithet is a patronym honouring George Beals Schaller, for his contributions to conservation, field research and science. Common Names: Schaller's Sakleshpur dwarf gecko.

Cnemaspis smaug Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis smaug Pal *et al.*, 2021

The species *Cnemaspis smaug* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and four Paratypes collected from Kerala, from a boulder in an evergreen forest, Mathikettan Shola National Park, Cardamom Hills (9.975° N and 77.241° E, 1364 m). The type specimens have been deposited in BNHS and CES, IISc. The species is named after "Smaug", the dragon from J. R. R. Tolkien's 1937 novel, 'The Hobbit'. The name is derived from the old German verb 'smeuganan' meaning "to creep" or "to squeeze through a hole". Suggested Common Name: Smaug forest gecko.

Cnemaspis uttaraghati Khandekar, Thackeray & Agarwal. *Zootaxa*, 4969(2): 331-350, 2021

Cnemaspis uttaraghati Khandekar *et al.*, 2021

The species *Cnemaspis uttaraghati* was described by Akshay Khandekar, Tejas Thackeray and Ishan Agarwal based on a Holotype and three Paratypes collected from Maharashtra, Ahmednagar district, Kedareshwar caves on Harishchandragad mountain in Kalsubai-Harishchandragad Wildlife Sanctuary (19.392° N and 73.779° E, 1200 m). The type specimens have been deposited in NRC-AA and BNHS. The specific epithet is used as a noun in apposition and is derived from the Sanskrit 'uttara' for north and 'ghat' for mountains, as this mountain locality represents the currently known northern limit of Cnemaspis distribution in the Western Ghats. Suggested Common Names: Northern dwarf gecko or Harishchandragad dwarf gecko.

Cnemaspis wallaceii Pal, Mirza, Dsouza & Shanker. *Zoological Research*, 42(6): 675-691, 2021

Cnemaspis wallaceii Pal *et al.*, 2021

The species *Cnemaspis wallaceii* was described by Saunak Pal, Zeeshan A. Mirza, Princia Dsouza and Kartik Shanker based on a Holotype and one Paratype collected from Tamil Nadu, Anamalai Hills, from a rock in an evergreen forest, Andiparai Shola (10.394° N and 76.992° E, 1307 m). The type specimens have been deposited in BNHS and CES, IISc. The species epithet is a patronym, honouring Alfred Russel Wallace for his tremendous contribution to the field of biogeography. His work has been an inspiration for the authors and towards this study. Suggested Common Name: Wallace's Forest gecko.

Genus: *Cyrtodactylus* Gray, 1827.

Cyrtodactylus aaronbauri Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan & Rathee. *Zootaxa*, 4980(1): 451-489, 2021

The species *Cyrtodactylus aaronbauri* was described by Jayaditya Purkayastha, Hmar Tlawmte Lalremsanga, Sanath Chandra Bohra, Lal Biakzuala, H.T. Decemson, Lal Muansanga, Mathipi Vabeiryureilai, Suraj Chauhan and Yashpal Singh Rathee based on a Holotype and two Paratypes collected from Mizoram, Aizawl district, Durtlang North (23.797266° N and 92.728791° E, 1285 m) and six Paratypes collected from different localities of Mizoram state. The type specimens have been deposited in the National Zoological Collection, maintained by the Department of Zoology, Mizoram University, Aizawl, Mizoram, India. The specific epithet aaronbaueri is an eponym honouring Dr. Aaron Bauer for his unparalleled contribution to the field of gekkotan taxonomy. The name is masculine and formed in the genitive case. Suggested common name: Aaron Bauer's bent-toed gecko.

Cyrtodactylus aaronbauri Purkayastha *et al.*, 2021

Cyrtodactylus agarwali Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan & Rathee. *Zootaxa*, 4980(1): 451-489, 2021

Cyrtodactylus agarwali Purkayastha *et al.*, 2021

The species *Cyrtodactylus agarwali* was described by Jayaditya Purkayastha, Hmar Tlawmte Lalremsanga, Sanath Chandra Bohra, Lal Biakzuala, H.T. Decemson, Lal Muansanga, Mathipi Vabeiryureilai, Suraj Chauhan and Yashpal Singh Rathee based on a Holotype and four Paratypes collected from Meghalaya, South Garo Hills district, outskirts of Siju village, from nearby a dirt road connecting National Highway 217 (25.358962° N and 90.664637° E, 270 m). The type specimens have been deposited in the National Zoological Collection, maintained by the Department of Zoology, Mizoram University, Aizawl, Mizoram, India. The specific epithet *agarwali* is an eponym honouring Ishan Agarwal for his extensive and ongoing contributions in the field of systematics and taxonomy of Indian lizards, particularly geckos. The name is masculine and formed in the genitive case. Suggested common name: Agarwal's bent-toed gecko.

Cyrtodactylus arunachalensis Mirza, Bhosale, Ansari, Phansalkar, Sawant, Gowande & Patel. *Evolutionary Systematics*, 5(2021): 13-23, 2021

Cyrtodactylus arunachalensis Mirza *et al.*, 2021

The species *Cyrtodactylus arunachalensis* was described by Zeeshan A. Mirza, Harshal Bhosale, Faizan Ansari, Pushkar Phansalkar, Mandar Sawant, Gaurang Gowande and Harshil Patel based on a Holotype and four Paratypes collected from Arunachal Pradesh, East Kameng district, Seijosa near Pakke Tiger Reserve (26.966819° N and 93.01332° E, 179 m). The type specimens have been deposited in BNHS. The specific epithet is refers to the state of Arunachal Pradesh in northeast India where the species was discovered.

Cyrtodactylus bapme Kamei & Mahony. *Herpetological Journal*, 31: 177-196, 2021

Cyrtodactylus bapme Kamei & Mahony, 2021

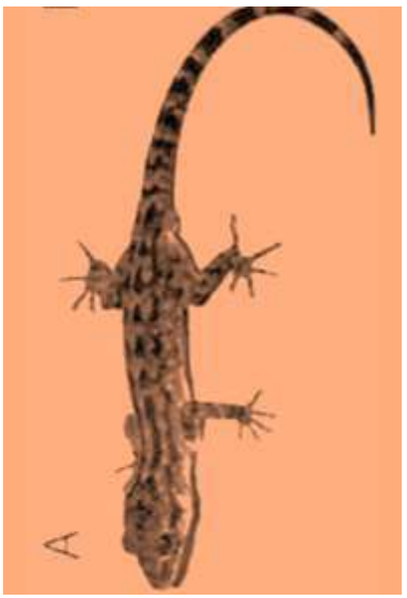
The species *Cyrtodactylus bapme* was described by Rachunliu G. Kamei and Stephen Mahony based on a Holotype collected from Meghalaya, East Garo Hills district, Nokrek Ridge National Park in Nokrek Biosphere Reserve, Daribokgre Hamlet, from the banks of a stream below Daribokgre Wildlife Inspection Bungalow (25.494975 and 90.323572, 1,015 m) and four Paratypes collected from different localities of East and West Garo Hills districts. The type specimens have been deposited in BNHS. The specific epithet "bapme" is derived from the word for "gecko" in the Garo language of the A'chik Mande ("Garo people"), the tribe indigenous to the region where the species occurs. The name is treated as a noun in apposition. Suggested common name: Garo Hills bent-toed gecko.

Cyrtodactylus bengkhuaiai Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan & Rathee. *Zootaxa*, 4980(1): 451-489, 2021

Cyrtodactylus bengkhuaiai Purkayastha *et al.*, 2021

The species *Cyrtodactylus bengkhuaiai* was described by Jayaditya Purkayastha, Hmar Tlawmte Lalremsanga, Sanath Chandra Bohra, Lal Biakzuala, H.T. Decemson, Lal Muansanga, Mathipi Vabeiryureilai, Suraj Chauhan and Yashpal Singh Rathee based on a Holotype and five Paratypes collected from Mizoram, Aizawl district, outskirts of Sailam village, from Sailam Community Reserved Forest (23.342758°N and 92.800058°E, 1372 m). The type specimens have been deposited in the National Zoological Collection, maintained by the Department of Zoology, Mizoram University, Aizawl, Mizoram, India. The specific epithet bengkhuaiai is an eponym honouring Bengkhuaia (~1830-1879), the Mizo chief of Sailam village, one of the most formidable chiefdoms. Suggested common name: Bengkhuaiai bent-toed gecko.

Cyrtodactylus karsticola Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan & Rathee. *Zootaxa*, 4980(1): 451-489, 2021



Cyrtodactylus karsticola Purkayastha *et al.*, 2021

The species *Cyrtodactylus karsticola* was described by Jayaditya Purkayastha, Hmar Tlawmte Lalremsanga, Sanath Chandra Bohra, Lal Biakzuala, H.T. Decemson, Lal Muansanga, Mathipi Vabeiryureilai, Suraj Chauhan and Yashpal Singh Rathee based on a Holotype and two Paratypes collected from Meghalaya, South Garo Hills district, outskirts of Siju village, from nearby a dirt road connecting National Highway 217 with the west bank of the Simsang River (25.355763°N and 90.690746°E, 100 m). The type specimens have been deposited in the National Zoological Collection, maintained by the Department of Zoology, Mizoram University, Aizawl, Mizoram, India. The specific epithet karsticola, is derived from the German noun "Karst" referring to a limestone landscape, and Latin suffix -cola meaning inhabitant of/dwelling in, with reference to the limestone cave habitat of the species. Suggested common name: Karst dwelling bent-toed gecko.

Genus: *Gekko* Laurenti, 1768

Gekko stoliczkai Chandramouli, Gokulakrishnan, Sivaperuman & Grismer. *Amphibian & Reptile Comservation*, 15(1): 108-125, 2021

Gekko stoliczkai Chandramouli *et al.*, 2021

The species *Gekko stoliczkai* was described by S.R. Chandramouli, G. Gokulakrishnan, C. Sivaperuman and L. Lee Grismer based on a Holotype collected from Little Nicobar Island, Makachua (7.4035ºN and 93.7134ºE, 37 m) and four Paratypes collected from different localities of Great Nicobar. The type specimens have been deposited in ZSI-ANRC. The specifc epithet is a patronym honoring Dr. Ferdinand Stoliczka (1838-1874) for his early contributions to the herpetology of Andaman and Nicobar Islands.

Genus: *Hemidactylus* Oken, 1817

Hemidactylus tamhiniensis Khandekar, Thackeray & Agarwal. *Zootaxa*, 5020(3): 434-456, 2021

Hemidactylus tamhiniensis Khandekar *et al.*, 2021

The species *Hemidactylus tamhiniensis* was described by Akshay Khandekar, Tejas Thackeray & Ishan Agarwal based on a Holotype and one Paratype collected from Maharashtra, Raigad district, Tamhini Ghat (18.398402° N and 73.385258° E) and two Paratypes collected from Maharashtra, Pune district, Tamhini Ghat (18.472910° N and 73.420590° E). The type specimens have been deposited in NRC-AA and BNHS. The specific epithet is a toponym for Tamhini Ghat in Pune and Raigad districts of Maharashtra, the type and currently only known locality for this species. Suggested common name: Tamhini giant rock gecko or Basalt giant rock gecko.

Genus: *Hemiphyllodactylus* Bleeker, 1860

Hemiphyllodactylus goaensis Khandekar, Parmar, Sawant & Agarwal. *Zootaxa*, 5027(2): 254-268, 2021

Hemiphyllodactylus goaensis Khandekar *et al.*, 2021

The species *Hemiphyllodactylus goaensis* was described by Akshay Khandekar, Dikansh, Nitin Sawant and Ishan Agarwal based on a Holotype collected from Goa, Goa University, Taleigao (15.46032° N and 73.83583° E, 50 m) and two Paratypes collected from Goa, Goa University, Taleigao (15.46041° N and 73.83544° E, 50 m) and Goa, South Goa district, Chandor (15.26089° N and 74.04367° E, 10 m). The type specimens have been deposited in BNHS. The specific epithet is a toponym for Goa state, to which the new species is currently restricted to. Suggested common name: Goan slender gecko.

Family: PAREIDAE
Genus: *Xylophis* Beddome, 1878

Xylophis deepaki Narayanan, Mohapatra, Balan, Das & Gower. *Vertebrate Zoology*, 71: 219-230, 2021

The species *Xylophis deepaki* was described by Surya Narayanan, Pratyush P. Mohapatra, Amirtha Balan, Sandeep Das and David J. Gower based on a Holotype and one Paratype collected from Tamil Nadu, close to Marthandam (8°20.610'N and 77°13.092'E) and two Paratypes collected from Potugani junction, Kanyakumari district, Tamil Nadu (8°28.672'N and 77°13.627'E). The type specimens have been deposited in ZSI-CZRC, ZSISRC and BNHS. The species is named in honour of the Indian herpetologist Dr Deepak Veerappan, in recognition of his substantial, 21st Century contributions to herpetology, including work on *Xylophis* systematics.

Xylophis deepaki Narayanan *et al.*, 2021

Family: SCINCIDAE
Genus: *Subdoluseps* Freitas, Datta-Roy, Karanth, L. Grismer & Siler, 2019

Subdoluseps nilgiriensis Ganesh, Srikanthan, Ghosh, Adhikari, Vijay Kumar & Datta-Roy. *Zootaxa*, 4950(2): 361-376, 2021

The species *Subdoluseps nilgiriensis* was described by S.R. Ganesh, Achyuthan N. Srikanthan, Avrajjal Ghosh, Omkar Dilip Adhikari, Shree Varsha Vijay Kumar and Aniruddha Datta-Roy based on a Holotype collected from peninsular India, Western Ghats, Coimbatore, Anaikatti hills, Tamil Nadu (11.110°N and 76.769°E, 600 m). The type specimens have been deposited in BNHS. Toponym, named after its type locality in the Nilgiris, one of the prominent massifs in the Western Ghats. Suggested common name: Nilgiri gracile skink.

Subdoluseps nilgiriensis Ganesh *et al.*, 2021

Family: UROPELTIDAE
***Genus: Uropeltis* Cuvier, 1829**

Uropelts jerdoni Ganesh, Punith, Adhikari & Achyuthan. *Journal of Threatened Taxa*, 13(6): 18508-18517, 2021

The species *Uropelts jerdoni* was described by S.R. Ganesh, K.G. Punith, Omkar D. Adhikari and N.S. Achyuthan based on a Holotype and five Paratypes collected from Karnataka, Tumkur district, Devarayana Durga and two Paratypes collected from Karnataka, Chikballapur district, Nandi Durga. The type specimens have been deposited in BNHS. Patronym named in genitive singular case, honouring Thomas Caverhill Jerdon, a pioneering English naturalist who described some of the earliest reptiles from the Bengaluru uplands.

Uropelts jerdoni Ganesh *et al.*, 2021

Family: VIPERIDAE
Genus: *Craspedocephalus* Kuhl & van Hasselt, 1822

Craspedocephalus peltopelor Malik, Srikanthan, Ganesh, Vijayakumar, Campbell, Malhotra & Shanker. *Vertebrate Zoology*, 71(2021): 577-619, 2021

The species *Craspedocephalus peltopelor* was described by Ashok Kumar Mallik, Achyuthan Needamangalam Srikanthan, Sumaithangi Rajagopalan Ganesh, Seenapuram Palaniswamy Vijayakumar, Patrick D. Campbell, Anita Malhotra and Kartik Shanker based on a Holotype collected from Southern Western Ghats, Chemunji, Peppara Wildlife Sanctuary, Agasthyamalai hill, Kerala (08°40.7'N and 77°11.55'E) and one Paratype collected from Southern Western Ghats, Chemunji, Peppara Wildlife Sanctuary, Tirunelveli Hills (Agasthyamalai). The type specimens have been deposited in BNHS. The species is named after Günther's erstwhile genericnomen that alludes to the shield-like, large scales.

Craspedocephalus peltopelor Malik *et al.*, 2021

Craspedocephalus travancoricus Malik, Srikanthan, Ganesh, Vijayakumar, Campbell, Malhotra & Shanker. *Vertebrate Zoology*, 71(2021): 577-619, 2021

The species *Craspedocephalus travancoricus* was described by Ashok Kumar Mallik, Achyuthan Needamangalam Srikanthan, Sumaithangi Rajagopalan Ganesh, Seenapuram Palaniswamy Vijayakumar, Patrick D. Campbell, Anita Malhotra and Kartik Shanker based on a Holotype collected from Southern Western Ghats, Kerala, a part of the Agasthyamalai Hill complex, Peppara, Bonnakard, (8°39.7167'N and 77°10.7167'E) and one Paratype collected from Tamil Nadu, Devarmalai. The type specimens have been deposited in BNHS. Toponym, named after its distribution in the far south of the Western Ghats, in the southern parts of the 'Travancore' hill ranges.

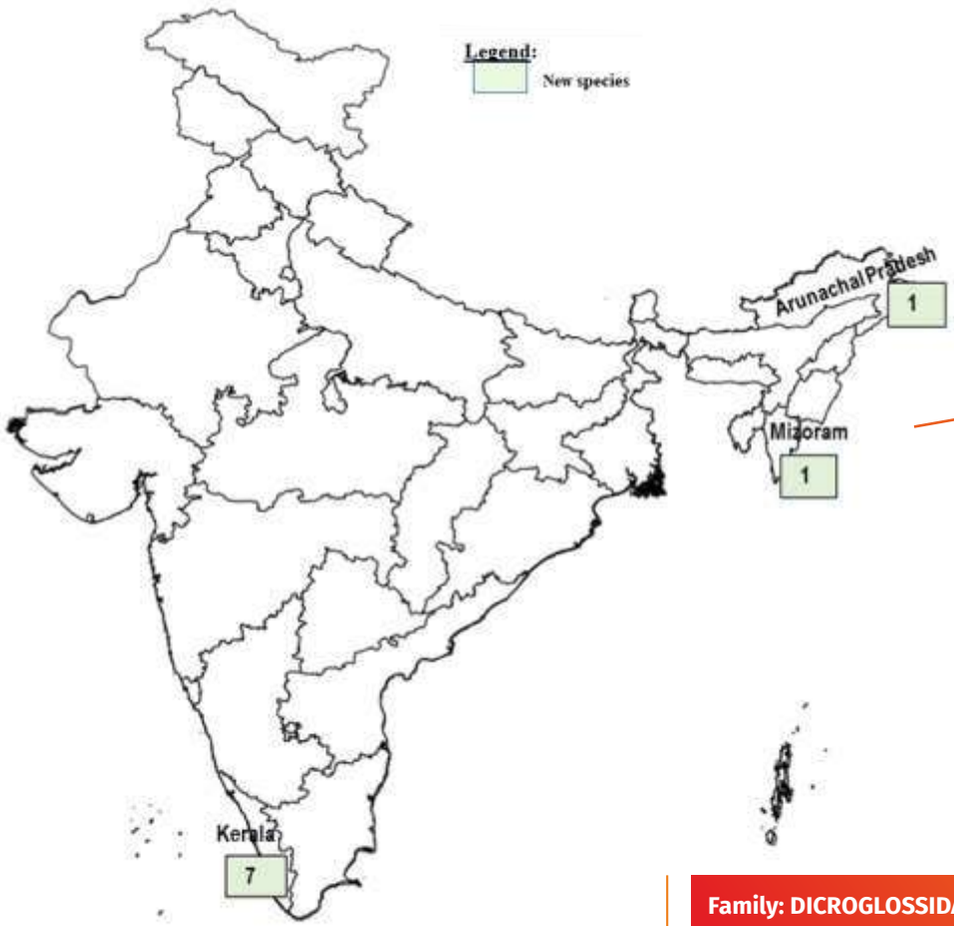
Craspedocephalus travancoricus Malik *et al.*, 2021

Family: XENODERMIDAE
Genus: *Stoliczkia* Jerdon, 1870

Stoliczkia vanhnuailianai Lalronunga, Lalhmangaiha, Zosangliana, Lalhmingliani, Gower, Das & Deepak. *Zootaxa*, 4996(3): 569-580, 2021

The species *Stoliczkia vanhnuailianai* was described by Samuel Lalronunga, K. Lalhmangaiha, Isaac Zosangliana, Esther Lalhmingliani, David J. Gower, Abhijit Das and V. Deepak based on a Holotype collected from Mizoram, Aizawl district, Tuinghaleng river near its confluence with Tuirivang river at the vicinity of Phulpui village (23.573°N and 92.756°E, 235 m). The type specimens have been deposited in BNHS. The species is named in honour of Vanhnuailiana, a famous Mizo chief and warrior of the Lushai Hills (in present day Mizoram state in India) in the mid-1800s. For nomenclatural purposes, the species epithet is considered a noun in apposition.

Stoliczkia vanhnuailianai Lalronunga *et al.*, 2021



AMPHIBIA
3.3

The word Amphibia is derived from two Greek words (Amphi = two or both land and water and bios = life) literally meaning living in two habitats, water and land. For these vertebrates, aquatic environment is a must in their life cycle. Actually, amphibians evolved from fish-like ancestors during the Devonian period about 400 million years ago and flourished during the Carboniferous period. They are also the earliest tetrapods or land vertebrates. One major feature of the feeding habits of frogs and toads has made them the most versatile protectors of our crops. They help in reducing the number of blood-sucking insects which are vectors of deadly diseases. Adults actively feed on mosquitos and flies while the tadpoles and young froglets consume their larvae. Tadpoles also consume many kinds of organic materials that might otherwise pollute our ponds and rivers and sometimes act as scavengers by feeding on dead animals. World Diversity: 8455 species (7471 Anurans, 770 Urodela, 214 Caecilians). Diversity in India: 454 species (413 Anurans, 2 Urodela, 39 Caecilians), of which 358 species are endemic.20 species Critically Endangered, 36 species Endangered, 22 species Vulnerable and 8 species Near Threatened in India. New amphibian species are described from the following states of India, Kerala (7), Arunachal Pradesh (1) and Mizoram (1).

Family: DICROGLOSSIDAE
Genus: *Euphlyctis* Fitzinger, 1843

Euphlyctis kerala Dinesh, Channakeshavamurthy, Deepak, Ghosh & Deuti. *Zootaxa*, 4990(2): 329-353, 2021

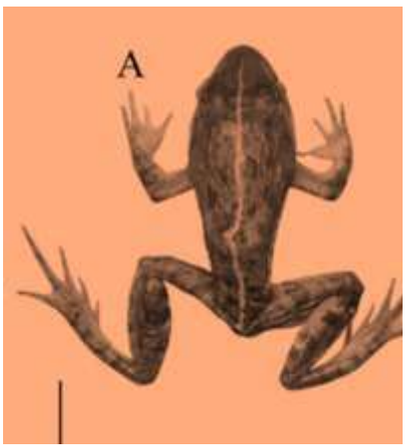
The species *Euphlyctis kerala* was described by K.P. Dinesh, B.H. Channakeshavamurthy, P. Deepak, Avrajjal Ghosh and Kaushik Deuti based on a Holotype and two Paratypes collected from Kerala, surroundings of the Thattekad Bird Sanctuary (10.1272N and 76.6840E). The type specimens have been deposited in ZSI-WGRC. The species is named after the western coastal state 'Kerala' of peninsular India which is home to the most number of endemic species of amphibians in India. The species epithet is treated as noun in opposition to the generic name. Suggested common name: 'Kerala skittering frog'.

Euphlyctis kerala Dinesh *et al.*, 2021

Genus: *Minervarya* Dubois, Ohler & Biju, 2001

Minervarya pentali Garg & Biju. *Asian Herpetological Research*, 12(4): 345-370, 2021

The species *Minervarya pentali* was described by Sonali Garg and S.D. Biju based on a Holotype and four Paratypes collected from Kerala, Ernakulam district, Cochin, Nedumbassery (10°09'425''N and 76°23'22.4''E, 11 m). The type specimens have been deposited in BNHS. The species is named after Prof. Deepak Pental, a renowned Indian Plant Genetist and former Vice Chancellor of University of Delhi, in appreciation of his contributions to science. The species epithet pentali is treated as a noun in the genitive case.



Minervarya pentali Garg & Biju, 2021

Family: ICHTHYOPHIIDAE
Genus: *Ichthyophis* Fitzinger, 1826

Ichthyophis benjii Lalremsanga, Purkayastha, Biakzuala, Vabeiryureilai, Muansanga & Hmar. *Amphibian & Reptile Conservation*, 15(2): 198-209, 2021

Ichthyophis benjii Lalremsanga *et al.*, 2021

The species *Ichthyophis benjii* was described by Hmar Tlawmte Lalremsanga, Jayaditya Purkayastha, Lal Biakzuala, Mathipi Vabeiryureilai, Lal Muansanga, and Gospel Zothanmawia Hmar based on a Holotype collected from Mizoram, Aizawl district, Durtlang (23°47'6.58"N and 92°43'31.74"E, 1233 m) and four Paratypes collected from different localities of Aizawl district, Mizoram. The type specimens have been deposited in MZMU. The species epithet "benjii" is dedicated in memory of Benjamin Lalremsanga. Suggested English common name: Benji's Caecilian.

Family: RANIDAE
Genus: *Amolops* Cope, 1865

Amolops adicola Patel *et al.*, 2021

Amolops adicola Patel, Garg, Das, Stuart & Biju. *Journal of Natural History*, 55(21-22): 1403-1440, 2021

The species *Amolops adicola* was described by Naitik G. Patel, Sonali Garg, Abhijit Das, Bryan L. Stuart and S.D. Biju based on a Holotype and three Paratypes collected from Arunachal Pradesh, Upper Siang district, Adi hills adjoining the basin of Mossing River, located between Tuting and Jengging (28.776°N and 94.768°E, 515 m) and one Paratype collected from Arunachal Pradesh, East Siang district, Dainakorong Stream, near Renging (28.094° N and 95.268° E, 356 m). The type specimens have been deposited in BNHS. The species name is derived from 'Adi' (after Adi hills and the Adi tribe that inhabits the region where the type series was collected) and Latin 'cola' (meaning inhabiting or dwelling in). The species epithet adicola is treated as an invariable noun in apposition to the generic name.

Family: RHACOPHORIDAE
Genus: *Raorchestes* Biju, Shouche, Dubois, Dutta & Bossuyt, 2010

Raorchestes drutaahu Garg, Suyesh, Das, Bee & Biju. *PeerJ* 9: e10791 DOI 10.7717/peerj.10791, 2021

The species *Raorchestes drutaahu* was described by Sonali Garg, Robin Suyesh, Sandeep Das, Mark A. Bee and S.D. Biju based on a Holotype and two Paratypes collected from Kerala, Idukki district, Munnar, Kadalar (10.1311N and 77.0005E, 1430 m) and one Paratype collected from Kerala, Palakkad district, Siruvani (10.9587N and 76.6667E, 1048 m). The type specimens have been deposited in BNHS. The species name is derived from Sanskrit 'druta' (meaning fast) and 'ahu' (meaning call), referring to the fast-pulsatile calls of the new species. The species epithet drutaahu is treated as an invariable noun in apposition to the generic name.

Raorchestes drutaahu Garg *et al.*, 2021

Raorchestes keirasabinae Garg, Suyesh, Das, Bee & Biju. *PeerJ* 9: e10791 DOI 10.7717/peerj.10791, 2021

The species *Raorchestes keirasabinae* was described by Sonali Garg, Robin Suyesh, Sandeep Das, Mark A. Bee and S.D. Biju based on a Holotype collected from Kerala, Thiruvananthapuram district, Chathankod-Makki (8.6723N and 77.1301E, 230 m) and one Paratype collected from Kerala, Thiruvananthapuram district, Ponmudi (8.75N and 77.13E, 980 m). The type specimens have been deposited in BNHS. The species is named after a young nature lover Keira Sabin, in appreciation of the long-time support and commitment of the Andrew Sabin Family Foundation towards amphibian research and conservation around the world. The species epithet *keirasabinae* is treated as a noun in the genitive case.

Raorchestes kakkayamensis Garg *et al.*, 2021

Raorchestes kakkayamensis Garg, Suyesh, Das, Bee & Biju. *PeerJ* 9: e10791 DOI 10.7717/peerj.10791, 2021

The species *Raorchestes kakkayamensis* was described by Sonali Garg, Robin Suyesh, Sandeep Das, Mark A. Bee and S.D. Biju based on a Holotype and one Paratype collected from Kerala, Kozhikode district, Kakkayam (11.5542N and 75.9196E, 750 m). The type specimens have been deposited in BNHS. The species is named after the place Kakkayam, where the type series was collected.

Raorchestes keirasabinae Garg *et al.*, 2021

Raorchestes sanjappai Garg, Suyesh, Das, Bee & Biju. *PeerJ* 9: e10791 DOI 10.7717/peerj.10791, 2021

Raorchestes sanjappai Garg *et al.*, 2021

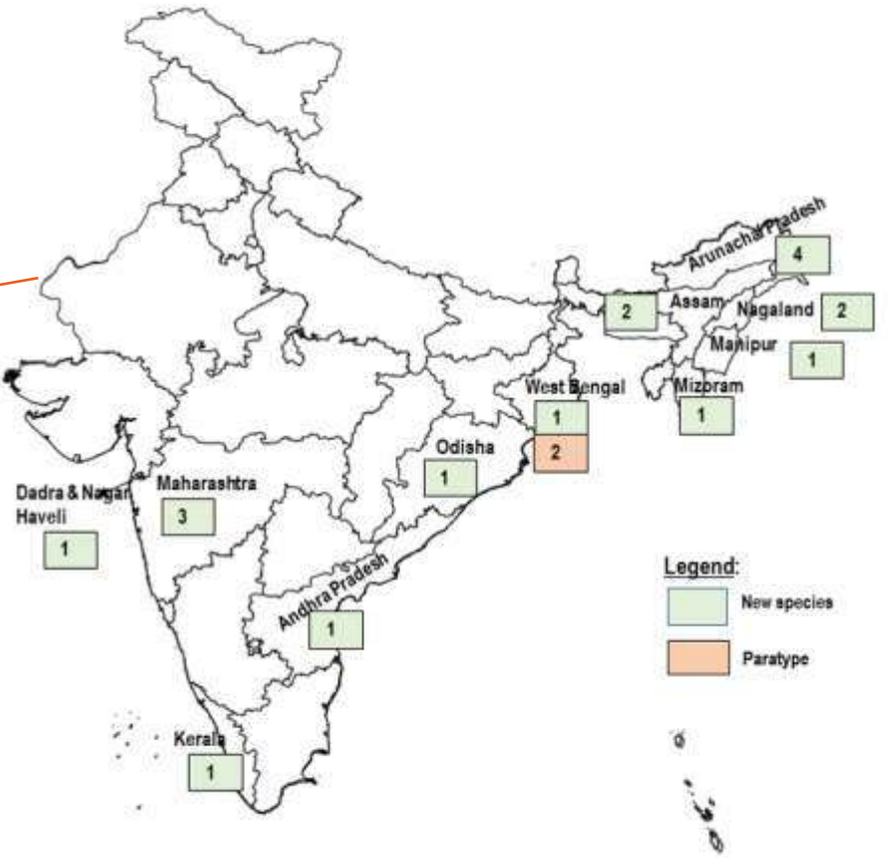
The species *Raorchestes sanjappai* was described by Sonali Garg, Robin Suyesh, Sandeep Das, Mark A. Bee and S.D. Biju based on a Holotype and one Paratype collected from Kerala, Wayanad district, Periya (11.8342N and 75.8574E, 750 m). The type specimens have been deposited in BNHS. The species is named after Dr. M. Sanjappa, a renowned Indian Botanist and former Director of the Botanical Survey of India. The species name is in appreciation of his taxonomic contributions as well as generous support to SDB during the initial phases of his research career. The species epithet *sanjappai* is treated as a noun in the genitive case.

Raorchestes vellikkannan Garg *et al.*, 2021

Raorchestes vellikkannan Garg, Suyesh, Das, Bee & Biju. *PeerJ* 9: e10791 DOI 10.7717/peerj.10791, 2021

The species *Raorchestes vellikkannan* was described by Sonali Garg, Robin Suyesh, Sandeep Das, Mark A. Bee and S.D. Biju based on a Holotype collected from Kerala, Palakkad district, Siruvani, Singappara (10.9794N and 76.615E, 856 m). The type specimens have been deposited in BNHS. The species name is derived from Malayalam (the language of Kerala State where the type series were collected) 'velli' (meaning silver) and 'kannu' (meaning eye) referring to the silver colour of the iris in this species. The species epithet *vellikkannan* is treated as an invariable noun in apposition to the generic name.

3.4 PISCES



Freshwater Fishes

Fishes are cold-blooded aquatic vertebrates that breathe through pharyngeal gills, propelling and balancing themselves using fins. Fishes, in simple definition, are aquatic vertebrates that have gills throughout life and limbs, if any, in the shape of fins. Among vertebrates, "fishes" constitute an amazing group that exhibits remarkable diversity in their morphology, inhabiting habitats and biology. Fish provides a staple diet and protein supplement for people, thus making it a vital resource element in the economy of many nations. Freshwater fishes make up more than 6% of the world's annual animal protein supplies for humans (FAO, 2007). Some fish, like the lungfish, are of zoological importance because of their discontinuous distribution and anatomical features. They also play an important role in the aquatic ecosystem. Many freshwater fish species are of immense aquaculture importance. Fishes constitute over one-half of the world's living vertebrates. The freshwater habitat comprises only a small proportion of the earth's surface water but contains an inappropriately large number of the world's fish species (Nelson et al., 2016). The number of valid fish species globally is 36,149, of which 18,267 are found in freshwater (Fricke et al., 2020). In India, there are about 1037 freshwater fish species, out of which more than 530 species are endemic, and 148 species are threatened as per the IUCN Red Data List. This year a total of 18 new species of Fishes (Freshwater and Marine) have been described from various states and Union Territories of India; Arunachal Pradesh (4), Maharashtra (3), Assam (2), Nagaland (2), Dadra and Nagar Haveli (1), Kerala (1), Andhra Pradesh (1), Orissa (1), West Bengal (1), Mizoram (1), Manipur (1). Paratypes of the two new species have also been found from West Bengal.

Marine Fishes

Marine fisheries are very important to the economy and wellbeing of coastal communities, with potential to transform the lives of coastal communities by providing food security, employment, income and traditional cultural identity. The economic importance of fish is greater today than ever before and is growing steadily. Statisticians predict that much of the vital protein food necessary to nourish our ever-increasing human population- of which perhaps half is underfed even today, will come from marine fisheries. At present, approximately 25 million tons of fish are procured from the sea every year, and various kind of ways and means are now being vigorously pursued in many parts of the world and India to increase this yield. About 18,196 species of marine fish had been described in the world. In India, the estimated number of fish species constitutes 3267 species distributed in 230 families, which is 75.6% of total fish species reported and 91 species are endemic to India. Acc. There are about 50 species are threatened, 6 of them critically endangered, 7 are endangered & 37 vulnerable, while 45 are near-threatened.

Family: ADRIANICHTHYIDAE
Genus: *Oryzias* Jordan & Snyder, 1906

Oryzias andrewi Roberts, Chakraborty, Yardi & Mukherjee. *aqua, International Journal of Ichthyology*, 27(1): 21-32, 2021

The species *Oryzias andrewi* was described by Tyson R. Roberts, Priyankar Chakraborty, Kranti Yardi and Prasun Mukherjee based on a Holotype and one Paratype collected from Assam, Alipurduar district near Baro-bisha town, Brahmaputra basin, Sutinmari River, an offshoot of the Sankosh River, (26°29'24"N and 89°46'16"E, 63 m) and one Paratype collected from West Bengal, Ichamati River about 60 km northeast of Calcutta near small town of Duttapulia. The type specimens have been deposited in BNHS. The species name *andrewi* honors the fish trader Andrew Arunava Rao who collected the specimens and made them available to the authors.

Oryzias andrewi Roberts *et al.*, 2021

Family: BADIDAE
Genus: *Badis* Bleeker, 1854

Badis kaladanensis Ramliana, Lalronunga & Singh, *PLoS ONE*, 16(7): e0246466. https://doi.org/10.1371/journal.pone.0246466, 2021

The species *Badis kaladanensis* was described by Lal Ramliana, Samuel Lalronunga and Mahender Singh based on a Holotype and three Paratypes collected from Mizoram, Palak river in the vicinity of Phurra Village (22°14'12"N and 92°53'59"E) and two Paratypes collected from different localities of Mizoram state. The type specimens have been deposited in Zoological Survey of India, Kolkata (ZSI) and PUCMF. The species is named after the River drainage, the Kaladan River. An adjective.

Badis kaladanensis Ramliana *et al.*, 2021

Garra jaldhakaensis Kosygin *et al.*, 2021

Family: CYPRINIDAE
Genus: *Garra* F. Hamilton, 1822

Garra jaldhakaensis Kosygin, Shangningam, Singh & Das. *Rec. zool. Surv. India*, 121(3): 325-331, 2021

The species *Garra jaldhakaensis* was described by Laishram Kosygin, Bungdon Shangningam, Pratima Singh and Ujjal Das based on a Holotype and three Paratypes collected from West Bengal, Kalimpong district, Jaldhaka River near Jhalong, Brahmaputra River Drainage (27°02'39'N and 88°52'71'E, 1200 ft). The type specimens have been deposited in ZSI-Kolkata. The species is named after the type locality, Jaldhaka River.

Garra langlungensis Ezung, Shangningam & Pankaj. *Journal of Threatened Taxa*, 13(6): 18618-18623, 2021

The species *Garra langlungensis* was described by Sophiya Ezung, Bungdon Shangningam and Pranay Punj Pankaj based on a Holotype and six Paratypes collected from Nagaland, Dimapur district, Langlung River near Zutovi Village, Brahmaputra Basin (25.716°N and 93.650°E). The type specimens have been deposited in ZSI-Kolkata. The species is named after its type locality, Langlung River.

Garra langlungensis Ezung *et al.*, 2021

Garra triangularis Shangningam, Rath & Kosygin. *Ichthylogical Exploration of Freshwaters*, IEF-1168/pp. 1-7, 2021

The species *Garra triangularis* was described by Bungdon Shangningam, Shibananda Rath and Laishram Kosygin based on a Holotype and one Paratype collected from Dadra and Nagar Haveli Union territory, Dadra and Nagar Haveli district (20°15'35''N and 72°59'8.35''E). The type specimens have been deposited in ZSI-Kolkata. The species is named after the Latin adjective *triangularis, -is, -e,* meaning 'triangular', in reference to the shape of the labellum.

Garra triangularis Shangningam *et al.*, 2021

Parapsilorhynchus alluriensis Jadav *et al.*, 2021

Genus: *Parapsilorhynchus* Hora, 1921

Parapsilorhynchus alluriensis Jadav, Karuthapandi, Chandra, Jaiswal, Dinesh & Narahari. *Zootaxa*, 4751(3): 563-574, 2021

The species *Parapsilorhynchus alluriensis* was described by S.S. Jadhav, M. Karuthapandi, Kailash Chandra, Deepa Jaiswal, K.P. Dinesh and A. Narahari based on a Holotype and one Paratype collected from Andhra Pradesh, Visakhapatnam district, Dharamattam stream, near Golugonda village, Alluri Forest (17°42'47''N and 82°28'42''E, 210 m). The type specimens have been deposited in ZSI-WRC. The species is named after the Alluri Forest, Eastern Ghats, Visakhapatnam District, Andhra Pradesh State, India from where the type specimens were collected.

Family: DANIONIDAE
Genus: *Esomus* Swainson, 1839

Esomus nimasowi Abujam, Gogoi, Das, Das, Biswas & Bleher. aqua, *International Journal of Ichthyology*, 27(3): 81-92, 2021

The species *Esomus nimasowi* was described by Santoshkumar Abujam, Budhin Gogoi, Arup Nama Das, Debangshu Narayan Das, Shyama Prasad Biswas and Heiko Bleher based on a Holotype and eight Paratypes collected from Assam, Dima Hasao district, Phongloso stream, a tributary of Kopili River (Brahmaputra R. basin), Wasubil village (25°43 48.62N and 92°54 51.27E). The type specimens have been deposited in RGUMF and ZSI-APRC. The species is named after Prof. Gibji Nimasow, Rajiv Gandhi University, Arunachal Pradesh as an acknowledgement for his constant encouragement and interest in fishery related works.

Esomus nimasowi Abujam *et al.*, 2021

Family: ERETHISTIDAE
Genus: *Pseudolaguvia* Misra, 1976

Pseudolaguvia vespa Praveenraj, Vijayakrishnan, Lima & Gurumayum. *Zootaxa*, 5082(1): 077-086, 2021

The species *Pseudolaguvia vespa* was described by Jayasimhan Praveenraj, Balaji Vijayakrishnan, Akum Lima and Shanta Devi Gurumayum based on a Holotype and nine Paratypes collected from Nagaland, Mokokchung district, Tsücha River, Khar Village (26°27.59'N and 94°29.63'E, 294.4 m). The type specimens have been deposited in ZSI-APRC and CIARI-FF. The specific name vespa is derived from the Latin, meaning wasp, in reference to the alternating chrome-yellow and brown stripes on the body resembling a wasp.

Pseudolaguvia vespa Praveenraj *et al.*, 2021

Heteropneustes fuscus Plamoottil, 2021

Family: HETEROPNEUSTIDAE
Genus: *Heteropneustes* J. P. Müller, 1840

Heteropneustes fuscus Plamoottil, 2021. *Biodiversitas*, 22(12): 87-98, 2021

The species *Heteropneustes fuscus* was described by Mathews Plamoottil based on a Holotype and four Paratypes collected from Kerala, Pathanamthitta. The type specimens have been deposited in ZSI-WRC. The specific epithet fuscus was taken from Latin (*fuscus* meaning-dark); it refers to black colored body and fins of the new species.

Family: NEMACHEILIDAE
Genus: *Aborichthys* B. L. Chaudhuri, 1913

Aborichthys barapensis Nanda & Tamang. *Journal of Threatened Taxa*, 13(7): 18800-18808, 2021

The species *Aborichthys barapensis* was described by P. Nanda and L. Tamang based on a Holotype and two Paratypes collected from Arunachal Pradesh, Barap Stream (Brahmaputra River basin) near Lazu Village (26.898758N and 95.560656E, 1020 m). The type specimens have been deposited in ZSI-EBRC and DNGC. The specific name is derived from the name of the river Barap from where the present new species was obtained.

Aborichthys barapensis Nanda & Tamang, 2021

Aborichthys palinensis Nanda & Tamang. *FishTaxa*, 21: 19-27, 2021

The species *Aborichthys palinensis* was described by Prasanta Nanda and Lakpa Tamang based on a Holotype and three Paratypes collected from Arunachal Pradesh, Kra Daadi district, upper Brahmaputra River basin, a tributary of Palin River (27°43'21.65"N and 93°38'47.48"E, 840 m). The type specimens have been deposited in ZSI-EBRC and DNGC. The species name 'palinensis' is assigned after the name of the area 'Palin' headquarter of Kra Daadi District, where the fish was obtained.

Aborichthys palinensis Nanda & Tamang, 2021

Indoreonectes neeleshi Kumkar *et al.*, 2021

Genus: *Indoreonectes* Rita & Nalbant, 1978

Indoreonectes neeleshi Kumkar, Pise, Gorule, Verma & Kalous. *Vertebrate Zoology*, 71: 517-533, 2021

The species *Indoreonectes neeleshi* was described by Pradeep Kumkar, Manoj Pise, Pankaj A. Gorule, Chandani R. Verma and Lukáš Kalous based on a Holotype and nine Paratypes collected from Maharashtra, Mula River, Godavari River system, Harishchandragad (19°23.64'N and 73°46.74'E, ca 1180 m). The type specimens have been deposited in BNHS. The species name honours Neelesh Dahanukar researcher from Indian Institute of Science Education and Research (IISER), Pune, India, for his remarkable contributions to the understanding of the systematics and evolution of Indian freshwater fishes.

Indoreonectes rajeevi Kumkar, Pise, Gorule, Verma & Kalous. *Vertebrate Zoology*, 71: 517-533, 2021

The species *Indoreonectes rajeevi* was described by Pradeep Kumkar, Manoj Pise, Pankaj A. Gorule, Chandani R. Verma and Lukáš Kalous based on a Holotype and eleven Paratypes collected from Maharashtra, Hiranyakeshi River, Krishna River system, Amboli (15°58.02'N and 74°0.66'E, 692 m). The type specimens have been deposited in BNHS. The species name honours Rajeev Raghavan from Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi, India, for his remarkable contributions to the understanding of the Systematics and Evolution of Indian freshwater fishes.

Indoreonectes rajeevi Kumkar *et al.*, 2021

Genus: *Mustura* Kottelat (2018)

Mustura subhashi Choudhury, Das, Bharali, Sarma, Tyagi, Lal & Sarma. *FishBiology*, 2021: 1-12, 2021

The species *Mustura subhashi* was described by Hrishikesh Choudhury, Rajdeep Das, Ratul Ch. Bharali, Kangkan Sarma, Lalit K. Tyagi, Kuldeep K. Lal and Dandadhar Sarma based on a Holotype and four Paratypes collected from Arunachal Pradesh, East Kameng district, unnamed tributary of Dikal River (Brahmaputra drainage) at Upper Dikalmukh (26?57'31''N and 93°15'19''E, 141 m). The type specimens have been deposited in ICAR-NBFGR, ZSI, Kolkata and GUMF. The species is named after Professor Subhash Chandra Dey, honouring his contributions to the taxonomy of hillstream fishes of the Arunachal Himalayas.

Mustura subhashi Choudhury *et al.*, 2021

Mustura taretensis Chinglemba *et al.*, 2021

Mustura taretensis Chinglemba, Rameshori & Vishwanath. *Zootaxa*, 5081(4): 551-565, 2021

The species *Mustura taretensis* was described by Yengkhom Chinglemba, Yumnam Rameshori and Waikhom Vishwanath based on a Holotype and twenty-two Paratypes collected from Manipur, Tengnoupal district, Taret River, Chindwin River drainage (24°29'55"N and 94°22'39"E, 242 m). The type specimens have been deposited in MUMF. The species is named after the Taret River, its type locality. An adjective.

Family: OPHICHTHIDAE
Genus: *Cirrhimuraena* Kaup, 1856

Cirrhimuraena indica Mohapatra, Mohanty, Ray, Mishra & Seth. *Journal of Fish Biology*, 98: 1363-1370, 2021

The species *Cirrhimuraena indica* was described by Anil Mohapatra, Swarup Ranjan Mohanty, Dipanjan Ray, Subhrendu Sekhar Mishra and Jaya Kishor Seth based on a Holotype and five Paratypes collected from Odisha, Paradip fishing harbour and one Paratype collected from Petuaghat fishing port, West Bengal. The type specimens have been deposited in ZSI-EBRC and ZSI-MARC. The species is named after India, from where it is being collected and described.

Cirrhimuraena indica Mohapatra *et al.*, 2021

Family: SISORIDAE
Genus: *Glyptothorax* Blyth, 1860

Glyptothorax rupiri Kosygin, Singh & Rath. *Zootaxa*, 5023(2): 239-250, 2021

The species *Glyptothorax rupiri* was described by Laishram Kosygin, Pratima Singh and Shibananda Rath based on a Holotype and three Paratypes collected from Arunachal Pradesh, Upper Siang district, Jambung stream, a tributary of Siang River near Hawa Camp, Brahmaputra River basin (28°41'9.2''N and 94°58'8.82''E). The type specimens have been deposited in ZSI-Kolkata. The species is named after Rupir Boli of the Forest Department, Government of Arunachal Pradesh, for his help in collecting the specimens during the first author's survey of Arunachal Pradesh.

Glyptothorax rupiri Kosygin *et al.*, 2021

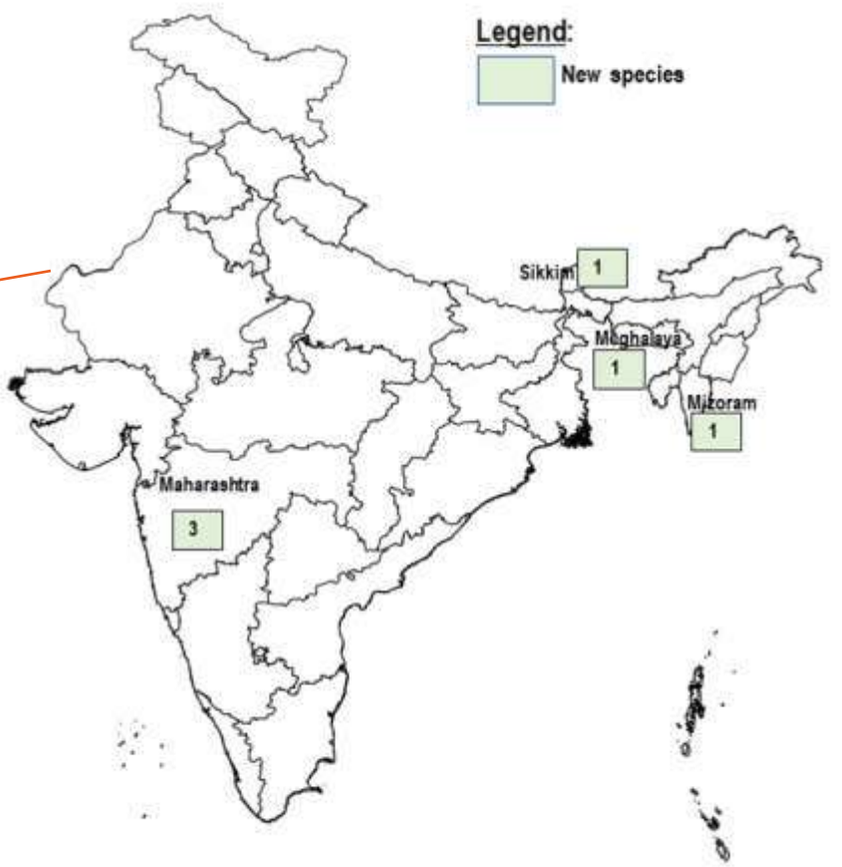
Family: SYNBRANCHIDAE
Genus: *Rakthamichthys* Britz, Dahanukar, Standing, Philip, Kumar & Raghavan, 2020

Rakthamichthys mumba Praveenraj, Thackeray, Mohapatra & Pavan-Kumar. *Aqua, International Journal of Ichthyology*, 27(3): 93-102.

The species *Rakthamichthys mumba* was described by Jayasimhan Praveenraj, Tejas Thackeray, Anil Mohapatra and Annam Pavan-Kumar based on a Holotype and one Paratype collected from Maharastra, a well inside Mancherji Banaji industrial home for the Blind, S V Road, Jogeshwari West (19°7'59.55" N and 72°50'53.24" E). The type specimens have been deposited in ZSI-EBRC. The species name *mumba* refers to the type locality, the city of Mumbai.

Rakthamichthys mumba Praveenraj *et al.*, 2021

3.5 MOLLUSCA

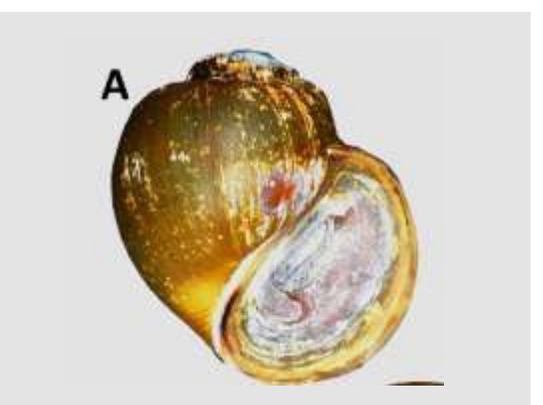


The blue revolution of India not only restricted to finfish fishery but shell fishery also occupies a significant position in the Indian economy by foreign trade as well as domestic consumption of the resources. Molluscs are used by human being for a variety of purposes and are also of considerable indirect benefits because of their role in food chains and their contribution to secondary production. Throughout India there is an enormous food fishery, especially for gastropods, bivalves and cephalopods, amounting millions of tonnes annually. Global diversity is estimated approximately 85,000 species, while diversity in India is 3271, of which 237 are endemic Threatened under IUCN is 149 species. This year a total of six new species have been described, three from Maharashtra, one each from Meghalaya, Mizoram and Sikkim.

Family: AMPULLARIIDAE
Genus: *Pila* Röding, 1798

Pila mizoramensis Sil, Basak, Karanth & Aravind. *Molluscan Research*, 41(3): 204-213, 2021

The species *Pila mizoramensis* was described by Maitreya Sil, Reshma Basak, K. Praveen Karanth and Neelavara Ananthram Aravind based on a Holotype and four Paratypes collected from Mizoram, Lunglai district, Lunglai (23.0008°N and 92.7237°E, 401 m) and four Paratypes collected from Mizoram, Bualte (22.807°N and 92.8124°E, 871 m). The type specimens have been deposited in ZSI-SRC. The species is named after the state from where the specimens were collected. The specific epithet is a noun in the genitive form.



Pila mizoramensis Sil *et al.*, 2021

Family: DIPLOMMATINIDAE
Genus: *Diplommatina* Benson, 1849

Diplommatina parietidentata Das & Aravind. *Molluscan Research by.* 2021. 10.1080/13235818.2021.1970352

The species *Diplommatina parietidentata* was described by Nipu Kumar Das & Neelavar Ananthram Aravind based on a Holotype and three Paratypes collected from Lachen towards Gurudongmar, Sikkim (27.74487° N and 88.54439° E). The type specimens have been deposited in ZSI-SRC. The species name parietidentata refers to the diagnostic shell features of this species i.e., a tooth on the parietal lip of the peristome of the shell aperture.

Diplommatina parietidentata Das & Aravind, 2021

Family: HELICARIONIDAE
Genus: *Varadia* Bhosale & Raheem, 2021

Varadia amboliensis Bhosale, Thackeray, Muley & Raheem. *European Journal of Taxonomy*, 757: 50-79, 2021

The species *Varadia amboliensis* was described by Nipu Kumar Das and Neelavara Ananthram Aravind based on a Holotype and 17 Paratypes collected from Amboli, Maharashtra, (15°57'17.8' N, 74°01'39.1' E).. The type specimens have been deposited in Bombay Natural History Society (BNHS), Mumbai. Named after the type locality, Amboli, in the Sindhudurg District of southern Maharashtra, India. Inrecent years, Amboli has emerged as a hotspot for the discovery of new species (particularly reptiles and amphibians) in the northern Western Ghats.

Varadia amboliensis Bhosale *et al.*, 2021

Family: HYDROCENIDAE
Genus: *Georissa* Blanford, 1864

Georissa mawsmaiensis Das & Aravind. *Journal of Conchology*, 44(2): 93-101, 2021

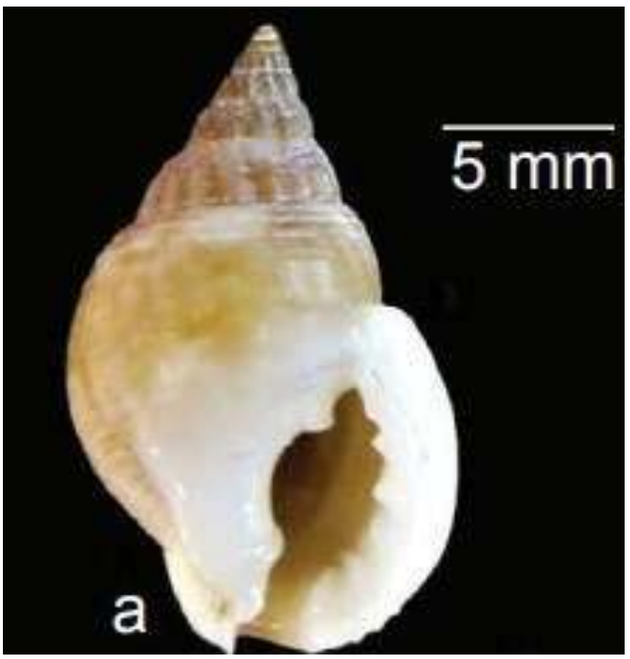
The species *Georissa mawsmaiensis* was described by Nipu Kumar Das and Neelavara Ananthram Aravind based on a Holotype and five Paratypes collected from Meghalaya, Mawsmai Cave (25.245° N and 91.72405°E, 1195 m). The type specimens have been deposited in ZSI-WGRC. The specific epithet '*mawsmaiensis*' refers to the type locality 'Mawsmai cave' from which the specimens were collected.

Georissa mawsmaiensis Das & Aravind, 2021

Family: NASSARIIDAE
Genus: *Nassarius* Duméril, 1805

Nassarius deepakaptei Nerurkar. *Journal of the Bombay Natural History Society*, 118(2) .10.17087/jbnhs/2021/v118/156254

The species *Nassarius deepakaptei* was described by Sayali Mukund Nerurkar based on a Holotype and three Paratype collected from Mandavi, Ratnagiri, Maharashtra, India (16° 59' 21.7' N, 73° 17' 08.1' E). The species is named in honour of Dr Deepak Apte, a renowned marine ecologist.



Nassarius deepakaptei Nerurkar, 2021

Family: STREPTAXIDAE
Genus: *Perrottetia* Kobelt, 1905

Perrottetia rajeshgopali Bhosale *et al.*, 2021

Perrottetia rajeshgopali Bhosale, Thackeray & Rowson. *Archiv für Molluskenkunde*, 150(1): 45-54, 2021

The species *Perrottetia rajeshgopali* was described by Amrut Bhosale, Tejas Thackeray and Ben Rowson based on a Holotype and eight Paratypes collected from Maharashtra, Kolhapur district, Dajipur, Radhanagari Wildlife Sanctuary, Ugwai Devi Temple (16.3726°N and 073.8642°E, 650 m). The type specimens have been deposited in BNHS and NZSI, Kolkata. The specific epithet is an eponym honouring Dr Rajesh Gopal, currently the Secretary General of the Global Tiger Forum. Dr Gopal is recognised for his remarkable work on the tigers of India during his tenure in the Indian Forest Service. His work has facilitated a better understanding of the mysterious lives of the big cats, helped to formulate better conservation action plans, and also proved to be instrumental in mitigating human-animal conflict to a great extent.

DIOLOPODA

3.6

The term Diplopoda comes from Greek (Diplo=double) and (podos = foot) and each body segment is formed by the fusion of two originally separate somites, though all the body segments are not always diplosegmented. The name miilipede also formed from the latin (mille=thousand) and (pede=foot), but no millipede has 1000 legs although some rare species has up to 750 and common species have between 36 and 400 legs and their many legs and wave like motion also given them the name millipede. Millipedes are slow moving detritivorous animals eating decaying leaves and dead plant matter, helping for converting decaying plant material to manure and sometimes act as minor garden pests especially in greenhouses where they can cause damage to emergent seedlings. Some species of millipedes also consume food of animal origin including human faeces and some are obviously omnivores. Millipedes can be easily distinguished from the similar and related centipedes (Class: Chilopoda) that have a single pair of legs for each body segment and are rapidly moving and carnivorous. Most of the millipedes are equipped with defence glands, the repugnatorial glands or the ozadenes, opening through ozopores located laterally on the metazonites and distributed on most of the body segments except a few anterior and tail segments. The secretion of these glands are odoriferous and highly volatile compounds of hydrogen cyanide, phenols, iodides, terpenoids, quinines and aldehydes which act as a deterrent to other animals. Economically the millipedes are important both as friend and foe. A good number of millipedes are found in the agricultural fields, where they help us in soil aeration as well as humification of the soil. The millipedes play a prominent role in the terrestrial ecosystems and can be called as "Macrodegraders". They facilitate microbial decomposition and enhancement of soil nutrient cycles.

More than 15,000 species of millipedes belonging to 2001 genera, 163 families in 16 orders are known globally out of which Indian fauna is comprised of over 270 species/ subspecies in 90 genera, 25 families and 11 orders. This year two new species of Diplopoda are described from the state of Kerala.

Family: PARADOXOSOMATIDAE
Genus: *Delarthrum* Attems, 1936

Delarthrum anomalans Golovatch, Aswathy, Bhagirathan & Sudhikumar. *Zootaxa*, 5068(4): 485-516, 2021

The species *Delarthrum anomalans* was described by Sergei I. Golovatch, Mathilakath Dasan Aswathy, Usha Bhagirathan and Ambalaparambil Vasu Sudhikumar based on a Holotype and four Paratypes collected from Kerala, Thrissur district (10°21'19''N and 76°12'48''E, 29 m) and three Paratypes collected from Kerala, Wayanad district, Manathavady, Valliyur kavu (11°48'08''N and 76°01'55''E, 716 m). The type specimens have been deposited in CATE. The species is named to emphasize the anomalous absence of adenostyles from both male legs 1 and 2.

Delarthrum anomalans Golovatch *et al.*, 2021

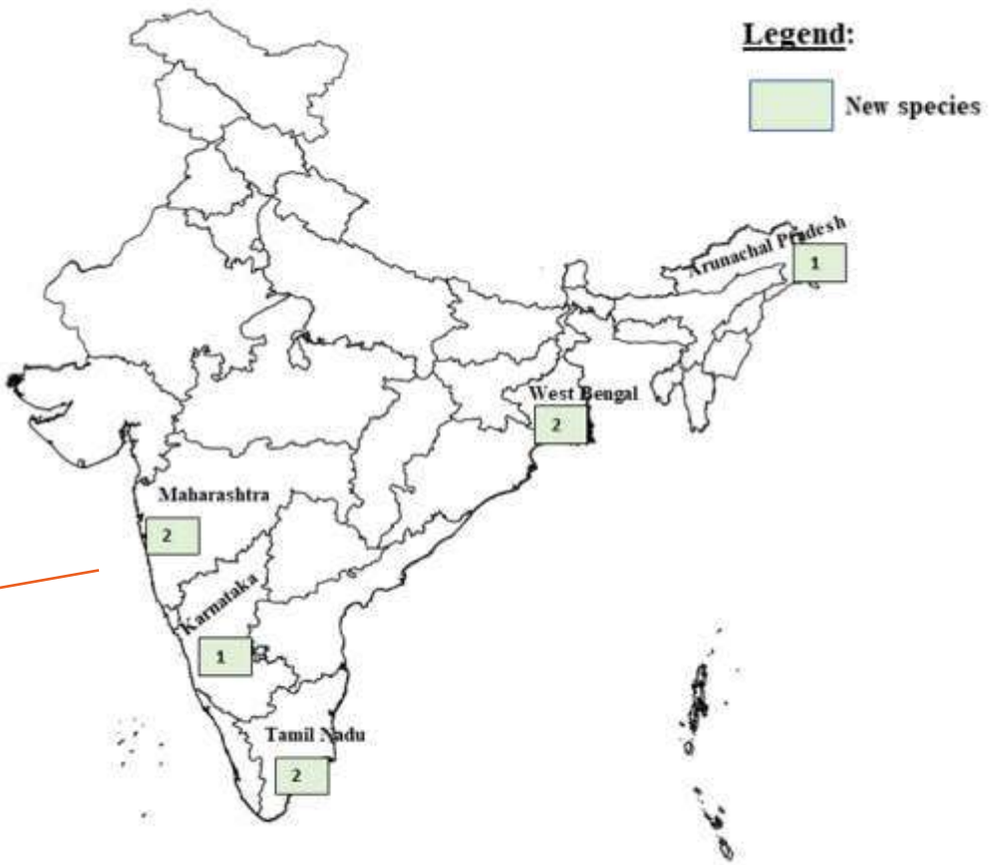
Family: PYRGODESMIDAE
Genus: *Klimakodesmus* Carl, 1932

Klimakodesmus bilobocaudatus Awasthy, Golovatch & Sudhikumar. *Zootaxa*, 4980(2): 373-382, 2021

The species *Klimakodesmus bilobocaudatus* was described by Mathilakath Dasan Aswathy, Sergei I. Golovatch and Ambalaparambil Vasu Sudhikumar based on a Holotype and eleven Paratypes collected from Kerala, Kannur district (11°58'2.5" N and 75°17'46.6" E, 5 m). The type specimens have been deposited in CATE. The species is named to emphasize a caudally relatively deeply bilobed dorsal keel (PM) on ring 19 in the new species; adjective.

Klimakodesmus bilobocaudatus Awasthy *et al.*, 2021

3.7 INSECTA



3.7.1 DIPTERA

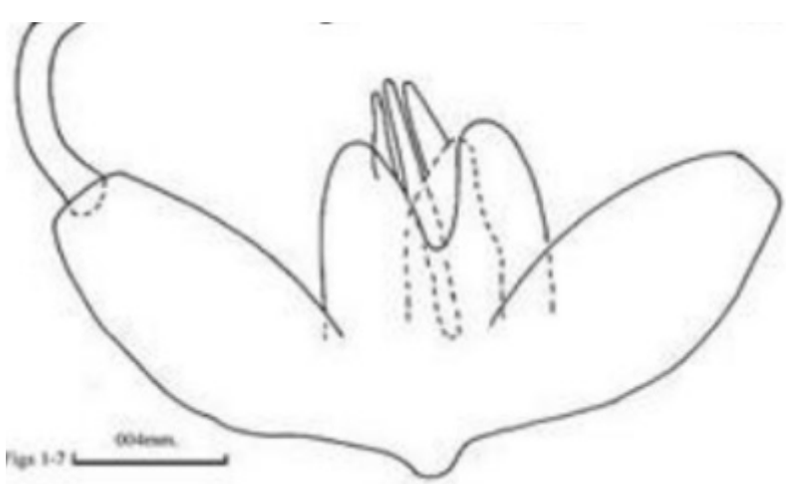
The Dipteran fauna popularly known as flies is a group of insects with two wings and two halters. Their extensive range of ecosystem services, derivation and distributional diversification have altogether made this dipteran flies essential part of any global ecosystem. The economic importance of the group is immense from being Predators and parasitoids of other insects, assisting in pest management to nutrient cycling, from soil turnover, forensic investigators, decomposition of biological by-products to blossoming of plants, this group of true flies has contributed towards significant economic and aesthetic benefits as well as cultural values to human society. The global diversity is represented by 151,201 species, while Indian diversity comprises 7382 species.

Eight new species have been described this year, two from Maharashtra, West Bengal and Tamil Nadu each and one species from Arunachal Pradesh and one from Karnataka.

Family: CECIDOMYIIDAE
Genus: *Lasioptera* Meigen, 1818

Lasioptera gangakhedensis Najam & Siddiqui, *Uttar Pradesh Journal Of Zoology*, 42(20): 124-127, 2021

The species *Lasioptera gangakhedensis* reared from *Setaria verticilla* L (Poaceae) a new host grass species collected at Gangakhed (Dist. Parbhani) Maharashtra, India was described by K.A. Ahad Najam and M.S. Siddiqui. The type specimens are deposited in the collection of insects, Department of Zoology, Shanakarrao Chavan Mahavidyalaya, Ardhapur, Nnaded (M.S.), The specific epithet *gangakhedensis* refers to locality i.e., Gangakhed.

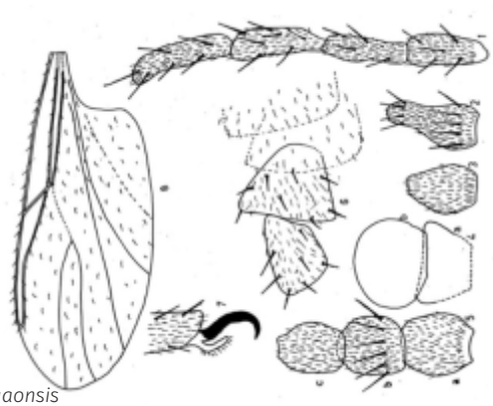


Lasioptera gangakhedensis Najam & Siddiqui, 2021

Genus: *Conarete* Pritchard, 1951

Conarete naigaonsis Siddiqui. Int. J. *Life Sciences*, 9(2): 269-271

The species *Conarete naigaonsis* was described by M.S. Siddiqui based on Holotype and two Paratypes collected from Naigaon Bazar dist, Mahrashtra. The type specimens are deposited in the collection of insects of Department of Zoology, Sharadchandra College, Naigaon Bazar dist., Nanded, Mahrashtra. The species epithet naigaonsisrefres to the place of collection, Naigaon.

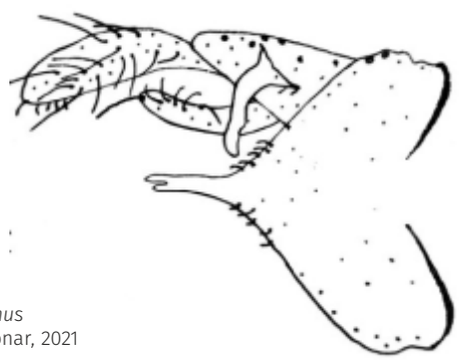


Conarete naigaonsis Siddiqui, 2021

Genus: *Stictochironomus* Kieffer, 1919

Stictochironomus bengalensis Konar. *Zootaxa*, 5072(2): 173-181, 2021

The species *Stictochironomus benghalensis* was described by Sanghamitra Konar based on a Holotype collected from West Bengal, Suri, Mayurakshi River (23°92 'N and 87°51'E) and three Paratypes collected from West Bengal, Narajole, Kangsabati River (22°29'N and 87°19'E). The type specimens retained in the Entomology Division, Department of Zoology, The University of Burdwan, West Bengal, India and will be deposited in ZSI-NZC. The species is named after the type locality, Bengal.

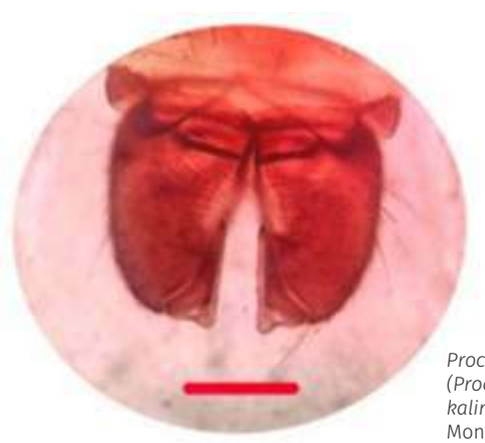


Stictochironomus bengalensis Konar, 2021

Family: CHIRONOMIDAE
Genus: *Procladius* Skuse, 1889

Procladius (Procladius) kalimpongensis Mondal, Mukherjee & Hazra. J. *Insect Biodiversity*, 029(1): 016-031

The species *Procladius (Procladius) kalimpongensis* was described by Debarshi Mondal, Tuhar Mukherjee and Niladri Hazra based on a Holotype and four Paratypes collected from West Bengal, Kalimpong (27.06 and 88.47). The type specimens are now housed in the collection of insects in the Entomology Division, Department of Zoology, The University of Burdwan, West Bengal, India and will be deposited in ZSI-NZC. The species is named after the type locality.



Procladius (Procladius) kalimpongensis Mondal *et al.*, 2021

Family: CULICIDAE
Genus: *Culex* Linnaeus, 1758

Culex (Culex) gaugleri Suman *et al.*, 2021

Culex (Culex) gaugleri Suman. *Rec. zool. Surv. India*, 121(4): 429-439, 2021

The species *Culex (Culex) gaugleri* was described by Devi Shankar Suman, Souvik De, Gaurav Sharma, Kailash Chandra and Dhriti Banerjee based on a Holotype and one Paratype collected from Tamil Nadu, Kodaikanal hills (10°13'23" N and 77°20'48" E). The type specimens have been deposited in Diptera section, Zoological Survey of India, Kolkata (NZSI). The new species is named after Prof. Randy Gaugler of Rutgers University, NJ, USA, in recognition of his significant contributions to vector biology and management.

Family: SYRPHIDAE
Genus: *Monoceromyia* Shannon, 1925

Monoceromyia flavoscutata Sankararaman *et al.*, 2021

Monoceromyia flavoscutata Sankararaman, Anooj & Mengual. *Journal of Asia-Pacific Entomology,* https://doi.org/10.1016/j.aspen.2021.09.011, 2021

The species *Monoceromyia flavoscutata* was described by H. Sankararaman, S.S. Anooj and Ximo Mengual based on a Holotype collected from Tamil Nadu, Thadiyankudisai (27°58'59''N and 94°39'59''E) and one Paratype collected from Tamil Nadu, Coimbatore (11°02'4''N and 77°12'4''E). The type specimens have been deposited in UASB. The species epithet flavoscutata refers to the yellow scutellum, by which it differs from closely related *M. trinotata* and *M. tredecimpunctata*.

Monoceromyia nigra Sankararaman, Anooj & Mengual. *Journal of Asia-Pacific Entomology,* https://doi.org/10.1016/j.aspen.2021.09.011, 2021

The species *Monoceromyia nigra* was described by H. Sankararaman, S.S. Anooj and Ximo Mengual based on a Holotype collected from Arunachal Pradesh, Basar, West Siang, (27 58'59''N and 94 39'59''E). The type specimens have been deposited in UASB. The species epithet 'nigra' means black in Latin, referring to the black mesonotum, pleuron and scutellum.

Monoceromyia nigra Sankararaman *et al.*, 2021

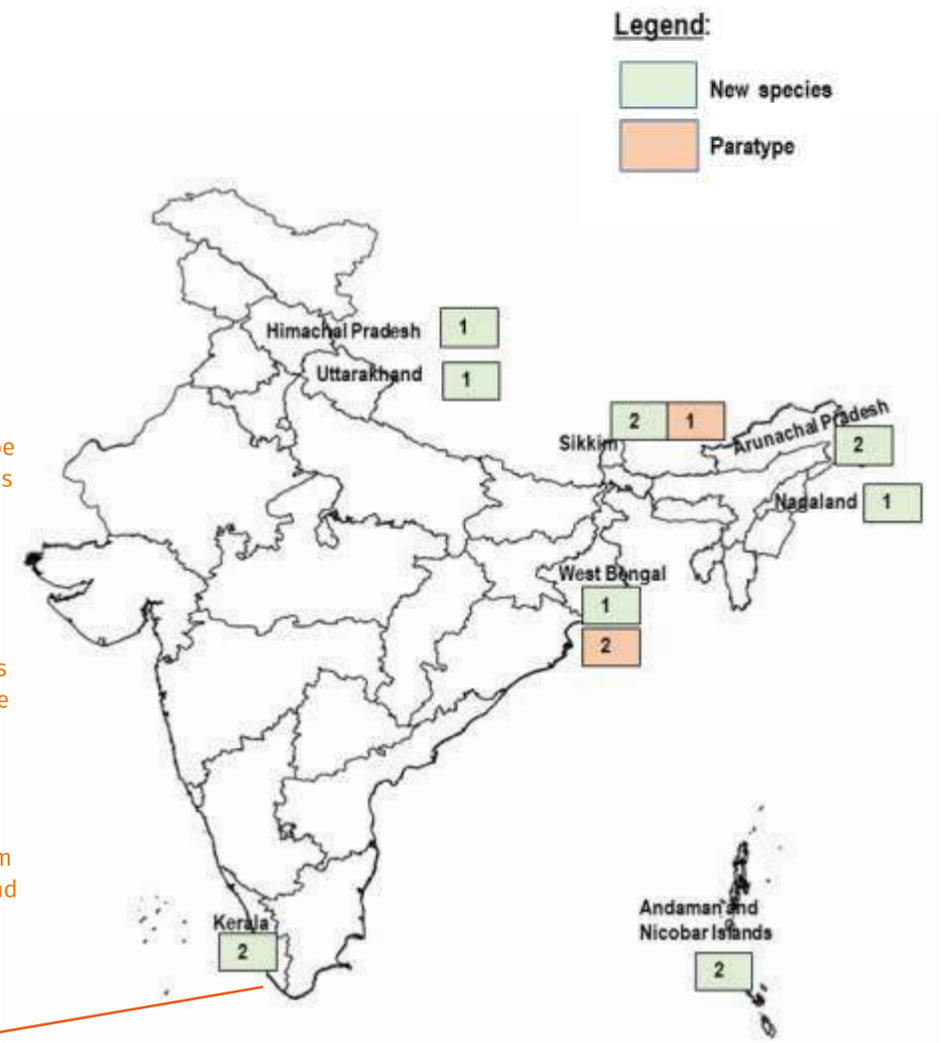
Elaphromyia juncta David *et al.*, 2021

Family: TEPHRITIDAE
Genus: *Elaphromyia* Bigot, 1859

Elaphromyia juncta David, Hancock & Sachin. *Zootaxa,* 5023(2): 251-262, 2021

The species *Elaphromyia juncta* was described by K.J. David, D.L. Hancock, K. Sachin, R.S. Ramya and S. Ramani based on a Holotype and one Paratype collected from Karnataka, Chikkamagaluru, Tarikere, Kemmangundi, K. R. hill station. The type specimens have been deposited in NBAIR. The specific epithet is an adjective derived from the Latin word junctus (=connected), denoting the connected hyaline spots in the wing.

Lepidoptera is an attractive and fascinating group of Insects in terms of species diversity and economic importance. It is one of the most widespread and widely recognizable insect orders in the world. Lepidoptera exhibit high species diversity and have significant economic impact. Many of its species are of great aesthetic value, important ecological indicators, pollinators, biological control agents, model organisms for Environmental survey, monitoring and conservation policies, useful in genetic and medical research, key constituent of different type of food chains and food webs and serious pest species of different crop plants. Within Lepidoptera, having 1,58,570 species (moths with 1,38,656 species constitute about 88% of the total Lepidoptera and about 9 % of the total Animal kingdom. As far as Indian fauna is concerned, about 12000 moth species are known. This year a total of 14 new Lepidopteran species have been described, two each from Andaman and Nicobar Islands, Arunachal Pradesh, Kerala and Sikkim. One species each from Himachal Pradesh, West Bengal, Nagaland and Uttarakhand. For the other two species paratypes have been found from India.



3.7.2 LEPIDOPTERA

Family: BOMBYCIDAE
Genus: *Trilocha* Moore, [1860]

Trilocha nicobari N. Singh & Ahmad. *Zootaxa*, 4970(3): 586-592, 2021

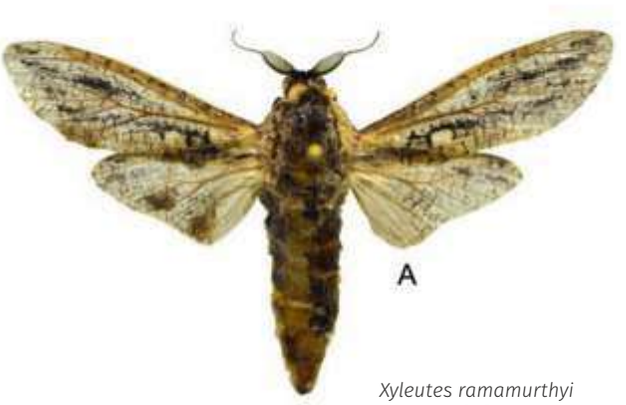
The species *Trilocha nicobari* was described by Navneet Singh, Jalil Ahmad and Kailash Chandra based on a Holotype and two Paratypes collected from Andaman and Nicobar Islands, Great Nicobar Island, 4 km South of Vijaynagar and ten Paratypes collected from different localities of Andaman and Nicobar Islands. The type specimens have been deposited in ZSI-NZC. The species is named after Great Nicobar Island.

Trilocha nicobari
Singh *et al.*, 2021

Family: COSSIDAE
Genus: *Xyleutes* Hübner, [1820]

Xyleutes ramamurthyi Yakovlev & Sankararaman. *Zootaxa*, 5040(4): 565-574, 2021

The species *Xyleutes ramamurthyi* was described by Roman V. Yakovlev, Hariharakrishnan Sankararaman, Rajasekaran Krishna Balaji and Valappil Balakrishnan based on a Holotype collected from Kerala, Malappuram, Thottapally (11°21'52.0''N and 76°06'30.20''E). The type specimens have been deposited in the University of Agricultural Sciences, Bengaluru and in the department of Entomology, Faculty of Agriculture, Annamalai University, Chidambaram. The second and third author dedicate this species to Dr. Vilayanoor V. Ramamurthy (Retired Professor, Indian Agricultural Research Institute, New Delhi), a well-known weevil taxonomist, who motivated them to take up insect taxonomy.



Xyleutes ramamurthyi Yakovlev & Sankararaman, 2021

Family: EREBIDAE
Genus: *Aberrasine* Volynkin & Huang, 2019

Aberrasine pangsau N. Singh, Kirti & Bisht. *Zootaxa*, 4950(2): 383-388, 2021

The species *Aberrasine pangsau* was described by Navneet Singh, Jagbir Singh Kirti and Santosh Singh Bisht based on a Holotype collected from Arunachal Pradesh, Sherga on (27.125N and 92.2556E). The type specimens have been deposited in ZSI-NZC. The species is named after Pangsau Pass Winter festival, a famous festival of Arunachal Pradesh and a great event of harmony between India and Myanmar.

Aberrasine pangsau Singh *et al.*, 2021

Genus: *Aemene* Walker, 1854

Aemene cernyi Volynkin & Černý. *Zootaxa*, 5068(4): 533-546, 2021

The species *Aemene cernyi* was described by Anton V. Volykin based on a Holotype and two Paratypes collected from Sikkim, Mt. Kanchenjunga (27' 30'' N and 88' 20'' E, 2000 m.), two Paratypes collected from Sikkim, Darjeeling and 87 Paratypes collected from different localities of Nepal. The type specimens have been deposited in MWM-ZSM. The new species is named after Dr Karel Černý (Innsbruck, Austria), expert in Asiatic Arctiinae and author's friend.

Aemene cernyi Volynkin & Černý, 2021

Genus: *Dentadra* Dubatolov, Volynkin, N. Singh, Joshi & Černý, 2021

The genus *Dentadra* (Type species: *Prabhasa flavicosta* Moore, 1878) was described by Vladimir V. Dubatolov, Anton V. Volynkin, Navneet Singh, Rahul Joshi and Karel Černý based on a Syntype (*Dentadra flavicosta* (Moore, 1878), comb. nov) collected from Cherra (27.125N and 92.2556E). The type specimen has been deposited in

Dentadra Dubatolov, Volynkin, N. Singh, Joshi & Černý. *Zootaxa*, 4966(5): 519-534, 2021

NHMUK. The genus name is an aggregate of the Latin word 'dentatus' meaning 'dentate' and the genus group name *Zadadra*. The name refers to the strongly dentate margin of the sacculus of the type species. Gender feminine.

Genus: *Miltochrista* Hübner, 1819

The species *Miltochrista berdepsebunda* was described by Anton V. Volynkin, Navneet Singh, Karel Černý and Rahul Joshi based on a Holotype collected from Malaysia, Pahang district, Endau Rompin State park, Camping by The Kincin River (2°37'10.4N and 103°20'10.9E) and twenty eight Paratypes collected from different localities of Malaysia, Brunei, Indonesia, Thailand and India. The type specimens have been deposited in MWM-ZSM, NHMUK, CKC, ZSM and ZSI-NZC and. The species is named after 'Berdepse' a Latin transliteration of the Greek **'μπέρδεψε'** meaning 'confused'. The specific epithet refers to the wrong treatment of the new species as *M. pudibunda* and *M. minibunda*.

Miltochrista berdepsebunda Volynkin, Singh, Černý & Joshi. *Zootaxa*, 4995(3): 551-564, 2021

Miltochrista berdepsebunda Volynkin *et al.*, 2021

Genus: *Prabadra* Dubatolov, Volynkin, N. Singh, Joshi & Černý, 2021

Prabadra occidentalis Dubatolov, Volynkin, N. Singh, Joshi & Černý. *Zootaxa*, 4966(5): 519-534, 2021

The genus *Prabadra* and the species *Prabadra occidentalis* was described by Vladimir V. Dubatolov, Anton V. Volynkin, Navneet Singh, Rahul Joshi and Karel Černý based on a Holotype and one Paratype collected from Nagaland, Wokha and three Paratypes collected from different localities of Thailand. The type specimens have been deposited in ZSI-NZC and CKC. The genus name is an aggregate of the genus group names *Prabhasa* and *Zadadra*. Gender feminine. In Latin, '*occidentalis*' means 'western'. The specific epithet refers to the species' more western distribution than *P. monastyrskii*.

Prabadra occidentalis Dubatolov *et al.*, 2021

Genus: *Zadadra* Moore, 1878

Zadadra confusa Dubatolov, Volynkin, N. Singh, Joshi & Černý. *Zootaxa*, 4966(5): 519-534, 2021

The species *Zadadra confusa* was described by Vladimir V. Dubatolov, Anton V. Volynkin, Navneet Singh, Rahul Joshi and Karel Černý based on a Holotype collected from Nepal, Ganesh Himal, 2 km N of Dhunche and several Paratypes collected from and different localities of Nepal, India and Bhutan. The type specimens have been deposited in MWM-ZSM, ZSI-NZC and CKC. The species is named after 'Confusa' means 'confused' in Latin. The specific epithet refers to its confusion with *Z. distorta*.

Zadadra confusa Dubatolov *et al.*, 2021

Family: GEOMETRIDAE
Genus: *Prometopidia* Hampson, 1902

Prometopidia joshimathensis joshimathensis Dey *et al.*, 2021

Prometopidia joshimathensis joshimathensis Dey, Uniyal, Hausmann & Stuning. *Zootaxa*, 4980(1): 028-044, 2021

The species *Prometopidia joshimathensis joshimathensis* was described by Pritha Dey, Virendra Prasad Uniyal, Axel Hausmann and Dieter stüning based on a Holotype and ten Paratypes collected from Uttarakhand, Joshimath (2424 m) and one Paratype collected from Auli, Uttarakhand (2893 m). The species is named after the type locality Joshimath, uttarakhand, western Himalaya.

Family: HESPERIIDAE
Genus: *Zographetus* (Watson, 1893)

Zographetus dzonguensis Kunte, Karmakar & Lepcha. *Zootaxa*, 5072(4): 373-379, 2021

The species *Zographetus dzonguensis* was described by Tarun Karmakar, Sonam Wangchuk Lepcha, Dipendra Nath Basu and Krushnamegh Kunte based on a Holotype and two Paratypes collected from Sikkim, North Sikkim district, Namprikdang village (27.518403 and 88.531640). The type specimens have been deposited in NCBS, Tata Institute of Fundamental Research, Bengaluru (=Bangalore), India. The new species is named after the type locality of Dzongu in Sikkim. This is a stronghold of the Lepcha-the people of Sikkim-to whom the description of this species is dedicated.

Zographetus dzonguensis Kunte, Karmakar & Lepcha, 2021

Family: LIMACODIDAE
Genus: *Thespea* Solovyev, 2014

Thespea aka N. Singh & Ahmad. *Zootaxa*, 4927(1): 123-132, 2021

The species *Thespea aka* was described by Navneet Singh, Jalil Ahmad, Kailash Chandra and Alexey Solovyev based on a Holotype and one Paratype collected from Arunachal Pradesh, West Kameng, Bhalukpong (27°04'18.5N and 092°35'26.2 E). The type specimens have been deposited in ZSI-NZC. The species is named after a tribe called Aka living in the West Kameng district of Arunachal Pradesh, India.

Thespea aka Singh *& Ahmad*, 2021

Nacaduba sinhala ramaswamii Sadasivan, 2021

Family: LYCAENIDAE
Genus: *Nacaduba* Moore, 1881

Nacaduba sinhala ramaswamii Sadasivan. *Journal of Threatened Taxa*, 13(3): 17939-17949, 2021

The species *Nacaduba sinhala ramaswamii* was described by Kalesh Sadasivan, Baiju Kochunarayanan, Rahul Knot and S. Ramasamy Kamaya Naicker based on a Holotype and four Paratypes collected from Kerala, Thiruvananthapuram district, Vithura (8.676N and 77.095E). The type specimens have been deposited in NCBS. The species is named after Lord Rama, signifying the connectons across the sea to Sri Lanka.

Family: NOCTUIDAE
Genus: *Phlogophora* Treitschke, 1825

Phlogophora similis Bandyopadhyay, Mallick, Sanyal & Chandra. *Zootaxa*, 5004(2): 311-342, 2021

The species *Phlogophora similis* was described by Uttaran Bandyopadhyay, Rushati Dey, Kamalika Bhattacharyya, Kaushik Mallick, Arna Mazumder, Subrata Gayen, Moumita Das, Angshuman Raha, Abesh Kumar Sanyal, Vikas Kumar, Virendra Prasad Uniyal and Kailash Chandra based on a Holotype and three Paratypes collected from West Bengal, Kalimpong district, Neora Vallet National Park, Rishap (27.1073°N and 088.6512°E, 2136 m). The type specimens have been deposited in NZC-ZSI. The name of the new species refers to its apparently similar wing pattern with the closely allied "*costalis*" group of species, all having names ending with suffix "*lis*" including *P. humilis* and *P. nobilis*.

Phlogophora similis Bandyopadhyay *et al.*, 2021

Family: NOTODONTIDAE
Genus: *Chadisra* Walker, 1862

Chadisra curvipenis N. Singh, Ahmad & Raha. *Zootaxa*, 5068(2): 277-286, 2021

The species *Chadisra curvipenis* was described by Navneet Singh, Jalil Ahmad and Angshuman Raha based on a Holotype and one Paratype collected from Andaman and Nicobar Islands, Great Nicobar Island, S.W. Road and four Paratypes collected from different localities of Great Nicobar Island. The type specimens have been deposited in NZCZSI. The species is named for its characteristically curved aedeagus at its distal end.

Chadisra curvipenis Singh *et al.*, 2021

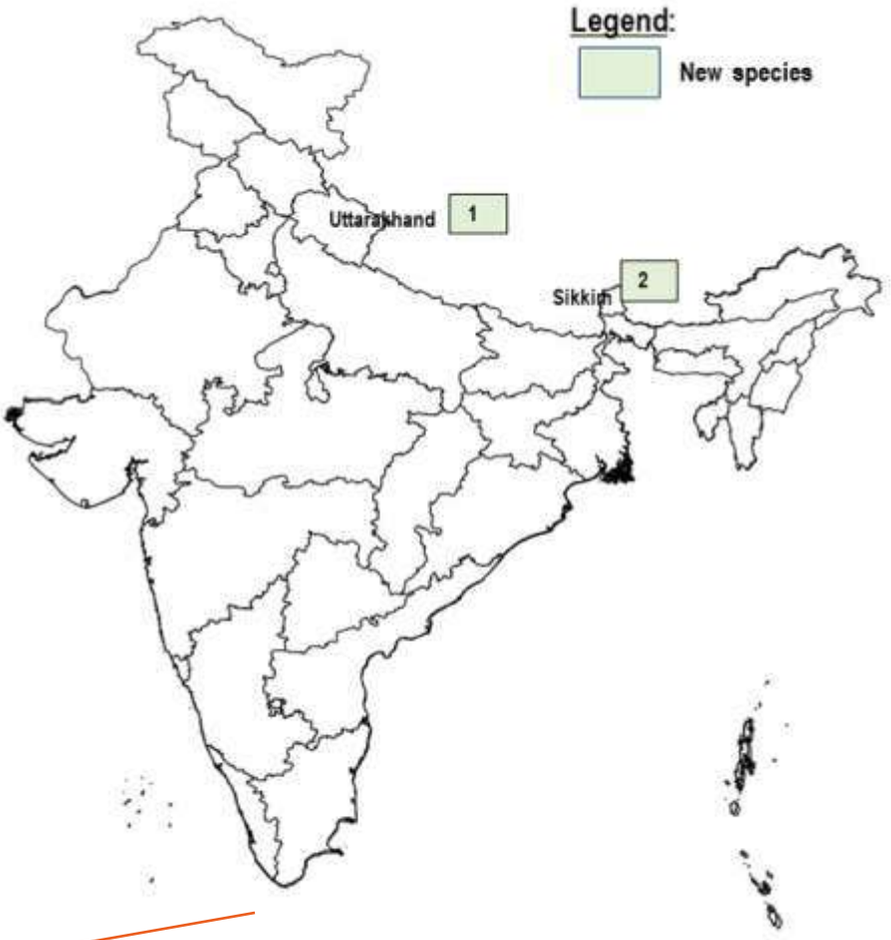
Family: PIERIDAE
Genus: *Pieris* Schrank, 1801

Pieris tadokoroi Das, Eitschberger, Singh & Chandra. *Zootaxa*, 5004(4): 501-520, 2021

The species *Pieris tadokoroi* was described by Gaurab Nandi Das, Ulf Eitschberger, Navneet Singh and Kailash Chandra based on a Holotype collected from Himachal Pradesh, Kullu, Great Himalayan National Park, Dhel Pool and sixteen Paratypes collected from different localities of Himachal Pradesh, Kullu, Great Himalayan National Park. The type specimens have been deposited in NZCZSI. The specific name tadokoroi is named after Mr. Teruo Tadokoro, a Japanese lepidopterist, well known for his pierid works.

Pieris tadokoroi Das *et al.*, 2021

Trichoptera (Caddisflies) being fresh water insects, are seventh most speciose insect order. These are holometabolus insects, with exclusively aquatic larval forms but the adult flies are terrestrial. Trichoptera plays various important roles in the ecosystem and are abundant in all types of natural freshwater aquatic ecosystem. Their immature stages are apneustic and depend on dissolved oxygen for respiration. They have a vital role in food webs and food chains. They act as food for fish and other predators which are of human concern. Caddisflies are present in all the continents except in Antarctica. At present, 16,267 species of Trichoptera from 632 genera and 63 families have been reported throughout the world. Out of these, 1405 species from 102 genera and 28 families have been reported from India. Two new species from Sikkim and one from Uttarakhand belonging to Trichoptera have been described this year.

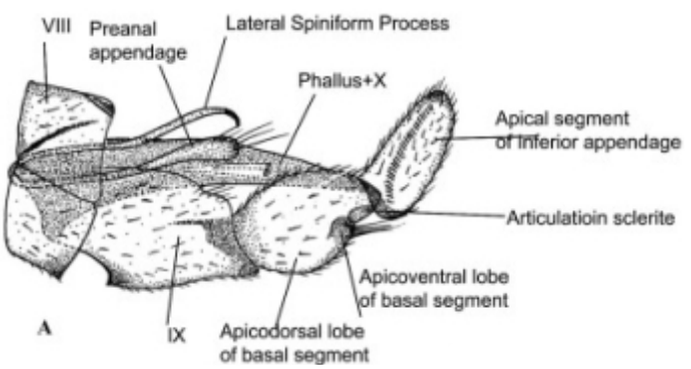


3.7.3 TRICHOPTERA

Family: PHILOPOTAMIDAE
Genus: *Kisaura* Ross, 1956

Kisaura similis Hussain, Pandher, Saini & Parey. *Oriental Insects*, DOI: 10.1080/00305316.2021.1906778, 2021

The species *Kisaura similis* was described by Zahid Hussain, Manpreet Singh Pandher, Malkiat Singh Saini and Sajad Hussain Parey based on a Holotype and three Paratypes collected from Uttarakhand, Gairsain, 2200 m. The type specimens have been deposited in NPC and ZSI-NZC. The species is named after the close resemblance of its genitalia to *K. rossi*.

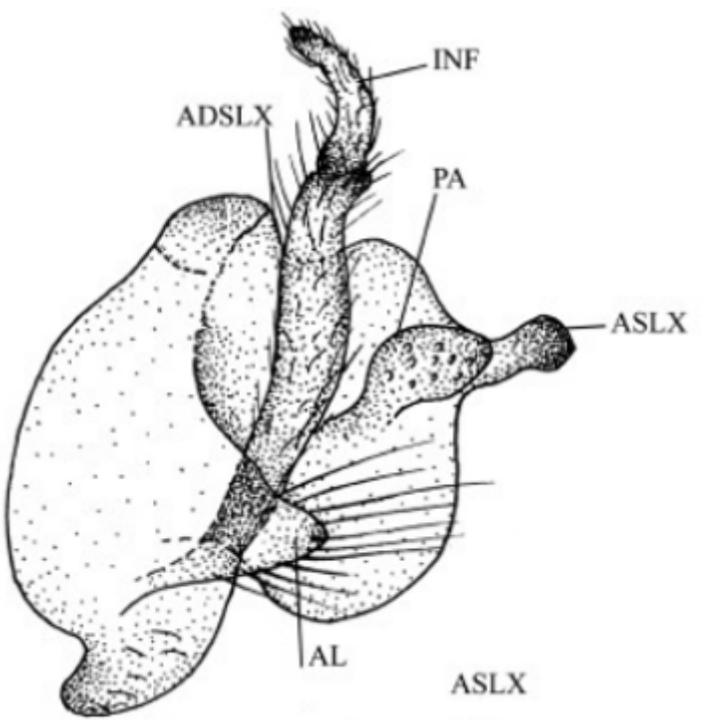


Kisaura similis Hussain *et al.*, 2021

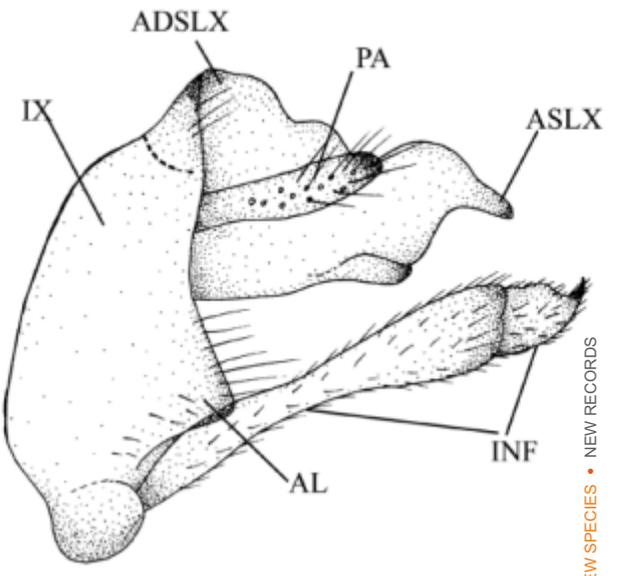
Family: HYDROPSYCHIDAE
Genus: *Hydromanicus* Brauer, 1865

Hydromanicus religious Pandher, Kaur & Garima. *Zootaxa*, 4915(3): 364-376, 2021

The species *Hydromanicus religious* was described by Manpreet Singh Pandher, Simarjit Kaur and Deepti Garima based on a Holotype and two Paratypes collected from Sikkim, Chungthang, 2200 m (27°36'14.04N and 88°38'47.04 E). The type specimens have been deposited in NPC. The species is named with respect to the religious importance of the type locality. According to the belief of the local people in Chungthang, the First Sikh Guru visited here in 1509 AD. He blessed this place and spread rice grains as there was no food grown locally. This is the only place in North Sikkim where rice cultivation occurs with his blessings.



Hydromanicus religious
Pandher *et al.*, 2021

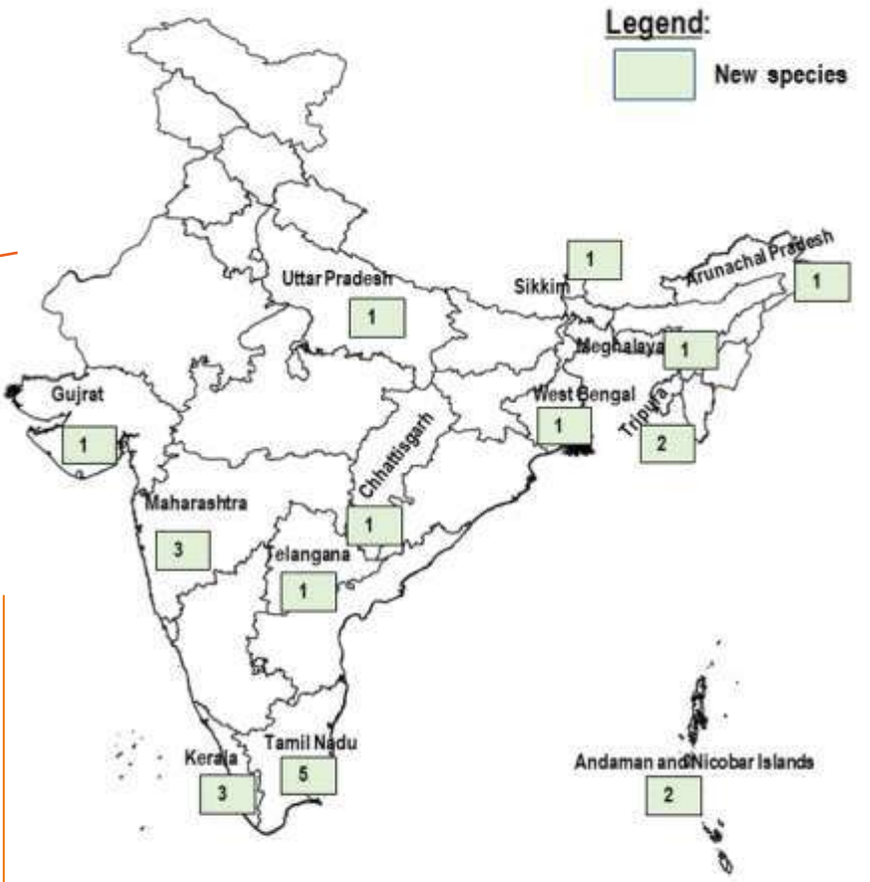


Hydromanicus sikkimensis
Pandher *et al.*, 2021

Hydromanicus sikkimensis Pandher, Kaur & Garima. *Zootaxa*, 4915(3): 364-376, 2021

The species *Hydromanicus sikkimensis* was described by Manpreet Singh Pandher, Simarjit Kaur and Deepti Garima based on a Holotype and one Paratype collected from Sikkim, Sangkalang, 1600 m (27°30'21.0''N and 88°31'43.3''E) and two Paratypes collected from Himachal Pradesh, Khajjiar (32°33'20.9''N and 76°3'56.2''E). The type specimens have been deposited in NPC and ZSI-NZC. The species is named after the state from where the type was collected.

3.7.4 COLEOPTERA



Order Coleoptera belonging to class Insecta is the most significant order worldwide, comprising 3,86,755 species under 28,959 genera and 176 families under four suborders (Archostemata, Myxophaga, Adephaga, and Polyphaga). More than 22,303 species of beetles are known in India, classified under 114 families. Members of Coleoptera are economically crucial as injurious or storage pests (Bruchidae, Buprestidae, Cerambycidae, Chrysomelidae, Coccinellidae, Curcujidae, Curculionidae, Meloidae, Scarabaeidae, etc.), predators (Coccinellidae, Cicindelidae, Carabidae), scavengers (Scarabaeidae, Tenebrionidae, Buprestidae, Hydrophilidae, etc.), as food and medicine. Moreover, they also show exceptionally diverse adaptation to a wide range of environmental conditions and habitats and show both destructive and beneficial economic importance. This year a total of 23 Coleopteran species have been described from India: Tamil Nadu (5), Maharashtra (3), Kerala (3), Andaman and Nicobar Islands (2), Tripura (2), Arunachal Pradesh (1), Chhattisgarh (1), Gujrat (1), Meghalaya (1), Sikkim (1), Telangana (1), Uttar Pradesh (1), West Bengal (1).

Family: CARABIDAE
Genus: *Chlaenius* Bonelli, 1810

Chlaenius (Lissauchenius) venkataramani Vasanthakumar & Kirschenhofer. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, 73: 37-41, 2021

The species *Chlaenius (Lissauchenius) venkataramani* was described by Duraikannu Vasanthakumar and Erich Kirschenhofer based on a Holotype and three Paratypes collected from Tamil Nadu, Sivagangai (9.8433°N and 78.4809°E). The type specimen has been deposited in ZSI-WRC. The species is named in honour of Dr. K. Venkataraman, former Director of Zoological Survey of India, Kolkata, for his keen interest, contribution and effort to revamp animal taxonomy in India.

Chlaenius (Lissauchenius) venkataramani Vasanthakumar & Kirschenhofer, 2021

Genus: *Omphra* Dejean, 1825

Omphra balli Akhil & Sabu. *Oriental Insects*, DOI:10.1080/00305316.2021 . 1918592, 2021

The species *Omphra balli* was described by Akhil Sv and Thomas K. Sabu based on a Holotype and three Paratypes collected Telangana, Amrabad TR, view point Farhabad and three Paratypes collected from Telangana, Amrabad TR, Amrabad gate. The type specimens have been deposited in ZSI-WRC. The species is named in honour of Late Prof. Geroge E. Ball, an American eminent entomologist, whose support enabled us to pursue the taxonomy of the ten lesser-known carabid subfamilies in India.

Omphra balli Akhil & Sabu, 2021

Omphra erwini Akhil & Sabu. *Oriental Insects*, DOI:10.1080/00305316.2021 .1918592, 2021

The species *Omphra erwini* was described by Akhil Sv and Thomas K. Sabu based on a Holotype and seven Paratypes collected Gujarat, Ambaji and one Paratype collected from Gujarat, Satadhar. The type specimens have been deposited in ZSI-DRC. The species is named in honour of Late Dr. Terry L. Erwin, an exceptional and outstanding American entomologist, whose taxonomic remarks and support lead us on our endeavour on taxonomy of Carabidae from India.

Omphra erwini Akhil & Sabu, 2021

Family: CERAMBYCIDAE
Genus: *Pelossus* Thomson, 1864

Pelossus indicus Majumder, Ghate & Chandra. *Zootaxa*, 5105(4): 593-599, 2021

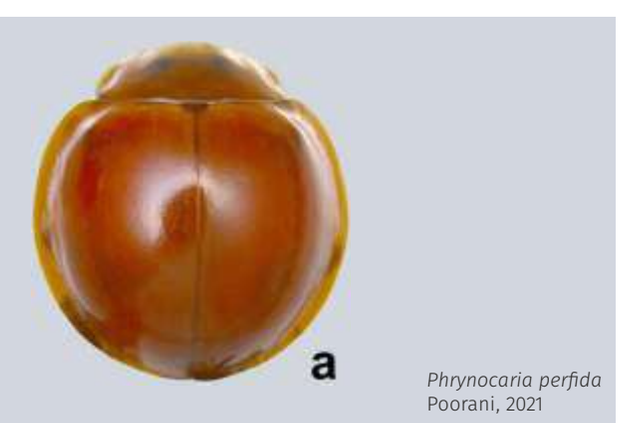
The species *Pelossus indicus* was described by Amitava Majumder, Hemant V. Ghate and Kailash Chandra based on a Holotype and two Paratypes collected from Chhattisgarh, Kabirdham, Bhoramdev Wildlife Sanctuary, Sakri River (22°05'40.9" N and 81°09'52.1" E, 427 m). The type specimens have been deposited in the National Zoological Collection of Zoological Survey of India (ZSI), Kolkata. The species name indicus is derived from the country of occurrence: India.

Pelossus indicus Majumder *et al.*, 2021

Family: COCCINELLIDAE
Genus: *Phrynocaria* Timberlake, 1943

Phrynocaria perfida Poorani. *Zootaxa*, 4926(1): 117-133, 2021

The species *Phrynocaria perfida* was described by J. Poorani, H. Sankararaman and S.S. Anusree based on a Holotype and one Paratype collected from Tamil Nadu, Kerala, Kakkadampoyil and two Paratypes collected from different localities of Kerala. The type specimens have been deposited in BMNH and NBAIR. The specific epithet is a latin adjective in nominative case (perfida L.= 'false'), alluding to its external similarity to *C. circumusta*.

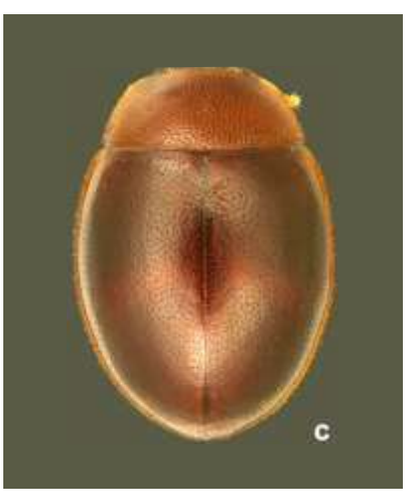


Phrynocaria perfida Poorani, 2021

Genus: *Protoplotina* Miyatake, 1994

Protoplotina ambigua Poorani. *Zootaxa*, 4915(2): 255-263, 2021

The species *Protoplotina ambigua* was described by J. Poorani, C. Anuradha and R. Thanigairaj based on a Holotype and ten Paratypes collected from Tamil Nadu, Podavur, NRCB research farm (10°47'20.16"N and 078°34'30.40"E). The type specimens have been deposited in NBAIR, NPC and UASB. The specific epithet is an adjective of Latin origin and is in reference to the extremely variable nature of the abdominal postcoxal lines in this species.



Protoplotina ambigua Poorani *et al.*, 2021

Genus: *Sasajiella* Miyatake, 1994

Sasajiella boothi Poorani & Thanigairaj. *Zootaxa*, 5005(2): 189-200, 2021

The species *Sasajiella boothi* was described by J. Poorani and R. Thanigairaj based on a Holotype and eight Paratypes collected from Tamil Nadu, Podavur, NRCB research farm (10°47'20.16"N and 078°34'30.40"E). The type specimens have been deposited in NBAIR. The new species is named for Dr. R. G. Booth of the Natural History Museum, London, to honour his contributions to Coccinellidae systematics and in grateful acknowledgement of his constant help and support for our studies on Indian Coccinellidae.

Sasajiella boothi Poorani & Thanigairaj, 2021

Family: DYTISCIDAE
Genus: *Hyphydrus* Illiger, 1802

Hyphydrus biswasi Ghosh. *Rec. zool. Surv. India*, 121(4): 441-445, 2021

The species *Hyphydrus biswasi* was described by Sujit Kumar Ghosh based on a Holotype and thirteen Paratypes collected from Arunachal Pradesh, Namdapha National Park, Vijay Nagar. The type specimens have been deposited in NZSI. The species is named after Late Dr Shyamrup Biswas, Retired Scientist at Zoological Survey of India, Kolkata, who devoted his career studying a different group of beetles from India.

Hyphydrus biswasi Ghosh, 2021

Genus: *Sandracottus* Sharp, 1882

Sandracottus vijayakumari Anand, Ashiq, Smitha, Adhithya, Tibin & Suresh. *Journal of Threatened Taxa*, 13(3): 17999-18003, 2021

The species *Sandracottus vijayakumari* was described by P.P. Anand, P.P. Ashiq, M. Smitha, M. Adhithya, T. Tibin and V. Suresh based on a Holotype and one Paratype collected from Kerala, Palakkad, southern Western Ghats, Nelliyampathy forest range- Kundrachola (100 30'58''N and 760 37'51" E). The type specimens have been deposited in DZUC. The species is named in honor of Mr. Vijayakumar PK (Aka. Vijayakumar Blathur), Popular science writer in Malayalam for his ardent passion towards insects.

Sandracottus vijayakumari Anand *et al.*, 2021

Family: ELATERIDAE
Genus: *Cryptalaus* Ôhira, 1967

Cryptalaus alveolatus Parekar & Patwardhan. *Journal of Threatened Taxa*, 13(3): 19985-19999, 2021

The species *Cryptalaus alveolatus* was described by Harshad Parekar and Amol Patwardhan based on a Holotype and one Paratype collected from Maharashtra, Raigad district, Supegaon and six Paratypes collected from different localities of Madhya Pradesh, Karnataka and Chhatsgarh. The type specimens have been deposited in ZKJSSC and BNHS. The species is named after the Latn word "alveolatus" means hollowed out like a trough. The specifc epithet refers to depressed elytral interstria II (than interstriae I and III), which appears to be trough-shaped.

Cryptalaus alveolatus Parekar & Patwardhan, 2021

Genus: *Lanelater* Arnett, 1952

Lanelater andamanensis Chandran & Dubey. *The Coleopterists Bulletin*, 75(1): 240-246, 2021

The species *Lanelater andamanensis* was described by Nithya Chandran and Anil Kumar Dubey based on a Holotype and three Paratypes collected from Andaman Islands, South Andaman district, Little Andaman, light house road bridge, near sea shore (10°32.579'N and 92°32.352'E). The type specimens have been deposited in ZSI-ANRC. The species is named after the type locality, the Andaman Islands.

Lanelater andamanensis Chandran & Dubey, 2021

Family: GEOTRUPIDAE
Genus: *Bolboceras* Kirby, 1819

Bolboceras bopdevense Kalawate & Hillert. *Zootaxa*, 4964(3): 559-570, 2021

The species *Bolboceras bopdevense* was described by Aparna Sureshchandra Kalawate and Oliver Hillert based on a Holotype collected from Maharashtra, Pune District, Kondhwa taluk, Bopdev Ghat, 700 m (18.477N and 73.894E). The type specimen has been deposited in ZSI-WRC. The species is named after the type locality, Bopdev Ghat of the Pune district, Maharashtra.

Bolboceras bopdevense Kalawate & Hillert, 2021

Bolboceras trimbakense Kalawate & Hillert. *Zootaxa*, 4964(3): 559-570, 2021

The species *Bolboceras trimbakense* was described by Aparna Sureshchandra Kalawate and Oliver Hillert based on a Holotype collected from Maharashtra, Nashik District, Trimbakeshwar, 696 m (19.984N and 73.518E). The type specimen has been deposited in ZSI-WRC. The species is named after the type locality, Trimbakeshwar of the Nashik district, Maharashtra.

Bolboceras trimbakense Kalawate & Hillert, 2021

Family: NITIDULIDAE
Genus: *Carpophilus* Stephens, 1830

Carpophilus (Ecnomorphus) venkataramani Dasgupta, Pal & Powell. *Annales Zoologici*, 71(3): 627-649, 2021

The species *Carpophilus (Ecnomorphus) venkataramani* was described by Jhikmik Dasgupta, Tarun Kumar Pal and Gareth S. Powell based on a Holotype collected from Tripura, W. Tripura district, Jirania, 18 km O-Agartala. The type specimens have been deposited in ZSIC. The species is named in honour of Dr. K. Venkataraman, Ex-Director, Zoological Survey of India for his support and encouragement in the research work.

Carpophilus (Ecnomorphus) venkataramani Dasgupta *et al.*, 2021

Family: SCARABAEIDAE
Genus: *Lepidoserica* Nikolaev, 1979

Lepidoserica barapaniensis Chandra, Ahrens, Bhunia, Sreedevi & Gupta. *Zootaxa*, 4951(3): 492-510, 2021

The species *Lepidoserica barapaniensis* was described by Kailash Chandra, Dirk Ahrens, Debika Bhunia, Kolla Sreedevi and Devangshu Gupta based on a Holotype collected from Meghalaya, Umiam, Barapani (25°40'1.2936''N and 91°54'17.1072''E, 996 m). The type specimen has been deposited in NBAIR. The new species is named after its type locality, Barapani (adjective in the nominative case singular).

Lepidoserica barapaniensis Chandra *et al.*, 2021

Genus: *Maladera* Mulsant & Rey, 1871

Maladera kaimurensis Chandra, Ahrens, Bhunia, Sreedevi & Gupta. *Zootaxa*, 4951(3): 492-510, 2021

Maladera kaimurensis Chandra *et al.*, 2021

The species *Maladera kaimurensis* was described by Kailash Chandra, Dirk Ahrens, Debika Bhunia, Kolla Sreedevi and Devangshu Gupta based on a Holotype collected from Uttar Pradesh, Mirzapur, Kaimur Wildlife Sanctuary (30.2622N and 77.63105933E). The type specimen has been deposited in NZSI. The name (adjective in the nominative singular) refers to the type locality, Kaimur Wildlife Sanctuary (India).

Maladera kottagudiensis Chandra, Ahrens, Bhunia, Sreedevi & Gupta. *Zootaxa*, 4951(3): 492-510, 2021

Maladera kottagudiensis Chandra *et al.*, 2021

The species *Maladera kottagudiensis* was described by Kailash Chandra, Dirk Ahrens, Debika Bhunia, Kolla Sreedevi and Devangshu Gupta based on a Holotype and two Paratypes collected from Tamil Nadu, Madras, Kottagudi (10.01664N, 77.48009333E, 2000-2,500 ft). The type specimen has been deposited in NZSI. The new species is named after the type locality Kottagudi (adjective in the nominative singular).

Maladera reyaensis Bhunia, Gupta, Chandra & Ahrens. *Zootaxa*, 5081(4): 594-600, 2021

Maladera reyaensis Bhunia *et al.*, 2021

The species *Maladera reyaensis* was described by Debika Bhunia, Devangshu Gupta, Kailash Chandra and Dirk Ahrens based on a Holotype and two Paratypes collected from West Bengal, Darjeeling, Reya (27.039490N and 88.263910E). The type specimen has been deposited in NZSI. The name (adjective in the nominative singular) refers to the type locality, Reya, West Bengal (India).

Maladera silviafabriziae Chandra, Ahrens, Bhunia, Sreedevi & Gupta. *Zootaxa*, 4951(3): 492-510, 2021

Maladera silviafabriziae Chandra *et al.*, 2021

The species *Maladera silviafabriziae* was described by Kailash Chandra, Dirk Ahrens, Debika Bhunia, Kolla Sreedevi and Devangshu Gupta based on a Holotype collected from Andaman and Nicobar, Forest adjoining to Rest House, Tugapur, Maya Bundar (12.9131N and 92.8977E). The type specimen has been deposited in NZSI. This new species name (noun in the genitive case) is dedicated to the Italian taxonomist, Silvia Fabrizi, in recognition of her contribution to Melolonthinae beetle taxonomy, especially on Sericini.

Maladera tripuraensis Chandra, Ahrens, Bhunia, Sreedevi & Gupta. *Zootaxa*, 4951(3): 492-510, 2021

Maladera tripuraensis Chandra *et al.*, 2021

The species *Maladera tripuraensis* was described by Kailash Chandra, Dirk Ahrens, Debika Bhunia, Kolla Sreedevi and Devangshu Gupta based on a Holotype collected from Tripura, North Tripura (23°35'N and 91°52'E, 29 m). The type specimen has been deposited in NBAIR. This new species is named after its occurrence in Tripura (adjective in the nominative case singular).

Genus: *Nepaloserica* Frey, 1965

Nepaloserica cheemaensis Bhunia, Gupta, Chandra & Ahrens. *Zootaxa*, 5081(4): 594-600, 2021

The species *Nepaloserica cheemaensis* was described by Debika Bhunia, Devangshu Gupta, Kailash Chandra and Dirk Ahrens based on a Holotype collected from Sikkim, Cheema, 27.570030N and 88.477300E). The type specimen has been deposited in NZSI. The name (adjective in the nominative singular) refers to the type locality Cheema, Sikkim (India).

Nepaloserica cheemaensis Bhunia *et al.* 2021

Family: STAPHYLINIDAE
Genus: *Astenus* Dejean, 1833

Astenus keralensis Sreevidhya, Akhil & Sebastian. *Journal of Threatened Taxa*, 13(5): 18215-18226, 2021

The species *Astenus keralensis* was described by P. Sreevidhya, S.V. Akhil and C.D. Sebastian based on a Holotype and five Paratypes collected from Kerala, Malappuram, Chelari (11.1112778N and 75.9039166E) and one Paratype collected from Kerala, Malappuram, University of Calicut (11.2277778N and 76.4977777E). The type specimens have been deposited in ZSIK. The species is named afer Kerala, a state of India, from where the specimen was collected.

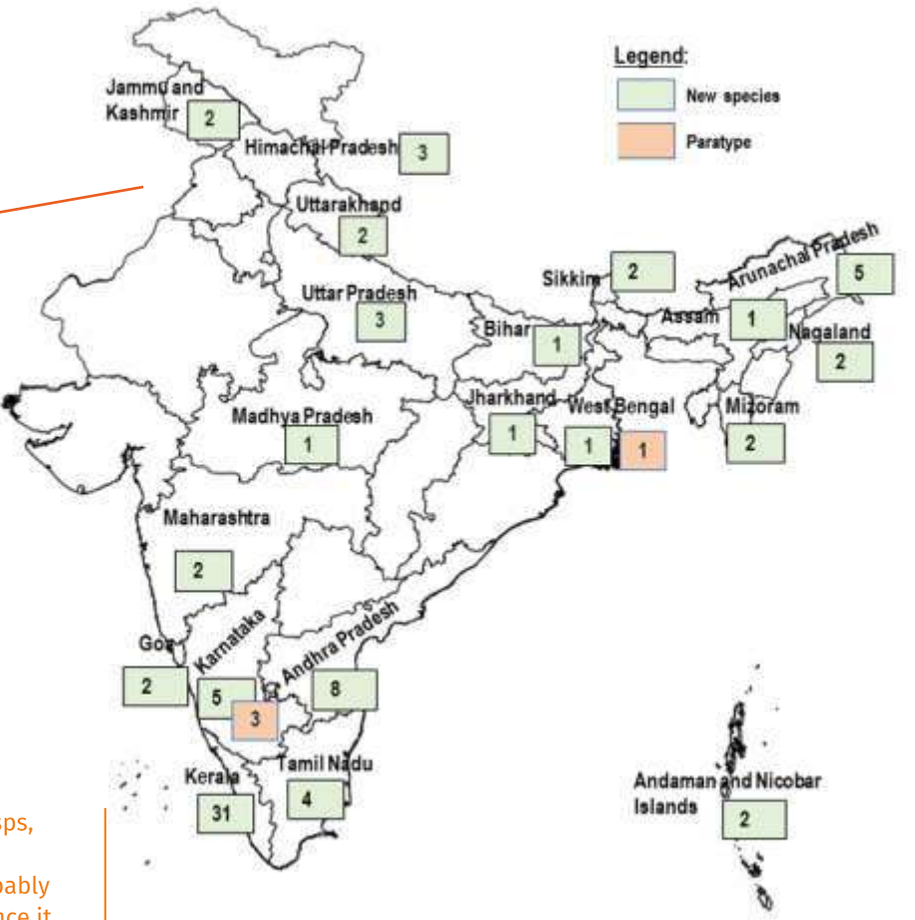
Astenus keralensis Sreevidhya *et al.*, 2021

Astenus rougemonti Sreevidhya, Akhil & Sebastian. *Journal of Threatened Taxa*, 13(5): 18215-18226, 2021

The species *Astenus rougemonti* was described by P. Sreevidhya, S.V. Akhil and C.D. Sebastian based on a Holotype and four Paratypes collected from Kerala, Malappuram, Chelari (11.1112778N and 75.9039166E). The type specimens have been deposited in ZSIK. The species is named in memory and honour of late Guillaume de Rougemont, a very charming personality and a man who loved rove beetles, who guided us with the taxonomy of the *genus Astenus*.

Astenus rougemonti Sreevidhya *et al.*, 2021

3.7.5 HYMENOPTERA

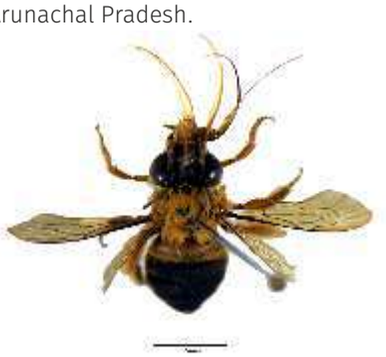


Order Hymenoptera includes bees, wasps, ants and sawflies. From the human standpoint, order Hymenoptera is probably the most beneficial group of insects since it not only contains a great many species that are of value as parasites or predators of insect pests, but also include the most important pollinators of plants, the bees. They are also interesting in terms of their greater biodiversity, fascinating biology, great diversity of habits and complexity of behaviour patterns culminating in the social organisation of the wasps, bees and ants. Hymenoptera are found in nearly all terrestrial habitats such as soil, leaf litter and a range of vegetation types while, some parasitic forms are found in aquatic habitats too. They are phytophagous, entomophagous or a combination of both. The number, definition and limits of Hymenoptera have always been in a state of flux and according to the recent estimates there are 1,53,088 species of Hymenoptera are described worldwide. No accounts on the consolidated number of various taxa of Indian Hymenoptera are available. This year 80 new Hymenopteran species have been described from various states and Union Territories: Kerala (31), Andhra Pradesh (8), Arunachal Pradesh (5), Karnataka (5), Tamil Nadu (4), Himachal Pradesh (3), Uttar Pradesh (3), Andaman and Nicobar Islands (2), Jammu and Kashmir (2), Goa (2), Maharashtra (2), Nagaland (2), Mizoram (2), Uttarakhand (2), Sikkim (2), Assam (1), Madhya Pradesh (1), Jharkhand (1), Bihar (1), West Bengal (1).

Family: APIDAE
Genus: *Elaphropoda* Lieftinck, 1966

Elaphropoda arunachalensis Saini, Chandra, Kumar & Hooda. J. *ent. Res.*, 45(4): 765-768, 2021

The species *Elaphropoda arunachalensis* was described by Jagdish Saini, Kailash Chandra, Hirdesh Kumar and Sandeep Hooda based on a Holotype collected from Arunachal Pradesh, Changlang district, Namdapha Tiger Reserve, Hornbill (27.5385°N and 96.43782°E). The type specimens have been deposited in NZSI. The name *arunachalensis* refers to the Northeastern Himalayan state of India, Arunachal Pradesh.



Elaphropoda arunachalensis Saini *et al.*, 2021

Elaphropoda guptai Saini, Chandra, Kumar & Hooda. *J. ent. Res.*, 45(4): 765-768, 2021

The species *Elaphropoda guptai* was described by Jagdish Saini, Kailash Chandra, Hirdesh Kumar and Sandeep Hooda based on a Holotype collected from Arunachal Pradesh, Changlang district, Namdapha Tiger Reserve, Deban (27.49715°N and 96.3911°E). The type specimens have been deposited in NZSI. The species is named in the memory of Dr. Rajiv K Gupta, a well-known entomologist.

Elaphropoda guptai Saini *et al.*, 2021

Family: BETHYLIDAE
Genus: *Goniozus* Förster, 1856

Goniozus coconymphagus Sureshan. *Journal of Asia-Pacific Biodiversity*, 14(2021): 378-385, 2021

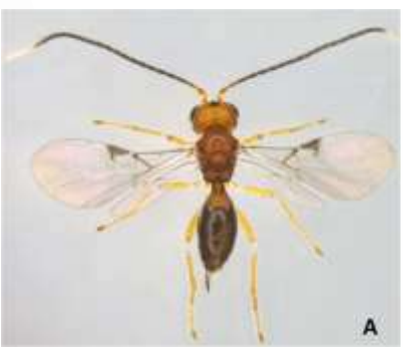
The species *Goniozus coconymphagus* was described by C. Binoy, S. Santosh, M. Ranjith and P.M. Sureshan based on a Holotype and four Paratypes collected from Kerala, Kozhikode district, Pantheerankavu. The type specimens have been deposited in ZSIK. The species named after the host generic name, *Coconympha iriarcha* Meyrick.

Goniozus coconymphagus Sureshan, 2021

Family: BRACONIDAE
Genus: *Asobara* Förster, 1862

Asobara jenningsi Gupta. *Zootaxa*, 5048(3): 444-450, 2021

The species *Asobara jenningsi* was described by Ankita Gupta and K.J. David based on a Holotype and two Paratypes collected from Karnataka: Bengaluru, ICAR-NBAIR Yelahanka campus (13.0968° N and 77.5666° E). The type specimens have been deposited in the National Insect Museum of ICAR-NBAIR. The species name is warmly dedicated to Dr John T. Jennings, The University of Adelaide, Australia for his relentless efforts in editing numerous manuscripts and thus contributing to the science of Ichneumonoid taxonomy.



Asobara jenningsi Gupta, 2021

Genus: *Carinadelius* Ranjith & van Achterberg, 2021

Carinadelius medicus Ranjith & van Achterberg. *Zootaxa*, 4926(1): 001-025, 2021

The genus *Carinadelius* and the species *Carinadelius medicus* was described by A.P. Ranjith, C. Van Achterberg, K.G. Samartsev and M. Nasser based on a Holotype and four Paratypes collected from Kerala, Thiruvananthapuram, Jawaharlal Nehru Tropical Botanic Garden and Research Institute. The type specimens have been deposited in the DZUC. The generic name formed by combining the generic name *Adelius* and 'carina', because of the midlongitudinal carina on the propodeum and the incomplete occipital carina. Gender: masculine and the species is named after Friedrich Kasimir Medikus (1738-1808), a German physician and botanist. Authors dedicate this species with gratitude to all doctors and nurses for their timeless and uncompromising efforts to control COVID-19.

Carinadelius medicus Ranjith & van Achterberg, 2021

Genus: *Dirrhope* Foerster, 1851

Dirrhope indica Ranjith. *Zootaxa*, 4908(2): 251-262, 2021

The species *Dirrhope indica* was described by A.P. Ranjith, K.G. Samartsev and M. Nasser based on a Holotype collected from Kerala, Thiruvananthapuram, Jawaharlal Nehru Tropical Botanic Garden and Research Institute. The type specimen has been deposited in DZUC.

Dirrhope indica Ranjith, 2021

Genus: *Leluthia* Cameron, 1887

Leluthia (Euhecabolodes) areola Ranjith & Belokobylskij. *Journal of Asia-Pacific Entomology*, 24(2021): 1033-1039, 2021

The species *Leluthia (Euhecabolodes) areola* was described by Sergey A. Belokobylskij, A.P. Ranjith, P. Girish Kumar and Dharma Rajan Priyadarsanan based on a Holotype collected from Kerala, Idukki, Koottar (9°46'41" N and 77°12'31" E) and one Paratype collected from Kerala, Kozhikode, Karad (11°11'57" N and 75°51'42" E). The type specimen has been deposited in ZSI-WGRC and DZUC. The species is named after the presence of delineated areola on the propodeum.

Leluthia (Euhecabolodes) areola Ranjith & Belokobylskij, 2021

Leluthia (Euhecabolodes) indica Belokobylskij & Ranjith. *Journal of Asia-Pacific Entomology*, 24(2021): 1033-1039, 2021

The species *Leluthia (Euhecabolodes) indica* was described by Sergey A. Belokobylskij, A.P. Ranjith, P. Girish Kumar and Dharma Rajan Priyadarsanan based on a Holotype collected from Goa, Kottigao (14°58'36" N and 74°12'22" E). The type specimen has been deposited in ZSI-WGRC. The species is named after the country in which the genus *Leluthia* is reported for the first time.

Leluthia (Euhecabolodes) indica Belokobylskij & Ranjith, 2021

Genus: *Meteorus* Haliday, 1835

Meteorus rubrum Ahmed & Shamim. *Journal of Threatened Taxa*, 13(3): 18011-18014, 2021

The species *Meteorus rubrum* was described by Zaheer Ahmed, Altaf Hussain Mir and Mohammad Shamim based on a Holotype and a Paratype collected from Jammu & Kashmir, Palma, Rajouri. The type specimens have been deposited in MDZUK. The new species is named after the red colour of the body of the type specimen.

Meteorus rubrum Ahmed & Shamim, 2021

Genus: *Nedinoschiza* Cameron, 1911

Nedinoschiza indica Ranjith. *Zootaxa*, 4990(3): 542-552, 2021

The species *Nedinoschiza indica* was described by A.P. Ranjith and Dharma Rajan Priyadarsanan based on a Holotype collected from Kerala, Kozhikode, Janakikkadu and one Paratype collected from Kerala, Kannur, Aralam. The type specimens have been deposited in the AIMB and will be transferred into ICAR-NBAIR. The species is named after the country where the specimen was collected.

Nedinoschiza indica Ranjith, 2021

Parahormius similis Gupta, 2021

Genus: *Parahormius* (Nixon, 1940)

Parahormius similis Gupta. *Zootaxa*, 5052(2): 292-296, 2021

The species *Parahormius similis* was described by Ankita Gupta based on a Holotype and two Paratypes collected from Maharashtra, Pune, Narayangaon (19.1229° N and 73.9771° E). The type specimens have been deposited in ICAR-NBAIR. The specific epithet is derived based on the resemblance in general appearance with other conspecific Indian species.

Genus: *Stantonia* Ashmead, 1904

Stantonia hayati Ghramh, Ahmed & Khan. *Pakistan J. Zool.*, 1-4, 2021

The species *Stantonia hayati* was described by Hamed A. Ghramh, Zubair Ahmed and Khalid Ali Khan based on a Holotype and seven Paratypes collected from Uttar Pradesh, Aligarh. The type specimens have been deposited in ZDAMU. The new species is named after Dr. Mohammed Hayat, a well-known Chalcidologist from India.

Stantonia hayati Ghramh *et al.*, 2021

Genus: *Yelicones* Cameron, 1887

Yelicones achterbergi Rishabanu, Binoy & Santhosh. *Zootaxa*, 5016(2): 294-298, 2021

The species *Yelicones achterbergi* was described by K. Rishabanu, C. Binoy and S. Santosh based on a Holotype and seven Paratypes collected from Kerala, Kozhikode district, Balussery (11°28'12.3" N and 75°52'23.3" E, 34m). The type specimens have been deposited in ZSIK. The specific epithet is a commemorative, genitive masculine noun in apposition taken from the patronym Achterberg after Dr Cornelis van Achterberg who has made prodigious contributions in hymenopteran taxonomy.

Yelicones achterbergi Rishabanu *et al.*, 2021

Family: CERAPHRONIDAE
Genus: *Cyoceraphron* Dessart, 1975

Cyoceraphron indicus Bijoy & Rajmohana. *Journal of Asia-Pacific Entomology*, 24(4): 1326-1333, 2021

The species *Cyoceraphron indicus* was described by C. Bijoy and K. Rajmohana based on a Holotype collected from Kerala, Palakkad district, Silent valley (11.0641°N and 76.5378°E). The type specimens have been deposited in the National Zoological Collection, at Zoological Survey of India, Calicut. This species is named 'indicus', (= India), the country from which it is collected.

Cyoceraphron indicus Bijoy & Rajmohana, 2021

Cyoceraphron sahyadri Bijoy & Rajmohana. *Journal of Asia-Pacific Entomology*, 24(4): 1326-1333, 2021

The species *Cyoceraphron sahyadri* was described by C. Bijoy and K. Rajmohana based on a Holotype collected from Kerala, Kollam district, Katilapara (8.8578°N and 77.2175°E) and one Paratype collected from Karnataka, Coorg district, Sringeri (13.4198°N and 75.2567°E). The type specimens have been deposited in the National Zoological Collection, at Zoological Survey of India, Calicut. This species is named 'sahyadri' (=belonging to Western Ghats), the region from which it is collected.

Cyoceraphron sahyadri Bijoy and Rajmohana, 2021

Genus: *Elysoceraphron* Szelenyi 1936

Elysoceraphron aadi Bijoy & Rajmohana. *Journal of Asia-Pacific Entomology*, 24(4): 1326-1333, 2021

The species *Elysoceraphron aadi* was described by C. Bijoy and K. Rajmohana based on a Holotype collected from Karnataka, Chamrajnagar district, Yelandur Taluk, Biligiriranga Hills, Mariyappana Pala (12.027280°N, 77.104617°E). The type specimens have been deposited in the National Zoological Collection, at Zoological Survey of India, Calicut. The species is named 'aadi' (=first, in Sanskrit, being the first species of *Elysoceraphron* to be described from Oriental region).

Elysoceraphron aadi Bijoy and Rajmohana, 2021

Genus: *Pteroceraphron* Dessart, 1981

Pteroceraphron apoorva Bijoy & Rajmohana. *Journal of Asia-Pacific Entomology*, 24(4): 1326-1333, 2021

The species *Pteroceraphron apoorva* was described by C. Bijoy and K. Rajmohana based on a Holotype collected from Kerala, Ernakulum district, Thattekkad IB (10.10398°N and 76.70046°E). The type specimens have been deposited in the National Zoological Collection, at Zoological Survey of India, Calicut. Being among the rarest taxa of Ceraphronidae, the species is named 'apoorva' (= 'rare', in Sanskrit).

Pteroceraphron apoorva Bijoy & Rajmohana, 2021

Family: CHALCIDIDAE
Genus: *Smicromorpha* Girault, 1913

Smicromorpha attenboroughi Binoy, Santhosh & Nasser. *Zootaxa*, 4991(1): 131-149, 2021

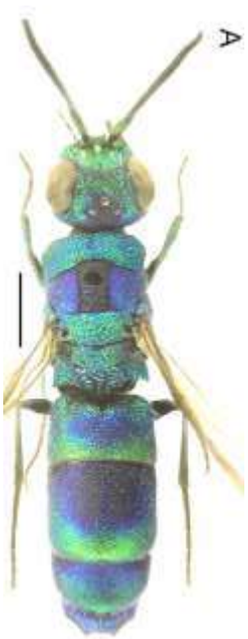
The species *Smicromorpha attenboroughi* was described by C. Binoy, S. Santosh and M. Nasser based on a Holotype and two Paratypes collected from Kerala, Kozhikode district, Mampetta (11'32°N and 75'98°E, 85 m) and four Paratypes collected from Kerala, Kozhikode district, Mukkam (11'25°N and 75'61°E, 50 m). The type specimens have been deposited in ZSIK. The specific epithet is a commemorative, genitive noun in apposition taken from the patronym Attenborough after the naturalist and broadcaster, Sir David Frederick Attenborough for making the world's natural history accessible and understandable to millions with his outstanding documentaries.

Smicromorpha attenboroughi Binoy *et al.*, 2021

Family: CHRYSIDIDAE
Genus: *Chrysis* Linnaeus, 1767

Chrysis arkadyi Rosa, Baiocchi, Halada & Proshchalykin. *Journal of Hymenoptera Research*, 84: 283-294, 2021

The species *Chrysis arkadyi* was described by Paolo Rosa, Daniele Baiocchi, Marek Halada and Maxim Yu. Proshchlykin based on a Holotype collected from Uttaranchal, Haldwani, Kathgodam. The type specimen has been deposited in MSNM. The specific epithet arkadyi is a patronym honouring Prof. Dr. Arkady Stepanovich Lelej on the occasion of his 75th birthday and in recognition of his numerous contributions to the study of the Hymenoptera and of the Russian Chrysididae.



Chrysis arkadyi Rosa *et al.*, 2021

Family: COLLECTIDAE
Genus: *Hylaeus* Fabricius, 1793

Hylaeus (Paraprospis) guptai Saini & Chandra. *Oriental Insects*, https://doi.org/10.1080/00305316.2021.1930229, 2021

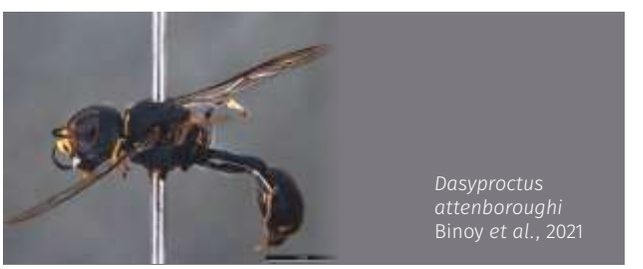
The species *Hylaeus (Paraprospis) guptai* was described by Jagdish Saini, Kailash Chandra and Hirdesh Kumar based on a Holotype and one Paratype collected from Arunachal Pradesh, Tawang district, Jang market (27.58189 and 91.98162). The type specimens have been deposited in NZSI. The species name is named after Prof. Rajiv Kumar Gupta, in appreciation of his merits to the systematics of the Indian bees.

Hylaeus (Paraprospis) guptai Saini & Chandra, 2021

Genus: *Dasyproctus* Lepeletier & Brullé, 1835

Dasyproctus attenboroughi Binoy, Santhosh & Girish Kumar. *Zootaxa*, 4991(3): 467-498, 2021

The species *Dasyproctus attenboroughi* was described by C. Binoy P. Girish Kumar and S. Santosh based on a Holotype and two Paratypes collected from Kerala, Kannur district, Kannapuram (12°25'4.8"N and 75°21'1.62"E). The type specimens have been deposited in ZSIK. The species name is a commemorative, genitive noun in apposition taken from the patronym Attenborough after the naturalist and broadcaster, Sir David Frederick Attenborough for making the world's natural history accessible and understandable to millions with his outstanding documentaries.



Dasyproctus attenboroughi Binoy *et al.*, 2021

Family: CRABRONIDAE
Genus: *Argogorytes* Ashmead, 1899

Argogorytes pulawskii Girish Kumar & Dubey. *Zootaxa*, 4927(2): 282-288, 2021

The species *Argogorytes pulawskii* was described by P. Girish Kumar and Anil Kumar Dubey based on a Holotype collected from Andaman Islands, North Andaman Island, Diglipur, Shyamnagar (13°14'49''N and 92°58'25''E). The type specimen has been deposited in ZSI-WGRC. The species is named after Dr Wojciech J. Pulawski, California Academy of Sciences, USA for honouring his tremendous contribution to taxonomy of Crabronidae. The species is named after Dr Wojciech J. Pulawski, California Academy of Sciences, USA for honouring his tremendous contribution to taxonomy of Crabronidae.

Argogorytes pulawskii Girish Kumar & Dubey, 2021

Dasyproctus geethae Binoy & Girish Kumar. *Zootaxa*, 4920(2): 223-234, 2021

The species *Dasyproctus geethae* was described by C. Binoy, P. Girish Kumar and S. Santosh based on a Holotype and four Paratypes collected from Kerala, Kozhikode district, Elathur (11°20'37''N and 75°43'6.74''E). The type specimens have been deposited in ZSIK. The species is named after first author's mother, Mrs. Geetha Rajeevan, who helped in the collection of the type specimen and also encouraged and helped the first author during the study of the developmental stages of the new species.

Dasyproctus geethae Binoy & Girish Kumar, 2021

Dasyproctus leclercqi Binoy, Girish Kumar & Santhosh. *Zootaxa*, 4991(3): 467-498, 2021

The species *Dasyproctus leclercqi* was described by C. Binoy P. Girish Kumar and S. Santosh based on a Holotype collected from Nagaland, Mokokchung district, Longchem (26°36'54.0" N and 94°26'00.1" E). The type specimens have been deposited in ZSIK. The species name is a commemorative, genitive noun in apposition taken from the patronym Leclercq in honour of the late Dr. Jean Leclercq for his immense contributions to the study of the world Crabronini.

Dasyproctus leclercqi Binoy *et al.*, 2021

Dasyproctus niger Binoy, Santhosh & Girish Kumar. *Zootaxa*, 4991(3): 467-498, 2021

The species *Dasyproctus niger* was described by C. Binoy P. Girish Kumar and S. Santosh based on a Holotype collected from Tamil Nadu, Coimbatore district, Anaikatty, SACON (11°05'33.9" N and 76°47'13.0" E). The type specimens have been deposited in ZSIK. The species name, niger, is a Latin masculine adjective meaning black, depicting the overall black colour of the species.

Dasyproctus niger Binoy *et al.*, 2021

Dasyproctus tsunekii Binoy, Girish Kumar & Santhosh. *Zootaxa*, 4991(3): 467-498, 2021

The species *Dasyproctus tsunekii* was described by C. Binoy, P. Girish Kumar and S. Santosh based on a Holotype collected from Kerala, Kannur district, Meloor paddy field (11°05'33.9" N and 76°47'13.0" E) and one Paratype collected from Madayipara, Kannur district, Kerala. The type specimens have been deposited in ZSIK. The species name is a commemorative, genitive noun in apposition taken from patronym Tsuneki after the late Dr. Katsuji Tsuneki in honour of his prodigious contributions to aculeate hymenopteran taxonomy.

Dasyproctus tsunekii Binoy *et al.*, 2021

Genus: *Lyroda* Say, 1837

Lyroda aurea Mawadda & Girish Kumar. *Zootaxa*, 5005(2): 201-217, 2021

The species *Lyroda aurea* was described by N.V. Ayisha Mawadda, P. Girish Kumar and P.M. Sureshan based on a Holotype and one Paratype collected from Kerala, Kozhikode district, Nambikulam (11°30'28''N and 75°50'16''E) and two Paratypes collected from different localities of Kozhikode district and one Paratype collected collected from Karnataka, Kodagu district, Bettathur (12°24'26''N and 75°39'41''E). The type specimens have been deposited in ZSIK. The species name 'aurea' is the feminine Latin adjective derived from 'aureus', golden, the presence of golden setae distinguishes this species from other Indian *Lyroda*.

Lyroda aurea Mawadda & Girish Kumar, 2021

Lyroda nuda Mawadda & Girish Kumar, 2021

Lyroda nuda Mawadda & Girish Kumar. *Zootaxa*, 5005(2): 201-217, 2021

The species *Lyroda nuda* was described by N.V. Ayisha Mawadda, P. Girish Kumar and P.M. Sureshan based on a Holotype and two Paratypes collected from Kerala, Kozhikode district, Purameri (11°40'29''N and 75°35'43''E) and two Paratypes collected from Koothuparamb, Kannur district (11°50'18''N and 75°34'58''E) and one Paratype collected from Vilakkottur, Kozhikode district (11°45'32''N and 75°38'40''E), Kerala. The type specimens have been deposited in ZSIK. The species name 'nuda' is a Latin feminine adjective derived from 'nudus' which means nude. A bare appearance of the clypeus and lower frons and sparse setae on other body parts distinguish this species from the other *Lyroda*.

Genus: *Piyuma* Pate, 1944

Piyuma chapraensis Saini & Dey. *Oriental Insects*. https://doi.org/10.1080/00305316.2021.1997831

The species *Piyuma chapraensis* was described by Varun Saini and Debjani Dey based on a Holotype collected from Bihar, Chapra and one Paratype collected from Bihar, Pusa. The type specimens have been deposited in NPC-IARI. The species named after its type locality.

Piyuma chapraensis
Saini & Dey, 2021

Genus: *Spilomena* Shuckard, 1838

Spilomena attenboroughi Tessy, Sureshan & Binoy. *Zootaxa*, 5068(2): 263-276, 2021

The species *Spilomena attenboroughi* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Kerala, Kozhikode district, Kinalur (11°27'38''N and 75°49'43''E, Alt. 42 m). The type specimen has been deposited in ZSIK (WGRC). The specific epithet is a commemorative, genitive noun from the patronym Attenborough after the naturalist and broadcaster, Sir David Frederick Attenborough who has made the world's natural history accessible and understandable to millions with his outstanding documentaries.

Spilomena attenboroughi Tessy *et al.*, 2021

Spilomena fulvopleuris Tessy, Sureshan & Binoy. *Zootaxa*, 5068(2): 263-276, 2021

The species *Spilomena fulvopleuris* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Kerala, Kozhikode district, Elathur (11°20'30.48''N and 75°44'24.36''E, Alt. 23 m). The type specimen has been deposited in ZSIK (WGRC). The species epithet is after the yellowish-brown colouration on the mesopleural region.

Spilomena fulvopleuris Tessy *et al.*, 2021

Spilomena reticularis Tessy, Sureshan & Binoy. *Zootaxa*, 5068(2): 263-276, 2021

The species *Spilomena reticularis* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Kerala, Kozhikode district, Elathur (11°20'30.48''N and 75°44'24.36''E, Alt. 23 m). The type specimen has been deposited in ZSIK (WGRC). The species epithet is after the finely reticulate mesopleuron.

Spilomena reticularis Tessy *et al.*, 2021

Spilomena sahyadriensis Tessy, Sureshan & Girish Kumar. *Zootaxa*, 5068(2): 263-276, 2021

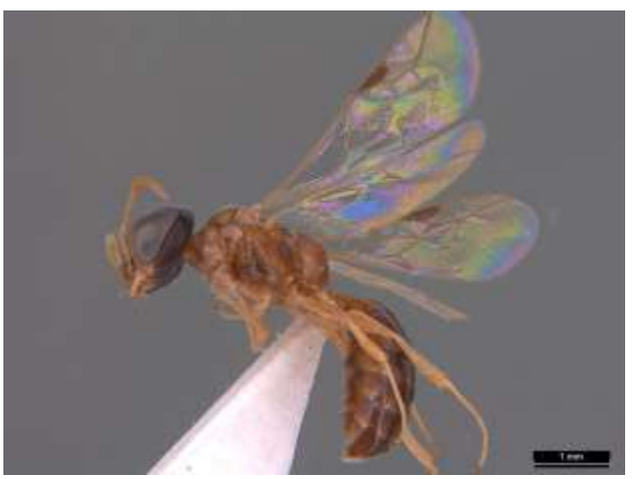
The species *Spilomena sahyadriensis* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Kerala, Thiruvananthapuram dtistrict, Neyyar Wildlife Sanctuary (8°31'50''N and 77°09'08''E, Alt. 93 m). The type specimen has been deposited in ZSIK (WGRC). The species name is derived from "Sahyadri", the vernacular name for the Western Ghat mountain ranges.

Spilomena sahyadriensis Tessy *et al.*, 2021

Spilomena tsunekii Tessy, Sureshan & Girish Kumar. *Zootaxa*, 5068(2): 263-276, 2021

The species *Spilomena tsunekii* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Kerala, Kozhikode district, Manipuram (11°22'48''N and 75°56'40''E, Alt. 99 m). The type specimen has been deposited in ZSIK (WGRC). The specific epithet is a commemorative, genitive noun taken from patronym Tsuneki after late Dr. Katsuji Tsuneki, in honor of his immense contribution to aculeate hymenopteran taxonomy.

Spilomena tsunekii Tessy *et al.*, 2021



Spilomena tuberculata Tessy *et al.*, 2021

Spilomena tuberculata Tessy, Sureshan & Girish Kumar. *Zootaxa*, 5068(2): 263-276, 2021

The species *Spilomena tuberculata* was described by Tessy Rajan, P. Girish Kumar, P.M. Sureshan and C. Binoy based on a Holotype collected from Karnataka, Kodagu district, Perumbadi (12°08'31''N & 75°47'44''E, Alt. 877 m) and four Paratypes collected from different localities of Kodagu district, Karnataka. The type specimen has been deposited in ZSIK (WGRC). The species name is derived from a distinctively conspicuous interantennal tubercle.

Genus: *Tzustigmus* Finnamore, 1995

Tzustigmus sahyadriensis Tessy, Girish Kumar & Sureshan. *Zootaxa*, 4950(2): 389-394, 2021

The species *Tzustigmus sahyadriensis* was described by Tessy Rajan, P. Girish Kumar and P.M. Sureshan based on a Holotype and two Paratypes collected from Kerala, Thiruvananthapuram District, Ponmudi (8°45'35.64''N and 77°7'0.84''E) and seven Paratypes collected from Kerala, Thiruvananthapuram district, Agasthyamalai Biosphere Reserve, Peppara Wildlife Sanctuary, Pandipath (8°40'15''N and 77°12'06''E). The type specimens have been deposited in ZSIK. The species is named after "Sahyadri", the vernacular name for the Western Ghat mountain ranges.

Tzustigmus sahyadriensis Tessy *et al.*, 2021

Family: CYNIPIDAE
Genus: *Lithosaphonecrus* Tang, Melika & Boszó, 2013

Lithosaphonecrus nagalandi Melika, Lobato-Vila & Pujade-Villar. *Zootaxa*, 5061(1): 124-136, 2021

The species *Lithosaphonecrus nagalandi* was described by George Melika, Avunjikkattu Parambil Ranjith, Irene Lobato-Vila, Dharma Rajan Priyadarsanan and Juli Pujade-Villar based on a Holotype and thirty-one Paratypes collected from Nagaland, Middle Khomi Village (25.3920N and 94.2358 E). The type specimens have been deposited in ICAR-NBAIR and ATREE-AIMB. The species is named after Nagaland, the state of India from where the galls, which yielded the new species, were collected. Noun in apposition.

Lithosaphonecrus nagalandi Melika *et al.*, 2021

Family: EULOPHIDAE
Genus: *Achrysocharoides* Girault, 1913

Achrysocharoides indicus Jamali & Zeya. *Munis Entomology & Zoology*, https://www.munisentzool.org/ (January, 2021) ISSN 1306-3022, 2021

The species *Achrysocharoides indicus* was described by Mohd Majid Jamali and Shahid Bin Zeya based on a Holotype and eight Paratypes collected from Uttar Pradesh, Jalesar, Etah. The type specimens have been deposited in ZDAMU. The species is named after the country 'India', from where species is described.

Achrysocharoides indicus Jamali & Zeya, 2021

Genus: *Asecodes* Förster, 1856

Asecodes doganlari Jamali & Zeya. *Journal of Asia-Pacific Entomology*. 24(2021): 35-45, 2021

The species *Asecodes doganlari* was described by Mohd Majid Jamali, Shahid Bin Zeya and Mohsin Ikram based on a Holotype and one Paratype collected from Andhra Pradesh, East Godavari, Samalkota, Rayapuram and three Paratypes collected from different localities of East Godavari and Guntur, Andhra Pradesh. The type specimens have been deposited in ZDAMU. The species is named after Mikdat Doganlar for his excellent contribution to eulophid taxonomy.

Asecodes doganlari Jamali & Zeya, 2021

Asecodes massi Jamali & Zeya. *Journal of Asia-Pacific Entomology.* 24(2021): 35-45, 2021

The species *Asecodes massi* was described by Mohd Majid Jamali, Shahid Bin Zeya and Mohsin Ikram based on a Holotype collected from Andhra Pradesh, East Godavari, Kakinada, Sarpavaram and one Paratype collected from Andhra Pradesh, Visakhapatnam, Gowripuram. The type specimens have been deposited in ZDAMU. The species name is an arbitrary combination of the letters and it is treated as a noun in apposition.

Asecodes massi Jamali & Zeya, 2021

Asecodes zhui Jamali & Zeya. *Journal of Asia-Pacific Entomology.* 24(2021): 35-45, 2021

The species *Asecodes zhui* was described by Mohd Majid Jamali, Shahid Bin Zeya and Mohsin Ikram based on a Holotype and fourteen Paratypes collected from Andhra Pradesh, Guntur, Rajmandi. The type specimens have been deposited in ZDAMU. The species is named after Prof. Chao-Dong Zhu, Chinese Academy of Sciences, Institute of Zoology, Beijing, China, for his contributions to the taxonomy of Chinese Chalcidoidea.

Asecodes zhui Jamali & Zeya, 2021

Asecodes sela Jamali & Zeya. *Journal of Asia-Pacific Entomology.* 24(2021): 35-45, 2021

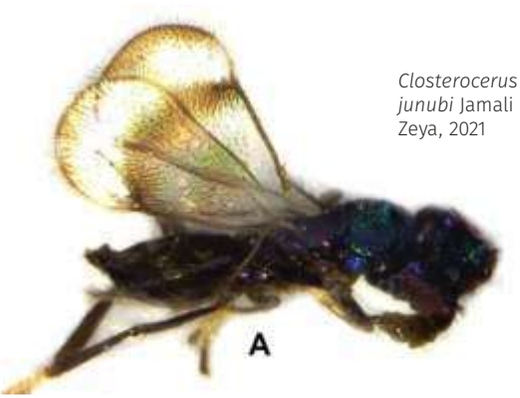
The species *Asecodes sela* was described by Mohd Majid Jamali, Shahid Bin Zeya and Mohsin Ikram based on a Holotype collected from Uttar Pradesh, Etah, Jalesar and four Paratypes collected from different localities of Uttar Pradesh. The type specimens have been deposited in ZDAMU.

Asecodes sela Jamali & Zeya, 2021

Genus: *Closterocerus* Westwood, 1833

Closterocerus junubi Jamali & Zeya. *Acta Entomologica Musei Nationalis Pragae,* 61(1): 231-241, 2021

The species *Closterocerus junubi* was described by Mohd Majid Jamali and Shahid Bin Zeya based on a Holotype and four Paratypes collected from Andhra Pradesh, Vishakhapatnam, Rajipeta. The type specimens have been deposited in ZDAMU. Species name is an arbitrary combination of letters and it should be treated as a noun in apposition.



Closterocerus junubi Jamali & Zeya, 2021

Closterocerus pakyongensis Jamali & Zeya. *Acta Entomologica Musei Nationalis Pragae*, 61(1): 231-241, 2021

The species *Closterocerus pakyongensis* was described by Mohd Majid Jamali and Shahid Bin Zeya based on a Holotype and two Paratypes collected from Sikkim, Pakyong, NRC campus. The type specimens have been deposited in ZDAMU. The species name is derived from the name of town locality Pakyong in Sikkim where the holotype was collected; adjective.

Closterocerus pakyongensis Jamali & Zeya, 2021

Neochrysocharis robustus Jamali & Zeya. *Munis Entomology & Zoology*, 16(2): 663-679, 2021

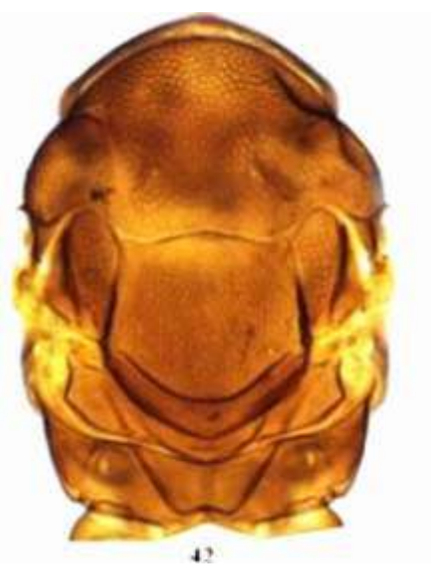
The species *Neochrysocharis robustus* was described by Mohd Majid Jamali, Shahid Bin Zeya and Prince Tarique Anwar based on a Holotype and one Paratype collected from Andhra Pradesh, East Godawri, Samalkotta, Rayapuram. The type specimens have been deposited in ZDAMU. The species is named for having robust clava.

Neochrysocharis robustus Jamali & Zeya, 2021

Genus: *Neochrysocharis* Kurdjumov, 1912

Neochrysocharis raily Jamali & Zeya. *Munis Entomology & Zoology*, 16(2): 663-679, 2021

The species *Neochrysocharis raily* was described by Mohd Majid Jamali, Shahid Bin Zeya and Prince Tarique Anwar based on a Holotype and one Paratype collected from Andhra Pradesh, East Godawri, Samalkotta, Rayapuram. The type specimens have been deposited in ZDAMU. The species name is an arbitrary combination of letters, and may be taken as a noun in apposition.



Neochrysocharis raily Jamali & Zeya, 2021

Neochrysocharis sudhiri Jamali & Zeya. *Munis Entomology & Zoology*, 16(2): 663-679, 2021

The species *Neochrysocharis sudhiri* was described by Mohd Majid Jamali, Shahid Bin Zeya and Prince Tarique Anwar based on a Holotype and four Paratypes collected from Andhra Pradesh, Vishakhapatnam, Rajipeta. The type specimens have been deposited in ZDAMU. The species is named for Dr. Sudhir Singh, Head of Entomology Section, Forest Research Institute, Dehradun, India, for his contributions to the taxonomy of the Indian Chalcids.

Neochrysocharis sudhiri Jamali & Zeya, 2021

Genus: *Pediobius* Walker, 1846

Pediobius coconymphagus Binoy & Sureshan. *Journal of Asia-Pacific Biodiversity,* 14(2021): 378-385, 2021

The species *Pediobius coconymphagus* was described by C. Binoy, S. Santosh, M. Ranjith and P.M. Sureshan based on a Holotype and eleven Paratypes collected from Kerala, Kozhikode district, Pantheerankavu. The type specimens have been deposited in ZSIK. The species named after the host generic name, *Coconympha iriarcha* Meyrick.

Pediobius coconymphagus Binoy & Sureshan, 2021

Genus: *Zaommomentedon* Girault, 1915

Zaommomentedon girault Jamali & Zeya. *Far Eastern Entomologist,* 428: 1-7, 2021

The species *Zaommomentedon girault* was described by M.M. Jamali and S.B. Zeya based on a Holotype and fourteen Paratypes collected from Andhra Pradesh, Guntur, Rajmandi. The type specimens have been deposited in ZDAMU. The species is named after the name of Alexandre Arsène Girault for his contribution to the chalcids taxonomy.

Zaommomentedon girault
Jamali & Zeya, 2021

Family: EVANIIDAE
Genus: *Brachygaster* Leach, 1815

Brachygaster kawadai Rameshkumar, Huben & Kazmi. *Zootaxa,* 5052 (1): 145-150, 2021

The species *Brachygaster kawadai* was described by Anandhan Rameshkumar, Mike R. Huben and Sarfrazul Islam Kazmi based on a Holotype collected from Jharkhand, Dhanbad, Lachhudih. The type specimen has been deposited in the NZC. The species is named after Dr Ricardo Kawada, Universidade Federal do Espírito Santo, Programade Pós-graduação em Biologia Animal, Av. Marechal Campos, Brazil for his enormous contribution to the taxonomy of Evaniidae.

Brachygaster kawadai Rameshkumar *et al.*, 2021

Brachygaster rarum Rameshkumar, Huben & Kazmi. *Zootaxa,* 5052 (1): 145-150, 2021

The species *Brachygaster rarum* was described by Anandhan Rameshkumar, Mike R. Huben and Sarfrazul Islam Kazmi based on a Holotype collected from Maharashtra, Satara, Soangaon. The type specimen has been deposited in the NZC. The species is named after its presumed rareness.

Brachygaster rarum
Rameshkumar *et al.*, 2021

Genus: *Prosevania* Kieffer, 1912

Prosevania austrina Rameshkumar & Kazmi. *Far Eastern Entomologist*, 430: 7-10, 2021

The species *Prosevania austrina* was described by J.A. Daniel, A. Rameshkumar and S. I. Kazmi based on a Holotype collected from Tamil Nadu, Coimbatore, Paddy Breeding Station (10°59'43.24"N and 76°54'59.22"E,). The type specimen has been deposited in ZSI-NZC. The species is named after Latin adjective "*austrinus*" (southern) refers to type locality situated in southernmost part of India.

Prosevania austrina Rameshkumar & Kazmi, 2021

Zeuxevania bengalensis Rameshkumar & Kazmi, 2021

Genus: *Zeuxevania* Kieffer (1902)

Zeuxevania bengalensis Rameshkumar & Kazmi. *International Journal of Tropical Insect Science*, DOI:10.1007/s42690-021-00484-w, 2021

The species *Zeuxevania bengalensis* was described by Anandhan Rameshkumar, Sarfrazul Islam Kazmi and S. Sheela based on a Holotype collected from West Bengal, Alipurduar district, Buxa Tiger Reserve, 22 miles (26.6177N and 89.5605E). The type specimen has been deposited in ZSI-NZC. The species is named after the Indian State, West Bengal from where the type specimen was collected.

Zeuxevania hayati Rameshkumar & Kazmi. *International Journal of Tropical Insect Science*, DOI:10.1007/s42690-021-00484-w, 2021

The species *Zeuxevania hayati* was described by Anandhan Rameshkumar, Sarfrazul Islam Kazmi and S. Sheela based on a Holotype collected from Assam, Jorhat district, Rain Forest Research Institute campus (26.7813N and 94.2920E) and on Paratype collected from Buxa Tiger Reserve, 22 miles, Alipurduar District, West Bengal (26.6177N and 89.5605E). The type specimen has been deposited in ZSI-NZC. The species is named for Dr Mohd. Hayat, Aligarh Muslim University, Aligarh, in recognition of his contribution to the taxonomy of Chalcidoidea.

Zeuxevania hayati Rameshkumar & Kazmi, 2021

Zeuxevania hubeni Kazmi & Rameshkumar. *Biodiversity Data Journal*, DOI: 10.3897/BDJ.9. e59487, 2021

The species *Zeuxevania hubeni* was described by Sarfrazul Islam Kazmi and Anandhan Rameshkumar based on a Holotype collected from Kerala, Kozhikode, Kadaludi Bird Sanctuary. The type specimen has been deposited in ZSI-NZC. The species is named after Mr. M. Huben, Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA in recognition of his contribution to the taxonomy of Evanioidea.

Zeuxevania hubeni Kazmi & Rameshkumar, 2021

Family: FORMICIDAE
Genus: *Agraulomyrmex* Prins, 1983

Agraulomyrmex damohensis Harshana & Dey. *Oriental Insects*, https://doi.org/10.1080/00305316.2021.2023056

The species *Agraulomyrmex damohensis* was described by Anand Harshana and Debjani Dey based on a Holotype collected from Madhya Pradesh, Damoh (23.5185N and 79.7771E). The type specimens have been deposited in National Pusa Collection, Division of Entomology, ICAR-Indian Agricultural Research Institute, New Delhi, India. The species name refers to its type locality.

Agraulomyrmex damohensis Harshana & Dey, 2021

Genus: *Lepisiota* Santschi, 1926

Lepisiota layla Wachkoo, Bharti & Akbar. *Bonn zoological Bulletin*, 70(2): 227-245, 2021

The species *Lepisiota layla* was described by Aijaz Ahmad Wachkoo, Himender Bharti and Shahid Ali Akbar based on a Holotype and one Paratype collected from Himachal Pradesh, Kotla (31.8821° N and 75.9963° E). The type specimens have been deposited in PUAC and NHMUK. The species epithet is an Arabic noun meaning dark beauty, in reference to the shining black color of this species.

Lepisiota layla Wachkoo *et al.*, 2021

Lepisiota mayri Wachkoo, Bharti & Akbar. *Bonn zoological Bulletin*, 70(2): 227-245, 2021

The species *Lepisiota mayri* was described by Aijaz Ahmad Wachkoo, Himender Bharti and Shahid Ali Akbar based on a Holotype and twelve Paratypes collected from Himachal Pradesh, Andretta (32.0744°N and 76.5856° E) and twenty-one Paratypes collected from different localities of Himachal Pradesh. The type specimens have been deposited in PUAC and NHMUK. The species is named in honor of Gustav Mayr, author of L. capensis to which it has been a homonym.

Lepisiota mayri Wachkoo *et al.*, 2021

Myrmecina reticulata Aswaj, Anoop & Priyadarsanan. *Zootaxa*, 4990(1): 160-171, 2021

The species *Myrmecina reticulata* was described by Punnath Aswaj, Karunakaran Anoop and Dharma Rajan Priyadarsanan based on a Holotype collected from Mizoram, Dampa Tiger Reserve, Mamit district (23.6948°N and 92.4283°E, 409 m). The type specimens have been deposited in ICAR-NBAIR. The species is named in reference to the reticulate sculpture on the first gastral tergum.

Myrmecina reticulata Aswaj *et al.*, 2021

Genus: *Myrmecina* Curtis, 1829

Myrmecina bawai Aswaj, Anoop & Priyadarsanan. *Zootaxa*, 4990(1): 160-171, 2021

The species *Myrmecina bawai* was described by Punnath Aswaj, Karunakaran Anoop and Dharma Rajan Priyadarsanan based on a Holotype and one Paratype collected from Mizoram, Phawngpui (blue mountain) National Park, Lawngtlai district (22.6907°N and 93.0492°E, 1619 m). The type specimens have been deposited in ICAR-NBAIR and AIMB. The species is named in honour of its founder president Prof. Kamaljit S. Bawa, renowned evolutionary ecologist and conservation biologist.

Myrmecina bawai Aswaj *et al.*, 2021

Genus: *Ooceraea* Roger, 1862

Ooceraea decamera Bharti, Rilta & Dhadwal. *ZooKeys*, 1010: 165-183, 2021

The species *Ooceraea decamera* was described by Himender Bharti, Joginder Singh Rilta and Tarun Dhadwal based on a Holotype collected from Madras, Alagarkovil, 21 km. N Madurai (10.02308°N and 77.833333°E). The type specimen has been deposited in MCZC. The species epithet decamera refers to the ten-segmented antennal count.

Ooceraea decamera Bharti *et al.*, 2021

Ooceraea joshii Bharti, Rilta & Dhadwa. *ZooKeys*, 1010: 165-183, 2021

The species *Ooceraea joshii* was described by Himender Bharti, Joginder Singh Rilta and Tarun Dhadwal based on a Holotype and a Paratype collected from Kerala, Periyar Tiger Reserve (9.5627°N and 77.2348°E). The type specimen has been deposited in PUAC. The species has been named in honor of Professor Amitabh Joshi, a distinguished evolutionary biologist based at Jawaharlal Nehru Centre for Advanced Scientific research (JNCASR), Bengaluru, India.

Ooceraea joshii Bharti *et al.*, 2021

Genus: *Parasyscia* Emery, 1882

Parasyscia ganeshaiahi Aswaj, Sahanashree, Udayakantha, Aniruddha & Priyadarsanan. *Zookeys*, 1056: 59-72, 2021

The species *Parasyscia ganeshaiahi* was described by Punnath Aswaj, Ramakrishnaiah Sahanashree, Warnakulasuriyage Sudesh Udayakantha, Marathe Aniruddha and Dharma Rajan Priyadarsanan based on a Holotype collected from Arunachal Pradesh, West Kameng, Eaglenest WLS (27.0433°N and 92.4209°E, 1400 m). The type specimen has been deposited in ICAR-NBAIR. The species is a Latin noun in the genitive case named in honour of one of its founders, Prof. K. N. Ganeshaiah, eminent ecologist and writer, who was instrumental in establishing Insect Taxonomy and Conservation Laboratory in ATREE.

Parasyscia ganeshaiahi Aswaj *et al.*, 2021

Genus: *Syllophopsis* Santschi, 1915

Syllophopsis peetersi Akbar, Bharti, Kanturski & Wachkoo. *Zootaxa*, 4985(3): 403-413, 2021

The species *Syllophopsis peetersi* was described by Shahid Ali Akbar, Himender Bharti, Mariusz Kanturski and Aijaz Ahmad Wachkoo based on a Holotype and six Paratypes collected from Kerala, Silent Valley National Park (11.0939N and 76.4462E, 900 m). The type specimens have been deposited in PUAC. The species epithet honours the late Professor Christian Peeters and is a masculine genitive noun. The name 'Peeters' is derived from the Greek root word Petrus ('rock' or 'stone') which also appropriately symbolises the foundational stature of Prof. Christian Peeters' work in the study of ants.

Syllophopsis peetersi Akbar *et al.*, 2021

Genus: *Syscia* Roger, 1861

Syscia indica Aswaj, Sahanashree, Udayakantha, Aniruddha & Priyadarsanan. *Zookeys*, 1056: 59-72, 2021

The species *Syscia indica* was described by Punnath Aswaj, Ramakrishnaiah Sahanashree, Warnakulasuriyage Sudesh Udayakantha, Marathe Aniruddha and Dharma Rajan Priyadarsanan based on a Holotype collected from Arunachal Pradesh, West Kameng, Eaglenest WLS (27.0434°N and 92.4302°E, 1600 m). The type specimen has been deposited in ICAR-NBAIR. The specific epithet indica is a Latin singular feminine adjective in the nominative case and refers to the country where the species was collected.

Syscia indica Aswaj *et al.*, 2021

Family: MUTILLIDAE
Genus: *Andreimyrme* Lelej, 1995

Andreimyrme paniya Terine, Lelej & Girish Kumar. *Zootaxa*, 5020(1): 184-190, 2021

The species *Andreimyrme paniya* was described by Joshua B. Terine, Arkady S. Lelej and P. Girish Kumar based on a Holotype collected from Kerala, Wayanad district, Periya, Camp shed (11°51'5.06"N and 75°47'22.55"E, 594 m). The type specimen has been deposited in ZSIK (WGRC). The specific name paniya is derived from the name of an indigenous tribe present in Wayanad and other parts of the Western Ghats. The term Paniya means 'someone who does work', which described their social standing, as a community who does work for their landlords. Paniyas were agrestic slaves who worked in the agricultural field of the janmis (jenmis) or landlords. This new species is named after the 'paniya' to honour this indigenous tribal community of the Western Ghats and to speak against the caste system that prevailed in the past. Treat as a noun in apposition.

Andreimyrme paniya Terine *et al.*, 2021

Eosmicromyrmilla subbuka Terine, Lelej & Girish Kumar. *Zootaxa*, 5052(4): 567-578, 2021

The species *Eosmicromyrmilla subbuka* was described by Arkady S. Lelej, Joshua B. Terine and Girish Kumar based on a Holotype collected from Goa, North Goa district, Madei Wildlife Sanctuary (15°35'48''N and 74°11'16''E), eight Paratypes collected from different localities of North Goa district and one Paratype collected from Karnataka, Chikmagalur district, Bygoor, Kabbinahalli coffee estate (13°21'05''N and 75°42'23''E). The type specimen has been deposited in ZSIK (WGRC). This species is named in honor of Kumarapuram A. Subramanian (nickname subbuka), Scientist-E & Officer-in-Charge (Southern Regional Centre, Zoological Survey of India, Tamil Nadu, India) for his contribution to aquatic insect taxonomy and encouragement for this study. Treat as a noun in apposition.

Eosmicromyrmilla subbuka Terine *et al.*, 2021

Genus: *Eosmicromyrmilla* Lelej & Krombein, 2001

Eosmicromyrmilla balakrishnani Terine, Lelej & Girish Kumar. *Zootaxa*, 5052(4): 567-578, 2021

The species *Eosmicromyrmilla balakrishnani* was described by Arkady S. Lelej, Joshua B. Terine and Girish Kumar based on a Holotype collected from Kerala, Wayanad district, Muthanga, Ponkuzhi (11°41'20.01"N and 76°23'26.38"E) and two Paratypes collected from Kerala, Wayanad district, Edavambam (11°40'56.42"N and 76°20'17.00"E). The type specimen has been deposited in ZSIK (WGRC). This species is named in honor of Balakrishnan Valappil for his dedication to the study of natural history and taxonomy of Indian Lepidoptera.

Eosmicromyrmilla balakrishnani Terine *et al.*, 2021

Genus: *Strangulotilla* Nonveiller, 1979

Strangulotilla sureshani Terine, Lelej & Girish Kumar. *Zootaxa*, 5057(3): 429-436, 2021

The species *Strangulotilla sureshani* was described by Joshua B. Terine, Arkady S. Lelej and Girish Kumar based on a Holotype collected from Karnataka, Kodagu district, Talakaveri Wildlife Sanctuary (12°25'57.36''N and 75°27'19.8''E). The type specimen has been deposited in ZSIK (WGRC). The specific name is a noun in the genitive case in honor of Dr. P.M. Sureshan, Scientist-E & Officer-in-Charge (Western Ghat Regional Centre, Zoological Survey of India, Kozhikode, India for his keen interest and constant encouragements to our studies and contribution to Indian hymenopteran taxonomy, especially on the family Pteromalidae.

Strangulotilla sureshani Terine *et al.*, 2021

Camptoptera aveolobato Anwar & Zeya, 2021

Family: MYMARIDAE
Genus: *Camptoptera* Foerster, 1856

Camptoptera aveolobato Anwar & Zeya. *Graellsia*, 77(2): e153, https://doi.org/10.3989/graellsia.2021.v77.328, 2021

The species *Camptoptera aveolobato* was described by Prince Tarique Anwar, Shahid Bin Zeya, Syeda Uzma Usman and Farmanur Rahman Khan based on a Holotype collected from Andaman & Nicobar Islands, South Andaman Forest, Garacharma. The type specimens have been deposited in ZDAMU. The species name is an arbitrary combination of letters, and is treated as noun in apposition.

Genus: *Cleruchoides* Lin & Huber, 2007

Cleruchoides indicus Manickavasagam & Sankararaman. *Journal of Natural History*, 55(17-18): 1161-1167, 2021

The species *Cleruchoides indicus* was described by H. Sankararaman, S. Palanivel, S. Manickavasagam and A. Rameshkumar based on a Holotype collected from Tamil Nadu, Salem, Yercaud hills (11°48'N and 78°13'E). The type specimen has been deposited in EDAU. The species is named after India, the country in which the specimens were collected.

Cleruchoides indicus Manickavasagam & Sankararaman, 2021

Genus: *Omyomymar* Schauff (1983)

Omyomymar sudhiri Anwar & Zeya. *Entomo Brasilis*, 14: e960, 2021

The species *Omyomymar sudhiri* was described by Prince Tarique Anwar, Shahid Bin Zeya and Syeda Uzma Usman based on a Holotype collected from Himachal Pradesh, Gandawal, Una. The type specimens have been deposited in ZDAMU. The species is named in honor of Dr. Sudhir Singh, Head of Entomology Section, Forest Research Institute, Dehradun, India, for his contributions to the taxonomy of the Indian Chalcidoidea.

Omyomymar sudhiri Anwar & Zeya, 2021

Omyomymar supremus Anwar & Zeya. *EntomoBrasilis*, 14: e960, 2021

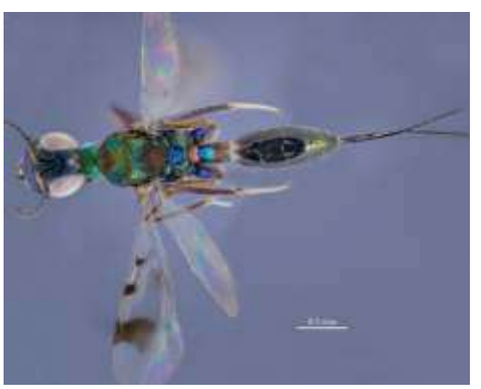
The species *Omyomymar supremus* was described by Prince Tarique Anwar, Shahid Bin Zeya and Syeda Uzma Usman based on a Holotype collected from Sikkim, Tadong. The type specimens have been deposited in ZDAMU. The species name is an arbitrary combination of letters and may be taken as a noun in apposition.

Omyomymar supremus Anwar & Zeya, 2021

Family: PTEROMALIDAE
Genus: *Heydenia* Förster, 1856

Heydenia kashmirensis Sureshan & Khanday. *Ann. Zool. Fennici*, 59: 71-77, 2021

The species *Heydenia kashmirensis* was described by Abdul Lateef Khanday, Pavittu Meethal Sureshan, Amir Maqbool and You Li based on a Holotype and four Paratypes collected from Jammu & Kashmir, Anantnag District, Nowpora village (33°61.078'N and 75°18.700'E, 1804 m). The type specimens have been deposited in ZSIK. The species epithet refers to the type locality.



Heydenia kashmirensis Sureshan & Khanday, 2021

Genus: *Trigonoderus* Westwood, 1832

Trigonoderus periyarensis Surya & Sureshan. *Oriental Insects, DOI: 10.1080/00305316.2021.1933638, 2021*

The species *Trigonoderus periyarensis* was described by Suresh K. Surya and Pavittu Meethal Sureshan based on a Holotype collected from Kerala, Idukki district, Periyar Tiger Reserve, Manalar (9°4'20.64"N and 77° 10'53.04"E) and one Paratype collected from Kambilipalashola, Idukki district, Kerala (9°50'51.036"N and 76°58'51.24"E). The type specimens have been deposited in ZSIK. The species name is derived from the collection locality of holotype, Periyar Tiger Reserve, Idukki, Kerala.

Trigonoderus periyarensis Surya & Sureshan, 2021

Family: SCELIONIDAE
Genus: *Triteleia* Kieffer, 1906

Triteleia flagellata Abhilash & Rajmohana. *Entomon*, 46(1): 01-10, 2021

The species *Triteleia flagellata* was described by Abhilash Peter, K. Rajmohana and A. Rameshkumar based on a Holotype collected from Kerala, Idukki district, Munnar IB and one paratype collected from Manalar, Idukki district, Kerala. The type specimen has been deposited in ZSI-WGRC. The species is named after its elongated A3, the first flagellar segment.

Triteleia flagellata Abhilash & Rajmohana, 2021

Triteleia robusta Abhilash & Rajmohana. *Entomon*, 46(1): 01-10, 2021

The species *Triteleia robusta* was described by Abhilash Peter, K. Rajmohana and A. Rameshkumar based on a Holotype and one Paratype collected from Kerala, Calicut District, Medical College Campus. The type specimen has been deposited in ZSIK. The species is named after its robust body.

Triteleia robusta Abhilash & Rajmohana, 2021

Family: TIPHIIDAE
Genus: *Methocha* Latreille, 1804

Methocha krombeini Hanima, Girish Kumar & Binoy. *Zootaxa*, 4999(3): 258-272, 2021

The species *Methocha krombeini* was described by Raveendran K.P. Hanima, P. Girish Kumar, C. Binoy and P.M. Sureshan based on a Holotype collected from Kerala, Kozhikode district, Elathur (11°20'01''N and 75°46'17''E). The type specimen has been deposited in ZSIK. The species is named after renowned hymenopterist Dr. Karl V. Krombein, for his quintessential contributions in the field of taxonomy of Tiphiidae describing many species of Methocha.

Methocha krombeini Hanima *et al.*, 2021

Methocha paraceylonica Hanima, Girish Kumar & Binoy. *Zootaxa*, 4999(3): 258-272, 2021

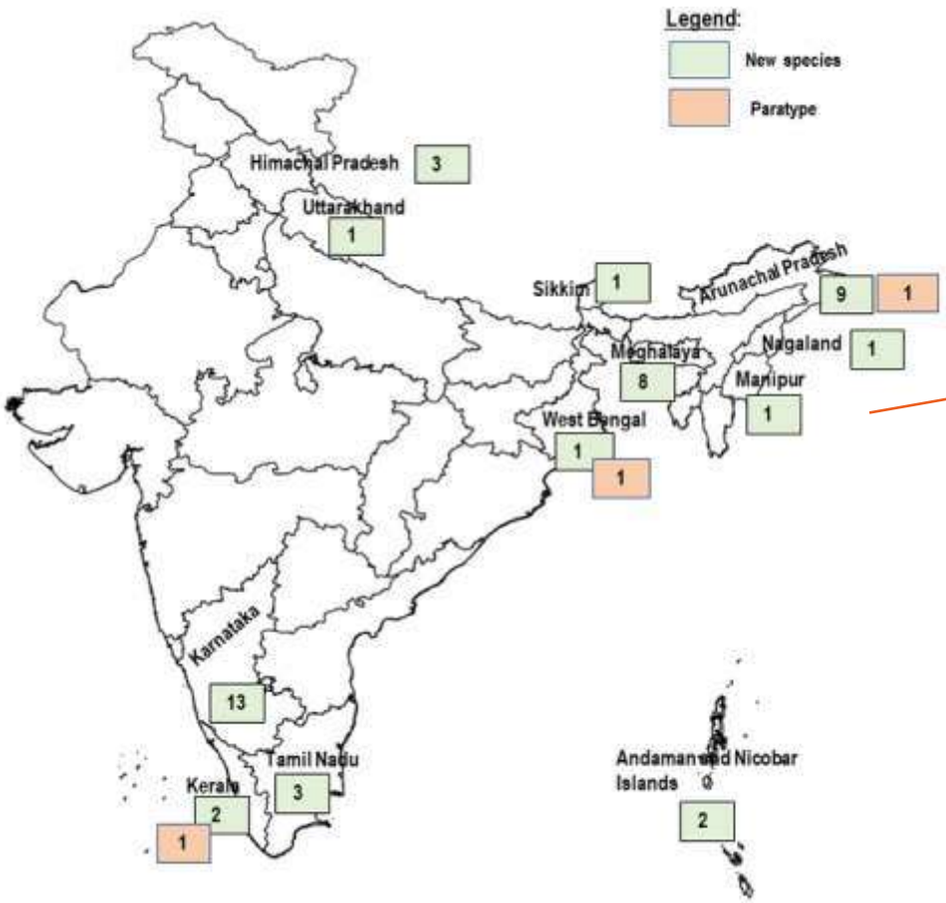
The species *Methocha paraceylonica* was described by Raveendran K.P. Hanima, P. Girish Kumar, C. Binoy and P.M. Sureshan based on a Holotype collected from Kerala, Thiruvananthapuram district, Agasthyamalai Biosphere Reserve, Peppara Wildlife Sanctuary (8°37'24''N and 7°08'09''E) and one Paratype collected from Karnataka, Dakshina Kannada district, Bajpe (12°58'54''N and 74°53'02''E). The type specimen has been deposited in ZSIK. The species epithet is derived from its close affinity with M. ceylonica krombein, described from Sri Lanka.

Methocha paraceylonica Hanima *et al.*, 2021

Methocha shyamagatra Hanima, Girish Kumar & Binoy. *Zootaxa*, 4999(3): 258-272, 2021

The species *Methocha shyamagatra* was described by Raveendran K.P. Hanima, P. Girish Kumar, C. Binoy and P.M. Sureshan based on a Holotype collected from Uttarakhand, Dehradun district, ZSI campus (30°20'49''N and 78°01'04''E). The type specimen has been deposited in ZSIK. The species epithet is derived from Sanskrit word 'shyamagathram' meaning black, based on the black body of the new species.

Methocha shyamagatra Hanima *et al.*, 2021



HEMIPTERA
3.7.6

Hemiptera is the fifth most significant order of insects and is known as a monophyletic group because of the presence of unique piercing and sucking type mouth parts called the rostrum composed of the concentric stylets interlock with one another to form the food and salivary canal. Hemipteran insects are mainly phytophagous in nature which attacking at economic staple crops and vegetables, some species like Triatominae (Reduviidae), behaving as carrier of Chagas' disease. Global diversity represented by 1,04,165 species while diversity in India comprises 6,479 species. Forty-five new species of Hemiptera have been described this year with the highest number of species from Karnataka (13), followed by Arunachal Pradesh (9), Meghalaya (8), Himachal Pradesh (3), Tamil Nadu (3), Andaman and Nicobar Islands (2), Kerala (2), Nagaland (1), Manipur (1), West Bengal (1), Sikkim (1), Uttarakhand (1). Paratypes of new species are also found from Arunachal Pradesh, Kerala and West Bengal.

Family: ALEYRODIDAE
Genus: *Dialeurodes* Cockerell, 1902

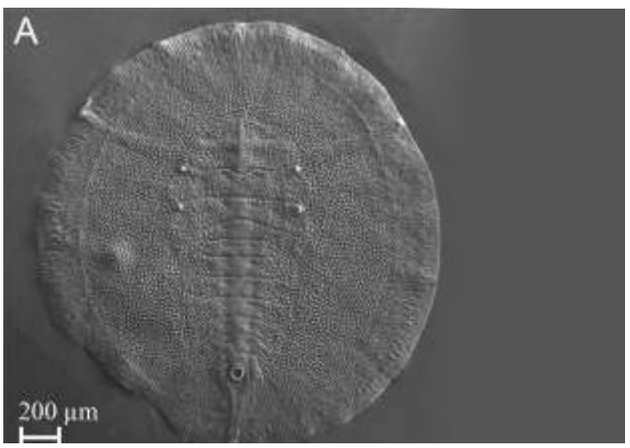
Dialeurodes andamanensis Dubey. *The Pan-Pacific Entomologist*, 97(4): 1-6, 2021

The species *Dialeurodes andamanensis* was described by Anil Kumar Dubey based on a Holotype and thirteen Paratypes collected from Andaman and Nicobar Islands, South Andaman, Port Blair, Ferargunj forests (11°44'11.53''N and 92°39'13.90''E). The type specimens have been deposited in ZSI-ANRC and NFIC-FRI. The species is named after the type locality, Andaman Islands.

Dialeurodes andamanensis Dubey, 2021

Dialeurodes sagoensis Dubey. *Ann. Zool. Fennici*, 58: 41-48, 2021

The species *Dialeurodes sagoensis* was described by Anil Kumar Dubey based on a Holotype and twenty-one Paratypes collected from Arunachal Pradesh, Basar, Sago forests, 5 km from Basar (27°96.14'N and 94°78.70'E). The type specimens have been deposited in IARI.



Dialeurodes sagoensis Dubey, 2021

Genus: *Pealius* Quaintance & Baker, 1914

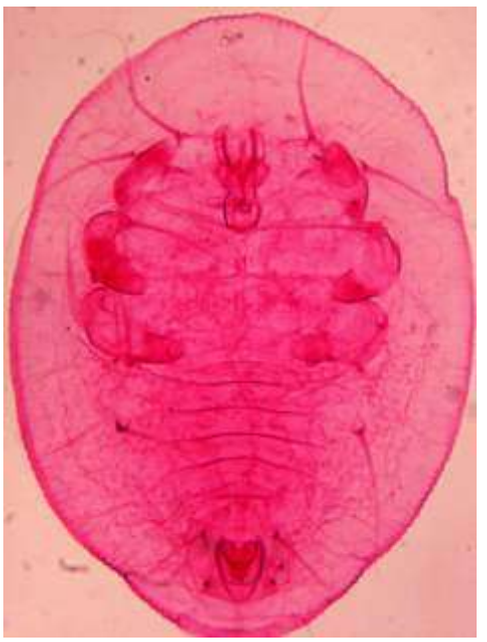
Pealius gallae Dubey. *Phytoparasitica*, 49: 327-332, 2021

The species *Pealius gallae* was described by Anil Kumar Dubey based on a Holotype and twenty Paratypes collected from Andaman Islands, Port Blair, Dhanikhari, (11°34'590''N and 92°40'425''E). The type specimens have been deposited in NZSI and NFIC-FRI. The species name 'gallae' is a Latin word for 'galls' corresponding to the pit galls caused to leaves by puparia.

Pealius gallae Dubey, 2021

Pealius kufriensis Dubey. *Journal of Asia-Pacific Entomology*, 24(4): 1239-1243, 2021

The species *Pealius kufriensis* was described by Anil Kumar Dubey and Sudhir Singh based on a Holotype and fifty-one Paratypes collected from Himachal Pradesh, Kufri. The type specimens have been deposited in NFIC-FRI. This species is named after the type collection locality in the state of Himachal Pradesh, Kufri.



Pealius kufriensis Dubey, 2021

Genus: *Rudisculptus* Dubey, 2021

Rudisculptus caudalis Dubey. *European Journal of Taxonomy*, 787: 1-16, 2021

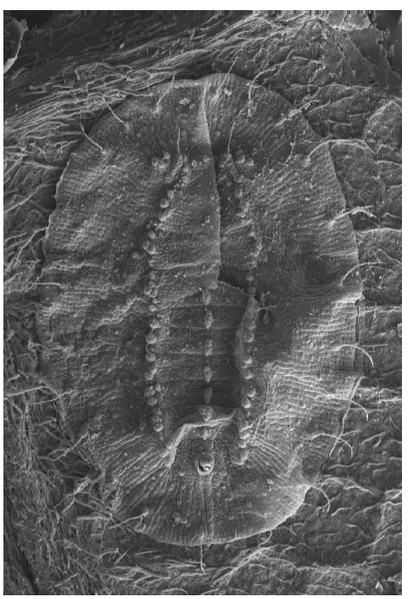
The species genus *Rudisculptus* and the species *Rudisculptus caudalis* was described by Anil Kumar Dubey based on a Holotype and eight Paratypes collected from Andaman and Nicobar Islands, North Andaman, Diglipur, Table Delgarno Island (13º24.46.88'N and 93º05.18.43'E, 9 m). The type specimens have been deposited in ZSI-ANRC and NFIC-FRI. The species epithet is a Latin word '*caudalis*' meaning '*caudal*', attributing to the caudal furrow.

Rudisculptus caudalis Dubey, 2021

Genus: *Tuberaleyrodes* Takahashi, 1932

Tuberaleyrodes monpa Dubey. *Bulletin of Insectology*, 74(2): 259-264, 2021

The species *Tuberaleyrodes monpa* was described by Anil Kumar Dubey based on a Holotype and three Paratypes collected from Arunachal Pradesh, Basar, Sago forests, 5 km from Basar (27°96.14'N and 94°78.70'E). The type specimens have been deposited in NZSI and NFIC-FRI. The species is named in honour of the 'Monpa' tribes of Arunachal Pradesh, the only tribes in the state known for nomadic life.



Tuberaleyrodes monpa Dubey, 2021

Family: CICADELLIDAE
Genus: *Baseprocessa* Fan & Li, 2017

Baseprocessa patkaensis Meshram. *Zootaxa*, 4999(5): 479-483, 2021

The species *Baseprocessa patkaensis* was described by Naresh M. Meshram, Mogili Ramaiah, P R Shashank and Stuti based on a Holotype and two Paratypes collected from Arunachal Pradesh: Thinsa (26°55'52''N and 95°32'05''E, 1583 m). The type specimens have been deposited in NPC, Division of Entomology, ICAR-IARI Research Institute, New Delhi, India. The species is named for the mountain range "patkai" in the place of collection

Baseprocessa patkaensis Meshram, 2021

Genus: *Igerna* Kirkaldy, 1903

Igerna gladiota Meshram & Rai. *Biologica*, DOI: 10.1007/s11756-021-00863-1, 2021

The species *Igerna gladiota* was described by Naresh M. Meshram and Stuti Rai based on a Holotype and two Paratypes collected from Arunachal Pradesh: Lapnan (26°59'27.03'' N, 95°28'58.29'' E, 448 m a.s.l.). Type material is deposited in the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi, India (NPC). The species is named after the sword like pygofer process.

Igerna gladiota Meshram and Rai, 2021

Genus: *Macropsis* Lewia, 1834

Macropsis dalhousiensis Viraktamath & Yeshwanth. *Zootaxa*, 4903(3): 353-372, 2021

The species *Macropsis dalhousiensis* was described by C.A. Viraktamath and H.M. Yeshwanth based on a Holotype and one Paratype collected from Himachal Pradesh: Dalhousie. The type specimens have been deposited in UASB. The species is named after the type locality.

Macropsis dalhousiensis Viraktamath & Yeshwanth, 2021

Macropsis krishna Viraktamath & Yeshwanth. *Zootaxa*, 4903(3): 353-372, 2021

The species *Macropsis krishna* was described by C.A. Viraktamath and H.M. Yeshwanth based on a Holotype and twenty-seven Paratypes collected from Karnataka, Bangalore, Hesaraghatta (13'9°N and 72'29°E, 861m). The type specimens have been deposited in UASB, BMNH, NBAIR and NPC. The specific epithet "krishna" (Sanskrit) means black, referring to the black coloration of the species in both the sexes; epithet to be treated as noun in apposition.

Macropsis krishna Viraktamath & Yeshwanth, 2021

Macropsis puttarudriahi Viraktamath & Yeshwanth. *Zootaxa*, 4903(3): 353-372, 2021

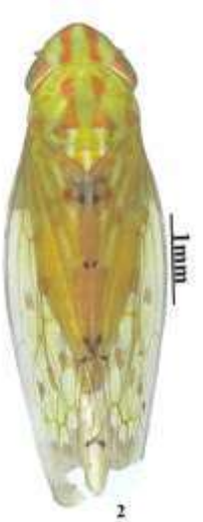
The species *Macropsis puttarudriahi* was described by C.A. Viraktamath and H.M. Yeshwanth based on a Holotype collected from Arunachal Pradesh, Khonsa (27°1'12" N and 95°34'12"E, 989 m). The type specimen has been deposited in NPC. The species is named in honour of late Dr M. Puttarudriah, a renowned entomologist of Karnataka, India.

Macropsis puttarudriahi Viraktamath & Yeshwanth, 2021

Genus: *Mohunia* Distant, 1908

Mohunia manohari Meshram. *Zootaxa*, 5061(1): 192-198, 2021

The species *Mohunia manohari* was described by Naresh M. Meshram based on a Holotype and three Paratypes collected from Arunachal Pradesh, Basar (27°58'39" N and 94°41'31" E, 661 m). The type specimen has been deposited in NPC. The species is named after the Late Mr. Manohar Meshram (Father of the Author) for his continuous support and encouragement to the author to pursue his passion in leafhopper taxonomy.



Mohunia manohari Meshram., 2021

Genus: *Myittana* Distant, 1908

Myittana (Myittana) bidentata Ramaiah & Meshram. *Zootaxa*, 499691): 189-193, 2021

The species *Myittana (Myittana) bidentata* was described by Mogili Ramaiah and Naresh M. Meshram based on a Holotype collected from Uttarakhand: Pantnagar (29°02'60.00"N 79°30'59.99"E), Type material is deposited in the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi, India (NPC). Species name "*bidentata*" alludes to pair of short processes on the shaft.

Myittana (Myittana) bidentata Ramaiah & Meshram, 2021

Genus: *Yelahanka* Viraktamath, Webb & Yeshwanth, 2021

Yelahanka canaraica Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka canaraica* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype and one Paratype collected from Karnataka, Dakshina Kannada, Vittla (20°45.814'N and 74°06.095'E, 60 m) and one Paratype collected from Kerala: KFRI, Nilambur (11o18.086'N and 76°15.037'E). The type specimens have been deposited in UASB and BMNH. The genus is named after the village Yelahanka, now part of Bengaluru city, wherein the type species breeds on the plant, Polyalthia longifolia Sonn.; gender: feminine. The species is named after the Canara region from where it has been collected.

Yelahanka canaraica Viraktamath *et al.*, 2021

Yelahanka kodaiensis Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka kodaiensis* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype and one Paratype collected from Tamil Nadu, Kodaikanal (20°45.814'N and 74°06.095'E, 60 m). The type specimens have been deposited in BMNH. The species is named after the first word of the locality (Kodai) where it lives.

Yelahanka kodaiensis Viraktamath *et al.*, 2021

Yelahanka montana Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka montana* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype and two Paratypes collected from Tamil Nadu, Nilgiri Hills and one Paratype collected from Tamil Nadu, Doddabetta. The type specimens have been deposited in BMNH. The species name refers to its occurrence in mountainous regions.

Yelahanka montana Viraktamath *et al.*, 2021

Yelahanka sikkimensis Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka sikkimensis* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype and one Paratype collected from Sikkim, Gangtok (2123 m). The type specimens have been deposited in UASB. The species is named after the state (Sikkim) from where it was collected.

Yelahanka sikkimensis Viraktamath *et al.*, 2021

Yelahanka shillongensis Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka shillongensis* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype collected from Meghalaya, Shillong (1961 m) and one Paratype collected from West Bengal, Algarah nr Kalimpong (1788 m). The type specimens have been deposited in UASB. The species is named after the locality where it was collected.

Yelahanka shillongensis Viraktamath *et al.*, 2021

Yelahanka trifida Viraktamath, Webb & Yeshwanth. *Zootaxa*, 4915(4): 451-480, 2021

The genus *Yelahanka* and the species *Yelahanka trifida* was described by C.A. Viraktamath, M.D. Webb and H.M. Yeshwanth based on a Holotype collected from Himachal Pradesh, Solan and one other material collected from Arunachal Pradesh, Basar district, West Siang (27°59'34" N and 94°42'15" E, 578 m). The type specimens have been deposited in NPC and UASB. The species epithet alludes to the three pronged pygofer process.

Yelahanka trifida Viraktamath *et al.*, 2021

Family: CICADIDAE
Genus: *Mata* Distant, 1906

Mata lenonia Sarkar, Mahapatra, Mohapatra, Nair & Kunte. *Zootaxa*, 4908(1): 001-028, 2021

The species *Mata lenonia* was described by Vivek Sarkar, Cuckoo Mahapatra, Pratyush P. Mohapatra, Manoj V. Nair and Krushnamegh Kunte based on a Holotype and a Paratype collected from Meghalaya, East Khasi Hills, Cherrapunjee, Wahkaba valley of Sohra (25°17'11.27''N and 91°43'28.76''E). The type specimens have been deposited in NCBS. The name 'lenonia' derived from the Latin word 'lenonius' which means small or miniscule. Among all the species in the genus *Mata,* this is significantly small.

Mata lenonia Sarkar *et al.*, 2021

Mata ruffordii Sarkar, Mahapatra, Mohapatra, Nair & Kunte. *Zootaxa*, 4908(1): 001-028, 2021

The species *Mata ruffordii* was described by Vivek Sarkar, Cuckoo Mahapatra, Pratyush P. Mohapatra, Manoj V. Nair and Krushnamegh Kunte based on a Holotype collected from Meghalaya, South Garo Hills, Balpakhram National Park (25°14'46.77''N and 90°51'41.83''E) and a Paratype collected from Meghalaya, East Khasi Hills, Laitrengew (25°19'53.95''N and 91°43'58.74''E). The type specimens have been deposited in NCBS. The species was first discovered under a tenure of a project that was supported by the Rufford Foundation (UK), part of the Rufford Small Grant programme. The Rufford Foundation has been supporting various conservation related work of many young researchers in India and many other countries for more than a decade. The species is named as 'ruffordii' to honour the support of the Rufford Foundation in conservation of nature and wildlife, starting from the smallest invertebrates to majestic mammals and their habitat.

Mata ruffordii Sarkar *et al.*, 2021

Mata meghalayana Sarkar, Mahapatra, Mohapatra, Nair & Kunte. *Zootaxa*, 4908(1): 001-028, 2021

The species *Mata meghalayana* was described by Vivek Sarkar, Cuckoo Mahapatra, Pratyush P. Mohapatra, Manoj V. Nair and Krushnamegh Kunte based on a Holotype and a Paratype collected from Meghalaya, East Khasi Hills, Cherrapunjee, Sohra, Mawkisiyem village (25°16'26.83''N and 91°43'31.10''E). The type specimen has been deposited in NCBS. This species was first discovered on the Sohra (Cherrapunjee) plateau of Meghalaya and on further investigation it was found that among the three newly discovered species of *Mata* from Meghalaya, this species is most widely distributed in the state hence the species was named as 'meghalayana'.

Mata meghalayana Sarkar *et al.*, 2021

Genus: *Platylomia* Stål, 1870

Platylomia kohimaensis Hajong & Limatemjen *Zootaxa*, 5047(1): 081-091, 2021

A new cicada species, *Platylomia kohimaensis* belonging to the *Platylomia* radha group is described from the Naga Hills in the eastern Himalayas. It is a dusk singing, large-sized cicada that calls for a short window during the evening twilight hours. Timbalisation is in the form of a continuous and regular cackling. Photographs of adult male and female along with genitalia illustration and distribution map are provided. A sonogram along with Acoustic Identification Card is also provided.

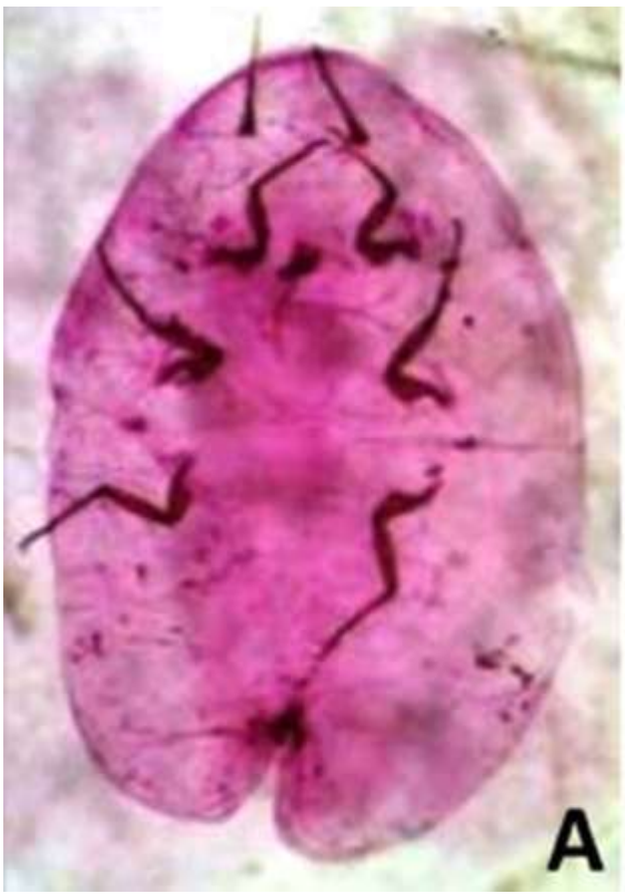
Platylomia kohimaensis Hajong & Limatemjen, 2021

Genus: *Pomponia* Stål, 1866

Pomponia pseudolinearis Sadasivan. *Zootaxa*, https://doi.org/10.11646/zootaxa.5040.3.4, 2021

The species *Pomponia pseudolinearis* was described by Kalesh Sadasivan based on a Holotype and four Paratypes collected from Kerala, Idukki district, Rajakumari, Swargamedu and six Paratypes collected from different localities of Kerala state. The type specimen has been deposited in UAS, NCBS and Zoological Survey of India (ZSI), Calicut. The species name '*pseudolinearis*' alludes to the close similarity to P. linearis (Walker, 1850), with which this species was confused in the past.

Pomponia pseudolinearis Sadasivan, 2021



Pulvinaria kalyaniensis Talukder & Das, 2021

Family: COCCIDAE
Genus: *Pulvinaria* Targioni Tozzetti, 1866

Pulvinaria kalyaniensis Talukder & Das. *Zootaxa*, 4941(3): 434-442, 2021

The species *Pulvinaria kalyaniensis* was described by Bipradeb Talukder and Bijan Kumar Das from specimens collected on twigs of Azadirachta indica A. Juss. (Meliaceae) from Kalyani, West Bengal, India. The Types are deposited at Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia-741252, West Bengal, India.

Family: GERRIDAE
Genus: *Metrocoris* Mayr, 1865

Metrocoris issaci Jehamalar & Dash. *Zootaxa*, 5082(4): 341-356, 2021

The species *Metrocoris issaci* was described by E. Eyarin Jehamalar and Swetapadma Dash based on a Holotype and eight Paratypes collected from Meghalaya, East Khasi Hills district, Sangmain, Umpaimmaw Nala (25.54208° N and 91.851° E, 1767 m). The type specimens have been deposited in ZSI-CEL. The new species is named after the first author's second oldest brother Mr. E. Issac Vijaya Singh, for his constant support.

Metrocoris issaci Jehamalar & Dash, 2021

Metrocoris josephi Jehamalar & Dash. *Zootaxa*, 5082(4): 341-356, 2021

The species *Metrocoris josephi* was described by E. Eyarin Jehamalar and Swetapadma Dash based on a Holotype and two Paratypes collected from Meghalaya, West Garo Hills district, Tura Peak, Rongkan River (25.50697°N and 90.23328°E, 653 m). The type specimens have been deposited in ZSI-CEL. The new species is named after the first author's oldest brother Mr. E. Joseph Veera Singh, who accompanied the first author to Garo Hills, Meghalaya, for field work.

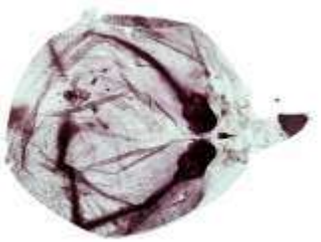
Metrocoris josephi Jehamalar & Dash, 2021

Metrocoris latus Jehamalar & Dash. *Zootaxa*, 5082(4): 341-356, 2021

The species *Metrocoris latus* was described by E. Eyarin Jehamalar and Swetapadma Dash based on a Holotype and eleven Paratypes collected from Meghalaya, East Khasi Hills district, Khrang Village, Wahkwar River (25.32889°N and 91.79°E, 1326 m) and one Paratype collected from Meghalaya, West Khasi Hills District, Porshich Village, Rynniaw River (25.65593°N and 91.06687°E, 926 m). The type specimens have been deposited in ZSI-CEL. The word “latus” is a Latin adjective which means broad, referring to the very broad male paramere of this species.

Metrocoris latus Jehamalar & Dash, 2021

Family: KERRIDAE
Genus: *Kerria* Targioni Tozzetti, 1884



Kerria canalis Rajgopal. *Zootaxa*, 4938(1): 060-068, 2021

The species *Kerria canalis* was described by N.N. Rajgopal, Arumugam Mohanasundaram and Kewal Krishan Sharma based on a Holotype and fifteen Paratypes collected from Tamil Nadu, opposite to Madura Corporation Eco Park, Madurai (9°56'09” N and 78°08'18” E). The type specimen has been deposited in ICAR-NBAIR and ICAR-IINRG. The species epithet is derived from the Latin word canalis, meaning canal, and alludes to the rough trailing canellar band present as a chitinous extension below each anterior spiracle in this species.

Kerria canalis Rajgopal, 2021

Family: MIRIDAE
Genus: *Astroscopometopus* Yasunaga & Hayashi, 2002

Astroscopometopus hesaraghattaensis Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Astroscopometopus hesaraghattaensis* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype and eight Paratypes collected from Karnataka, Hesaraghatta. The type specimens have been deposited in UASB. The species is named after the type locality Hesaraghatta where this species was collected.

Astroscopometopus hesaraghattaensis Yeshwanth *et al.*, 2021

Genus: *Harpedona* Distant, 1904

Harpedona vittlaensis Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The species *Harpedona vittlaensis* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and two Paratypes collected from Karnataka, Dakshina Kannada, Vittla (20°45.814'N and 75°06.095'E, 60 m). The type specimens have been deposited in UASB and ZISP. The species is named after the type locality, Vittla, India.

Harpedona vittlaensis Yashwanth & Konstantinov, 2021

Genus: *Isometopidea* Poppius, 1913

Isometopidea viraktamathi Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Isometopidea viraktamathi* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype collected from Kerala, Thekkady. The type specimens have been deposited in UASB. The species is named after Prof. Chandrashekara A. Viraktamath (University of Agricultural Sciences, GKVK, Bengaluru), collector of the holotype, and who introduced the first author to the study of Miridae and gave him his first specimen of Isometopinae.

Isometopidea viraktamathi
Yeshwanth *et al.*, 2021

Genus: *Isometopus* Fieber, 1860

Isometopus webbi Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Isometopus webbi* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype and two Paratypes collected from Karnataka, Chikkaballapura, Nandi Hills. The type specimens have been deposited in UASB. The species is named Mick Webb (BMNH), leafhopper taxonomist and curator of Hemiptera,The Natural History Museum, London, England

Isometopus webbi
Yeshwanth *et al.*, 2021

Isometopus wolskii Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Isometopus wolskii* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype and three Paratypes collected from Karnataka, Chikkaballapura, Nandi Hills. The type specimens have been deposited in UASB. The species is named after author's colleague Andrzej Wolski (University of Opole, Opole, Poland), Polish specialist of Cylapinae taxonomy.

Isometopus wolskii
Yeshwanth *et al.*, 2021

Genus: *Lopidolon* Poppius, 1911

Lopidolon dandeliensis Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The species *Lopidolon dandeliensis* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and three Paratypes collected from Karnataka, Dakshina Kannada, Dandeli (15.236°N and 74.616°E) and two Paratypes collected from Karnataka, Chickballapur, Nandi Hills (13°22.320'N and 77°741.108'E, 1443 m). The type specimens have been deposited in UASB. The species is derived from the type locality, Dandeli city.

Lopidolon dandeliensis
Yashwanth & Konstantinov, 2021

Genus: *Mertila* Distant, 1904

Mertila rubrocephala Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The species *Mertila rubrocephala* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and two Paratypes collected from Karnataka, Dakshina Kannada, Vittla (20°45.814'N and 75°06.095'E, 60 m). The type specimens have been deposited in UASB. The species epithet refers to the distinctive red head of the new species.

Mertila rubrocephala Yashwanth & Konstantinov, 2021

Genus: *Myiomma* Puton, 1872

Myiomma belavadii Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Myiomma belavadii* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype and four Paratypes collected from Karnataka, Bengaluru, GKVK. The type specimens have been deposited in UASB. The species is named after Prof. Vasuki V. Belavadi (Department of Entomology UAS, GKVK, Bengaluru), a pollination biologist who provided support and encouragement to the first author during his studies on Miridae.

Myiomma belavadii Yeshwanth *et al.*, 2021

Myiomma ramamurthyi Yeshwanth, Chérot & Henry. *Zootaxa*, 4903(2): 151-193, 2021

The species *Myiomma ramamurthyi* was described by H.M. Yeshwanth, Frédéric Chérot and Thomas Henry based on a Holotype and three Paratypes collected from Karnataka, Chikkaballapura, Nandi Hills. The type specimens have been deposited in UASB. The species is named after Dr. Vilayanoor V. Ramamurthy (IARI, New Delhi), well-known Indian weevil taxonomist.

Myiomma ramamurthyi Yeshwanth *et. al.*, 2021

Genus: *Namyatovia* Yashwanth & Konstantinov, 2021

Namyatovia castlerockensis Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The genus *Namyatovia* and the species *Namyatovia castlerockensis* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and two Paratypes collected from Karnataka, Belgaum, Castle Rock (15°25.293'N and 76°19.734'E, 569 m) and one Paratype collected from Karnataka, Shivamogga, Nagavalli (13.218°N and 77.054°E). The type specimens have been deposited in UASB. The new genus is named after Anna A. Namyatova in recognition of her important contributions to bryocorine taxonomy. The gender is feminine. The species is named after the type locality, Castle Rock, a village in the Western Ghats Mts, Karnataka.

Namyatovia castlerockensis Yashwanth & Konstantinov, 2021

Namyatovia sirsiensis Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The genus *Namyatovia* and the species *Namyatovia sirsiensis* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and two Paratypes collected from Karnataka, Sirsi (14°44.023'N and 74°46.711'E, 506 m) and four Paratypes collected from Karnataka, Mudigere (13°7.190'N and 75°37.670'E, 913 m). The type specimens have been deposited in UASB. The new genus is named after Anna A. Namyatova in recognition of her important contributions to bryocorine taxonomy. The gender is feminine. The species is named after the type locality, the type locality, Sirsi village.

Namyatovia sirsiensis Yashwanth & Konstantinov, 2021

Stonedahlia mishmiensis Yashwanth & Konstantinov, 2021

Genus: *Stonedahlia* Yashwanth & Konstantinov, 2021

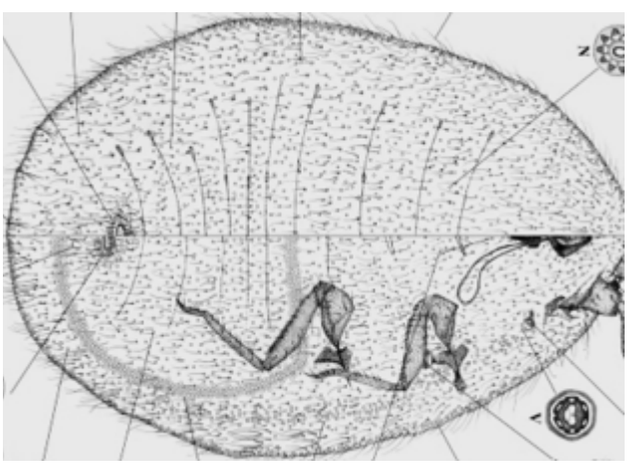
Stonedahlia mishmiensis Yashwanth & Konstantinov. *European Journal of Taxonomy*, 745: 1–69, 2021

The genus *Stonedahlia* and the species *Stonedahlia mishmiensis* was described by H.M. Yeshwanth and Fedor V. Konstantinov based on a Holotype and twenty-four Paratypes collected from Arunachal Pradesh, Myodia (28°16'47.4″N and 095°54'44.9″E, 2463 m). The type specimens have been deposited in ZISP. The new genus is named after Gary M. Stonedahl in recognition of his outstanding contribution to plant bug taxonomy and particularly his seminal studies of eccritotarsines. The gender is feminine. The name of the new species is derived from the type locality, Mishmi hills.

Family: MONOPHLEBIDAE
Genus: *Icerya* Signoret, 1875

Icerya viraktamathi Joshi. *Zootaxa*, 4920(2): 200-210, 2021

The species *Icerya viraktamathi* was described by Sunil Josh, Omprakash Navik and Veereshkumar based on a Holotype and six Paratypes collected from Meghalaya, Bhoirymbong. The type specimens have been deposited in ICAR-NBAIR. The species is named after Prof. C.A. Viraktamath (Gandhi Krishi Vigyan Kendra, University of Agricultural Sciences, Bengaluru, Karnataka, India) in recognition of his contributions to insect taxonomy in India; the name is in the masculine genitive.



Icerya viraktamathi Joshi, 2021

Family: PENTATOMIDAE
Genus: *Brachycerocoris* Costa, 1863

Brachycerocoris petrii Salini & Roca-Cusachs. *Zootaxa*, 5040(4): 507-527, 2021

The species *Brachycerocoris petrii* was described by S. Salini and M. Roca-Cusachs based on a Holotype collected from Karnataka, Bengaluru, Attur (13.1068°N and 77.5621°E) and 45 Paratypes collected from different localities of Karnataka. The type specimen has been deposited in ICAR-NBAIR. The new species is kindly dedicated to colleague and friend Petr Kment (National Museum, Prague, Czech Republic) for his valuable contribution to the taxonomy of Pentatomidae and also for helping the authors on numerous occasions. The gender of the genus Brachycercoris was not stated in the original description by Costa (1863), hence treated as masculine according to the Article 30.2.4 of ICZN. The species group name is noun in genitive case as per the Article 31.1.2 of ICZN and is masculine.

Brachycerocoris petrii Salini & Roca-Cusachs, 2021

Lodosocoris santhae Salini *et al.*,2021

Genus: *Lodosocoris* Ahmad & Afzal, 1986

Lodosocoris santhae Salini, Rabbani, Amala & Mahendiran. *Zootaxa*, 5072(1): 53-62, 2021

The species *Lodosocoris santhae* was described by S. Salini, M.K. Rabbani, U Amala and G Mahendiran based on a Holotype collected from Arunachal Pradesh, Pasighat, Sirukki Waterfall and three Paratypes collected from Arunachal Pradesh, Pasighat, Sirukki Waterfall. This species is dedicated to first author's mother, late Mrs. Santhamma. The specific epithet is a noun in genitive case formed by adding -ae to the stem of the personal name, Santh as per the article 31.1.2. of ICZN.

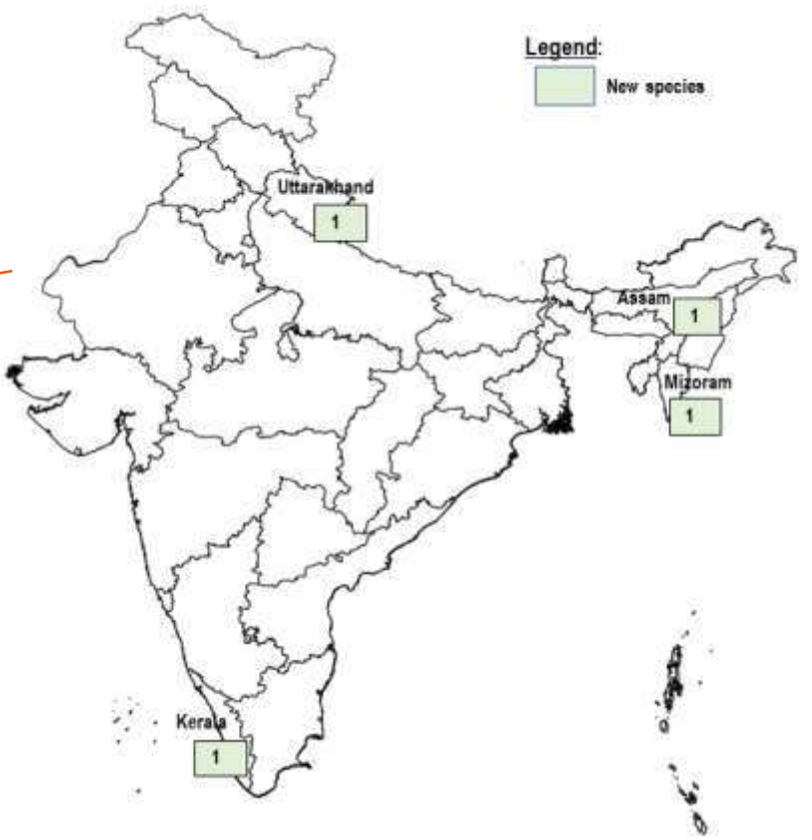
Genus: *Sarju* Ghauri, 1977

Sarju brevirostrata Salini, Rabbani & Singh. *Zootaxa*, 4951(2): 283-303, 2021

The species *Sarju brevirostrata* was described by Salini santhamma, Mosammat Briti Rabbani and Sudhir Singh based on a Holotype collected from Manipur, Imphal (24°82.081'N and 93°94.884'E, 783 m). The type specimens have been deposited in UASB. The specific epithet is derived from two Latin words, ' brevi ' (=short) and ' rostrata ' (=beak or labium). The gender of the genus Sarju was not stated in the original description by Ghauri (1977), but treated it as feminine in combination with an adjectival species-group name according to the Article 30.1.4.2 of ICZN (1999). Hence the specific epithet here considered as feminine.

Sarju brevirostrata Salini *et al.*, 2021

3.7.7 THYSANOPTERA

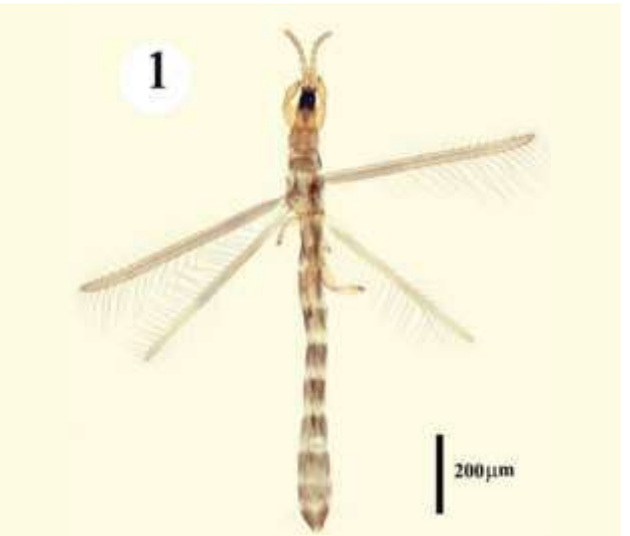


Members of the insect order Thysanoptera under two suborders, Terebrantia and Tubulifera, are commonly known as thrips. Till now, 6242 described species of thrips are reported across the globe of which, 739 species are from India Approximately 1% of the members of this order are considered as one of the serious pest and sole transmitters of plant Tospoviruses, affecting plant species in several unrelated plant families across the globe. Around 50% of the listed Thysanoptera species from India appear to be endemic. Four new species of Thysanoptera have been described this year each from Assam, Mizoram, Kerala and Uttarakhand.

Family: MEROTHRIPIDAE
Genus: *Merothrips* Hood 1912

Merothrips mizoramensis Johnson, Mound & Varatharajan. *Zootaxa*, 4926(4): 597-600, 2021

The species *Merothrips mizoramensis* was described by Th. Johnson, L.A. Mound and R. Varatharajan based on a Holotype collected from Mizoram, Dampa Tiger Reserve (23°36'N and 92°20'E). The type specimens have been deposited in the Indian National Bureau of Insect Resources, Bengaluru.



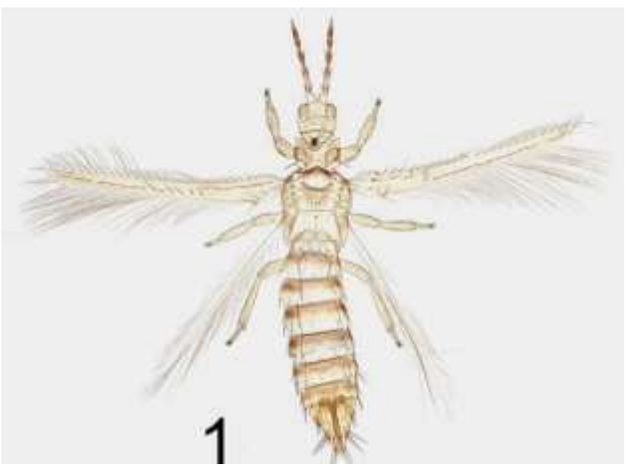
Merothrips mizoramensis Johnson *et al.*, 2021

Family: THRIPIDAE
Genus: *Oneilliella* Wilson, 1975

Oneilliella shivii Singha, Patidar, Tyagi & Kumar. *Zootaxa*, 4941(2): 186-192, 2021

The species *Oneilliella shivii* was described by Devkant Singha, Abhishek Patidar, Kaomud Tyagi and Vikas Kumar based on a Holotype and three Paratypes collected from Kerala, Thrissur (10.51N and 76.36E). The type specimens have been deposited in ZSI-NZC. The species is named after Shivendra Kumar Singh for his keen interest in thrips collection and studies backing to his childhood.

Oneilliella shivii Singha *et al.*, 2021



Mycterothrips nainiae Singha *et al.*, 2021

Genus: *Mycterothrips* Trybom, 1910

Mycterothrips nainiae Singha, Patidar, Kumar & Tyagi. *Zootaxa*, 5048(1): 135-140, 2021

The species *Mycterothrips nainiae* was described by Devkant Singha, Abhishek Patidar, Vikas Kumar and Kaomud Tyagi based on a Holotype and twenty-five Paratypes collected from Uttarakhand, Nainital (29.37N and 79.51E, 1614 m). The type specimens have been deposited in ZSI-NZC. The species is named after the Naini Lake, a natural freshwater body situated at Nainital.

Genus: *Neohydatothrips* John, 1929

Neohydatothrips biconcavus Rachana. *Zootaxa*, 4920(2): 297-300, 2021

The species *Neohydatothrips biconcavus* was described by R.R. Rachana based on a Holotype and 34 Paratypes collected from Assam, Jorhat. The type specimens have been deposited in ICAR-NBAIR. The species is name refers to the deeply concave anterior and posterior margins of pronotal blotch of this new species.

Neohydatothrips biconcavus Rachana, 2021

3.7.8 PSOCOPTERA

The order Psocodea comprises of chewing and sucking lice (Phthiraptera) and booklice and bark lice (Psocoptera). Earlier, Phthiraptera and Psocoptera have been treated as two separate insect Orders. Currently, based on morphological and molecular studies Phthiraptera is imbedded within the Psocoptera. Psocoptera, popularly known as Psocids, Book lice and bark lice, are small, whitish or brownish, soft bodied, sub-globular, winged or wingless insects, with two or three segmented tarsi. They are gregarious in habit. In general, psocids have minimal economic or health implications for humans. On rare occasions, they may cause skin infections, allergies, and asthma in humans. Some of the psocid species serve as intermediate hosts for several cestodes, notably the sheep fringed tapeworm. Several psocids are pests that feed on stored products, causing harm to insect collections, herbaria, old books, and animal products. Global diversity is represented by 5941 species, while diversity in comprises 136 species of which 60 species are endemic. One new Psocopteran species has been described from Tamil Nadu.

Family: LACHESILLIDAE

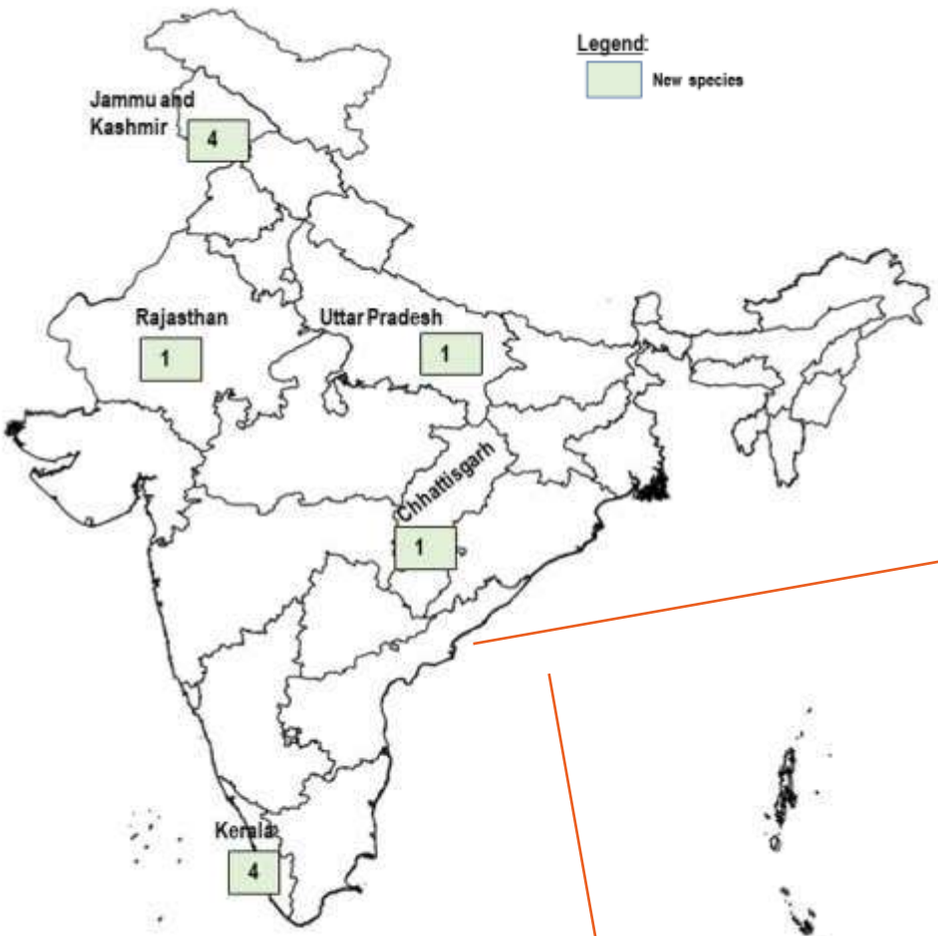
Genus: *Lachesilla* Westwood, 1840

Lachesilla vellimalai Ramesh, Babu, Subramanian & Neri. *Zootaxa*, 5027(2): 282-289, 2021

The species *Lachesilla vellimalai* was described by Gurusamy Ramesh, Rajappa Babu, Kumarapuram A. Subramanian and García Aldrete Alfonso Neri based on a Holotype and five Paratypes collected from Tamil Nadu, Theni district, Meghamalai Wildlife Sanctuary, Meghamalai Range, Vellimalai, Moola Vaigai river, near Antipoaching Camp (9°34'6.46''N and 77°24' 7.96''E, 773 m) and eight Paratypes collected from different localities of Tamil Nadu and Kerala state. The type specimens have been deposited in ZSI-SRC. The specific epithet refers to the type locality in Meghamalai Wildlife Sanctuary, Theni District, Tamil Nadu.

Lachesilla vellimalai Ramesh *et al.*, 2021

ORTHOPTERA 3.7.9



Among the orders of class Insecta, Orthoptera constitute one of the most diverse group and includes grasshoppers, locusts, katydids and crickets. They are easily encountered in field and identified by the presence of mandibulate mouth parts; large prothorax; usually enlarged hind legs which are modified for jumping; tarsi 3 to 4 segmented, rarely 5 or fewer than 3. The economic importance of Orthopteran insects has been recognized all over the world. Orthopterans are found almost in all terrestrial habitats. Most of them are active during the day and feed on vegetation but some are such as mole crickets spend most of their time in underground burrows. Species that change colour and behaviour at high population densities are called locusts. They form large swarms and cause serious economic damage. In agricultural fields, Orthopteran herbivores feed on crops as well as weeds. But, in non-agricultural ecosystems, they are helping in nutrient cycling, and liberating nitrogen and phosphorus from tree species. There are 29189 species of Orthoptera in world, while in India it is 1166.

This year a total of 11 new Orthopteran species have been described, 4 from Jammu and Kashmir, 4 from Kerala and one each from Chhattisgarh, Rajasthan and Uttar Pradesh.

Family: ACRIDIDAE
Genus: *Oxyina* Hollis, 1975

Oxyina kashmira Baba & Usmani. *Zootaxa*, 4985(2): 151-175, 2021

The species *Oxyina kashmira* was described by Tajamul Hassan Baba and Mohd. Kamil Usmani based on a Holotype from Kashmir, Baramulla, Eco Park (34.1925° N and 74.2987° E). The type specimen has been deposited in Zoology Museum, Aligarh Muslim University. The species name implies to the distribution of this new species in the Kashmir Valley, a region of Jammu & Kashmir state, India.

Oxyina kashmira
Baba & Usmani, 2021

Family: GRYLLIDAE
Genus: *Itara* Walker, 1869

Itara (Gryllitara) pilosa Meena, Swaminathan, Nagar, Chhangani & Kumar. *Zootaxa*, 5072 (5): 493–500, 2021

The species *Itara (Gryllitara) pilosa* was described by Ashok Kumar Meena, Rajamani Swaminathan, Rajendra Nagar, Gaurang Chhangani and Kuldeep Kumar based on a Holotype from Kerala, Idukki, Wagamon heights (9°40'50''N and 76°52'0''E, 1200 m). The type specimen has been deposited in "Dr. Kalyan Singh Kushwaha Insect Museum" at Departmentof Entomology, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, India. The species name is derived from the Latin word pilosa, referring to the upper and lower surface of the epiphallus with hairs.

Itara (*Gryllitara*) *pilosa* Meena *et al.*, 2021

Teleogryllus rohinae Jaiswara & Jain, 2021

Genus: *Teleogryllus* Chopard, 1961

Teleogryllus rohinae Jaiswara & Jain. *Zootaxa*, 5016(1): 81-106, 2021

The species *Teleogryllus rohinae* was described by Ranjana Jaiswara, Laure Desutter-Grandcolas and Manjari Jain based on a Holotype, one Allotype and ten Paratypes collected from Kerala, Bekal Club, 8km from Nileshwar Railway Station (12°16' 20.3''N and 75°6'47.4''E, 7 m.). The type specimens have been deposited in the department of Biological Sciences, IISER, Mohali, Punjab. The new species is named in honour of Professor Rohini Balakrishnan, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, for introducing RJ and MJ to the cricket model system and in recognition of her significant contribution to the understanding of the behaviour and ecology of Indian crickets. Name in apposition-gender feminine.

Family: GRYLLOTALPIDAE
Genus: *Gryllotalpa* Latreille, 1802

Gryllotalpa punana Meena, Swaminathan & Nagar. *Transactions American Entomological Society*, 147: 193-202, 2021

The species *Gryllotalpa punana* was described by Ashok Kumar Meena, Rajamani Swaminathan and Rajendra Nagar based on a Holotype, Allotype and two Paratypes collected from Rajasthan, Jaipur, Punana (27.0772°N and 75.5419°E, 419 m). The type specimens have been deposited in Dr. Kalyan Singh Kushwaha Insect Museum, Department of Entomology, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, India. The name of the new species refers to the place of its collection, from village Punana, Jaipur (Rajasthan) India.

Gryllotalpa punana Meena *et al.*, 2021

Family: PHALANGOPSIDAE
Genus: *Arachnomimus* Saussure,

Arachnomimus (Indimimus) jayanti Jaiswara. *Zootaxa,* 4965(1): 167-180, 2021

The subgenus *Arachnomimus Indimimus* and the species *Arachnomimus (Indimimus) jayanti* was described by Ranjana Jaiswara, Monaal and Laure Desutter-Grandcolas based on a Holotype, one Allotype and fifteen Paratypes collected from Chhattisgarh, Raigarh district, Lailunga Block, Kurra, Kurra cave (22°25'52.4928''N and 83° 27'21.618''E). Holotype and Allotype will be deposited in the Orthoptera collection of Zoological Survey of India, Kolkata, India. The specific epithet “jayanti” is derived from the first name of Dr. Jayant Biswas, (Founder, President cum Director of National Cave Research and Protection Organization, India) in recognition of his significant studies on biology of cave animals in India.

Arachnomimus (Indimimus) jayanti Jaiswara, 2021

Family: STENOPELMATIDAE
Genus: *Oryctopterus* Karny, 1937

Oryctopterus varuna Hiremath & Prathapan. *European Journal of Taxonomy,* 748: 108-137, 2021

The species *Oryctopterus varuna* was described by S.R. Hiremath and K.D. Prathapan based on a Holotype and sixteen Paratypes collected from Kerala, College of Agriculture, Vellayani. The type specimens have been deposited in NBAIR and UASB. The species is named after Varuna, the god of rains in Indian mythology. The name is a noun in apposition. This cricket was observed coming out to open areas such as campus roads following rains, hence the name. In the regional dialect, Ot. varuna sp. nov. is called 'Mannunni', meaning 'child of soil'. Also nicknamed 'Thanni-Pillai', meaning 'baby of water',alluding to its emergence following rains.

Oryctopterus varuna Hiremath & Prathapan, 2021

Oryctopterus yeshwanthi Hiremath & Prathapan. *European Journal of Taxonomy,* 748: 108-137, 2021

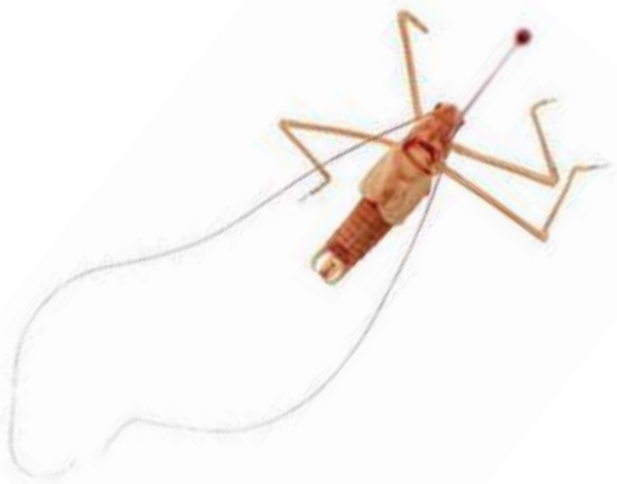
The species *Oryctopterus yeshwanthi* was described by S.R. Hiremath and K.D. Prathapan based on a Holotype collected from Kerala, Kallar. The type specimens have been deposited in UASB. The species is named after H.M. Yeshwanth, University of Agricultural Sciences, who collected the single known specimen.

Oryctopterus yeshwanthi Hiremath & Prathapan, 2021

Family: TETTIGONIIDAE
Genus: *Anormalous* Liu, 2011

Anormalous liu Shah & Usmani. *Zookeys*, 1078: 49-55, 2021

The species *Anormalous liu* was described by Muzamil Syed Shah and Mohd Kamil Usmani based on a Holotype collected from Jammu and Kashmir; Kashmir, Kupwara (34.5262°N and 74.2546°E) and two Paratypes collected from Jammu and Kashmir; Kashmir, Baramulla, Gulmarg (34.0484°N and 74.3805°E). The type specimens have been deposited in the Museum of Zoology Department, Aligarh Muslim University, Aligarh Uttar Pradesh, India. The species is named after Chun-Xiang Liu who described the genus *Anormalous*.



Anormalous liu Shah & Usmani, 2021

Genus: *Ducetia* Stål, 1874

Ducetia inermus Farooqi, Ahmad & Usmani. *Transactions American Entomological Society*, 147: 11-19, 2021

The species *Ducetia inermus* was described by Mohd Kaleemullah Farooqi, Ishtiaq Ahmad and Mohd Kamil Usmani based on a Holotype and two Paratypes collected from Uttar Pradesh, Lucknow, Semra (26°53'4.69"N and 81° 3'7.77"E). The type specimens have been deposited in ZDAMU. The specific epithet simply reflects the type locality (Semra) of the renamed species.

Ducetia inermus Farooqi *et al.*, 2021

Genus: *Ruspolia* Schulthess Schindler, 1898

Ruspolia kashmira Shah, Usmai, Ali & Dar. *Zootaxa*, 4966(4): 483-486, 2021

The species *Ruspolia kashmira* was described by Muzamil Syed Shah, Mohd Kamil Usmani, Mohd Ali and Afaq Ahmad Dar based on a Holotype and four Paratypes collected from Jammu and Kashmir, Kashmir, Pulwama, Malangpora (33.8918°N and 74.9811°E). The type specimens have been deposited in the Museum of Zoology Department, AMU. The name of the species is given from the region, Kashmir.

Ruspolia kashmira Shah *et al.*, 2021

Genus: *Yalvaciana* Çiplak, Heller & Demirsoy, 2002

Yalvaciana allowpora Shah & Usmani. *Zootaxa*, 4966(5): 591-595, 2021

The species *Yalvaciana allowpora* was described by Muzamil Syed Shah and Mohd Kamil Usmani based on a Holotype and three Paratypes collected from Jammu and Kashmir, Kashmir, Shopian, Now Pora, Allowpora (33.7317° N and 74.8938° E). The type specimens have been deposited in the ZDAMU. The name of the species is given from the area (Allowpora) where the specimens were collected.

Yalvaciana allowpora Shah & Usmani, 2021

3.7.10 BLATTODEA

Cockroaches are belonging to one of the oldest alive groups of insects. They are cosmopolitan, choosing warm and damp habitats. Auspiciously, only a few, nearly 1% of the known species are domiciliary pests of public health importance. While a few species are strictly phytophagous, the majority is omnivorous. They are unusually swift runners but poor in flight. However, it is imperative to note that most of the species of cockroaches do not have any implication in the transmission of diseases. The non-domiciliary roaches are encountered in a variety of habitats and niches. The members of this group have some economic and medical importance. There are a number of records that shows cockroaches causing damage to plants by eating their roots or flowers. The importance of cockroaches as vectors of vertebrates is well known. Diversity: World: 5528 species; India: 181 species; Endemic: 82 species. Three new species from the state of Tamil Nadu have been described this year.

Family: ECTOBIIDAE
Genus: *Allacta* Saussure & Zehntner, 1895

Allacta jcenpro Senraj, Packiam, Prabakaran, Lucanas & Jaiswal. *Zootaxa*, 4920(2): 254-266, 2021

The species *Allacta jcenpro* was described by M. Senraj, S. Maria Packiam, S. Prabakaran, Cristian C. Lucanas and Deepa Jaiswal based on a Holotype and three Paratypes collected from Tamil Nadu, Chennai, K. K. Nagar (13°2'19.608N and 80°12'20.7972E) and three Paratypes collected from Tamil Nadu, Virudhunagar, Elanthiraikondan (9°22'32.0016N and 77°31'32.9988E). The type specimen has been deposited in ZSI-SRC. The species is named in honor of the "Jesuits Chennai Province", a part of Loyola College, Chennai who initiated empowering the marginalized peoples, especially the rural poor and the Dalits.

Allacta jcenpro
Senraj *et al.*, 2021

Allacta kollimalai Senraj, Packiam, Prabakaran, Lucanas & Jaiswal. *Zootaxa*, 4920(2): 254-266, 2021

The species *Allacta kollimalai* was described by M. Senraj, S. Maria Packiam, S. Prabakaran, Cristian C. Lucanas and Deepa Jaiswal based on a Holotype and two Paratypes collected from Tamil Nadu, Namakkal, Valappurnadu View Point, Arappaleeswarar Temple near (11°15'02.320N and 78°23'16.652E). The type specimen has been deposited in ZSI-SRC. The species is named after the type locality, located in the Kollimalai hills, Tamil Nadu, India.

Allacta kollimalai
Senraj *et al.*, 2021

Allacta vellimalai Senraj, Packiam, Prabakaran, Lucanas & Jaiswal. *Zootaxa*, 4920(2): 254-266, 2021

The species *Allacta vellimalai* was described by M. Senraj, S. Maria Packiam, S. Prabakaran, Cristian C. Lucanas and Deepa Jaiswal based on a Holotype and one Paratype collected from Tamil Nadu, Theni, Megamalai Range, Vellimalai Forest Rest House (9°34'5.196N and 77°24'4.86E). The type specimen has been deposited in ZSI-SRC. The species is named after the type locality, Vellimalai hills, Megamalai, Theni, Tamil Nadu, India.

Allacta vellimalai
Senraj *et al.*, 2021

3.7.11 ODONATA

The order Odonata commonly known as dragonflies and damselflies are among the most ancient winged insect found in all the continents except Antarctica. They are regarded as beneficial insects because they are predators throughout their life, mostly feeding on smaller insects. The presence of dragonflies and damselflies in the waterbodies indicate the health of the freshwater ecosystem and habitat quality. Odonates have a significant role in the wetland food chain. Adult odonates feed on mosquitoes, other blood sucking flies and also termites, small moths, etc. and play a significant role in controlling the populations of these harmful insects. Many species of odonates inhabiting in agro-ecosystems and acts as a biocontrol agent. Diversity: World: 6366 species; India: 495 species excluding subspecies; Endemic: 186 species; Threatened: 25 species. Two new species of Odonata from Maharashtra and 1 new species from West Bengal have been described this year.

Family: EUPHAEIDAE
Genus: *Cephalaeschna* Selys, 1883

Cephalaeschna patrai Dawn. *Zootaxa*, 4949(2): 371-380, 2021

The species *Cephalaeschna patrai* was described by Prosenjit Dawn based on a Holotype collected from West Bengal, Darjeeling district, Neora Valley National Park, near the trail from Thulo Dhunga River to Aloobari forest camp (27.1195°N and 88.7173°E, 2,306 m) and one Paratype collected from (27.0851°N, 88.6996°E, 2,324 m). The type specimens have been deposited in National Zoological Collections, Zoological Survey of India, Kolkata. The specific name '*patrai*' is coined to honour Mr. Shubhankar Patra, a very dedicated naturalist of West Bengal, associated with documentation of floral and faunal resources for more than 30 years and inspiring many people including the author in nature study and conservation since more than two decades.

Cephalaeschna patrai Dawn, 2021

Genus: *Euphaea* Selys, 1840

Euphaea thosegharensis Sadasivan & Bhakare. *Journal of Threatened Taxa*, 13(5): 18200-18214, 2021

The species *Euphaea thosegharensis* was described by Shriram Dinkar Bhakare, Vinayan P Nair, Pratima Ashok Pawar, Sunil Hanmant Bhoite and Kalesh Sadasivan based on a Holotype and one Paratype collected from Maharashtra, Satara district, Thoseghar. The type specimens have been deposited in ZSI-WGRC. The species name '*thosegharensis*' is a toponym derived from the type locality in Thoseghar, Satara District, Maharashtra, India.

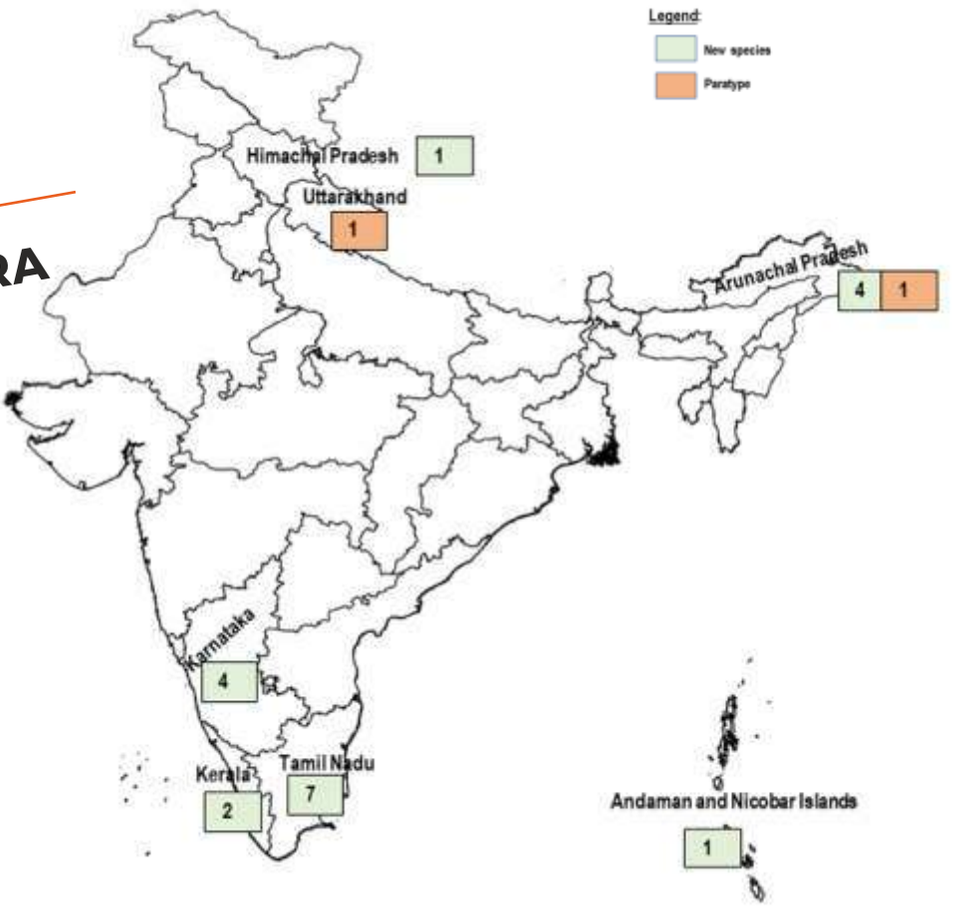
Euphaea thosegharensis Sadasivan & Bhakare, 2021

Euphaea pseudodispar Sadasivan & Bhakare. *Journal of Threatened Taxa*, 13(5): 18200-18214, 2021

The species *Euphaea pseudodispar* was described by Shriram Dinkar Bhakare, Vinayan P Nair, Pratima Ashok Pawar, Sunil Hanmant Bhoite and Kalesh Sadasivan based on a Holotype and one Paratype collected from Maharashtra, Satara district, Thoseghar. The type specimens have been deposited in ZSI-WGRC. The species name *pseudodispar* is coined as reminder to the close resemblance to the species *E. dispar* (Rambur, 1842) in coloration.

Euphaea pseudodispar Sadasivan & Bhakare, 2021

3.7.12 EPHEMEROPTERA



The order Ephemeroptera is popularly known as mayflies. They are the most primitive extant order of insects. The larvae are aquatic and adults are terrestrial with a very short lifespan. The larvae prefer well oxygenated pristine waters to complete its life stage. Hence, they are widely used as reliable indicators of water quality. The morphology and feeding behaviour of larval mayflies differ across species. The subimago stage between the mature larva and imago is unique among insects. The adults are non-feeding and they swarm, mate, lay eggs and die within a day or two after emergence. The mayflies are important prey of fishes, aquatic birds and other aquatic invertebrates. Being sensitive to water quality, they are widely used in biomonitoring. Diversity: World: 3700 species; India: 172 species; Endemic: 127 species. A total of 21 species of Ephemeroptera have been described this year; Tamil Nadu (7), Arunachal Pradesh (4), Karnataka (4), Kerala (2), Andaman and Nicobar Islands (1) 2 paratypes have been collected from Arunachal Pradesh and Uttarakhand.

Family: BAETIDAE
Genus: *Platybaetis* Müller-Liebenau, 1980

Platybaetis selvai
Kubendran *et al.*, 2021

Platybaetis selvai Kubendran, Vasanth & Subramanian. *Zootaxa*, 5047(5): 575-582, 2021

The species *Platybaetis selvai* was described by T. Kubendran, M. Vasanth, K. A. Subramanian, Fatima Jabeen, K. G. Sivaramakrishnan and Pallabi Mitra based on a Holotype and two Paratypes collected from Arunachal Pradesh, Dibang Valley district, Tangon stream (27.44119° N and 94.23509° E, 275 m). The type specimens have been deposited in ZSI-HARC. The species name "*selvai*" is abridged patronym of Dr. C. Selvakumar who has significantly contributed to Indian Ephemeroptera taxonomy.

Family: CAENIDAE
Genus: *Caenis* Stephens, 1835

Caenis americani Srinivasan, Sivaruben, Barathy, Malzacher & Isack. *Zootaxa*, 4926(1): 105-116, 2021

The species *Caenis americani* was described by Pandiarajan Srinivasan, T. Sivaruban, S. Barathy, Peter Malzacher and Rajasekaran Isack based on a Holotype and eighteen Paratypes collected from Tamil Nadu, Dindigul district, Kodaikanal, Mangalamkombu (10°30542'N and 77°67530'E, 1219 m). The type specimens have been deposited in ZSI-SRC and AMC. The species name "*americani*" is made in honour of the institute The American College, Madurai, South India for their support of finding this new species.

Caenis americani
Srinivasan *et al.*, 2021

Caenis maduraiensis Muthukatturaja & Balasubramanian. *Zootaxa*, 4980(2): 366-372, 2021

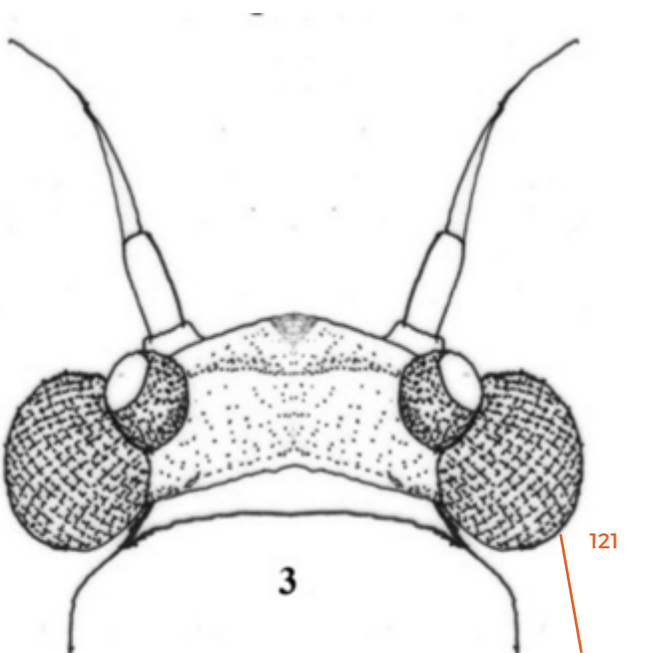
The species *Caenis maduraiensis* was described by Marimuthu Muthukatturaja and Chellaiah Balasubramanian based on a Holotype and six Paratypes collected from Tamil Nadu, Madurai district, Vandiyur pond (09°54'51" N and 78°10'52" E, 124 m). The type specimens have been deposited in ZSI-SRC. The species name *maduraiensis* refers to the locality, Madurai, Tamil Nadu where the new species was collected.

Caenis maduraiensis
Muthukatturaja &
Balasubramanian, 2021

Genus: *Clypeocaenis* Soldán, 1978

Clypeocaenis kaveri Balasubramanian & Muthukatturaja. *Zootaxa*, 4915(3): 377-388, 2021

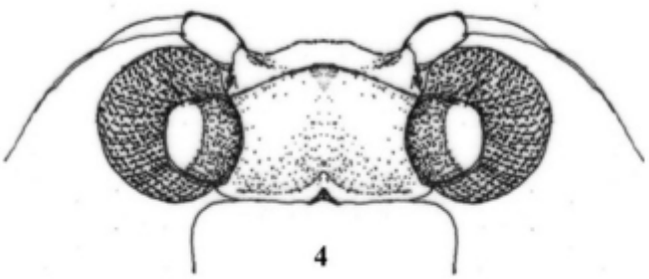
The species *Clypeocaenis kaveri* was described by Chellaiah Balasubramanian and Marimuthu Muthukatturaja based on a Holotype and six Paratypes collected from Karnataka, Kodagu district, Napoklu, river Kaveri (12.3140985°N and 75.6983046°E, 872 m). The type specimens have been deposited in ZSI-SRC. The species name *kaveri* refers to the river name, Kaveri, Kodagu district, Karnataka, where the new species was collected.



Clypeocaenis kaveri
Balasubramanian &
Muthukatturaja, 2021

Clypeocaenis napoklu Balasubramanian & Muthukatturaja. *Zootaxa*, 4915(3): 377-388, 2021

The species *Clypeocaenis napoklu* was described by Chellaiah Balasubramanian and Marimuthu Muthukatturaja based on a Holotype and six Paratypes collected from Karnataka, Kodagu district, Napoklu, river Kaveri (12.3140985°N and 75.6983046°E, 872 m). The type specimens have been deposited in ZSI-SRC. The species name *napoklu* refers to the type locality, where the new species was collected.



Clypeocaenis napoklu Balasubramanian & Muthukatturaja, 2021

Cincticostella changfai Martynov & Palatov, 2021

Family: EPHEMERELLIDAE
Genus: *Cincticostella* Allen, 1971

Cincticostella changfai Martynov & Palatov. *ZooKeys*, 1040: 123-166, 2021

The species *Cincticostella changfai* was described by Alexander V. Martynov, C. Selvakumar, Dmitry M. Palatov, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth and Luke M. Jacobus based on a Holotype and 22 Paratypes collected from Nepal, Bagmati zone, Shivapuri Nagarjun National Park, Gohare Khola River (near Mahankal village) (27.885842°N and 85.531386°E) and nine Paratypes collected from different localities of Uttarakhand. The type specimens have been deposited in NMNH-NASU. The species is named in honour of Dr. Chang-Fa Zhou (Nanjing Normal University, China), who contributed significantly to the study of the genus *Cincticostella*.

Cincticostella funki Martynov, Selvakumar, Palatov & Vasanth. *ZooKeys*, 1040: 123-166, 2021

The species *Cincticostella funki* was described by Alexander V. Martynov, C. Selvakumar, Dmitry M. Palatov, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth and Luke M. Jacobus based on a Holotype and one Paratype collected from Arunachal Pradesh, Papumpare District, vicinity of Parang Village, Rike River (27.32797°N and 93.50308°E) and one Paratype collected from Almora District, 2nd order left tributary of Ramganga River (in Dwarahat forest, 10.1 km north-eastwards of Chaukhutia Town), Uttarakhand (29.925608 N and 79.445983E). The type specimens have been deposited in ZSI-SRC and NMNH-NASU. The species is named in honour of Dr. David Funk (Stroud Water Research Center, USA), who contributed significantly to the study of Ephemerellidae.

Cincticostella funki Martynov *et al.*, 2021

Cincticostella wangi Selvakumar, Martynov & Subramanian. *ZooKeys*, 1040: 123-166, 2021

The species *Cincticostella wangi* was described by Alexander V. Martynov, C. Selvakumar, Dmitry M. Palatov, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth and Luke M. Jacobus based on a Holotype and eight Paratypes collected from Arunachal Pradesh, Lower Subansiri district, Tale Valley, unnamed stream (27.537201°N and 93.959883°E). The type specimens have been deposited in ZSI-SRC. The species is named in honour of Dr. T.-Q. Wang (formerly Purdue University, USA), who contributed significantly to the study of Ephemerelloidea.

Cincticostella wangi Selvakumar *et al.*, 2021

Genus: *Serratella* Edmunds, 1959

Serratella palatovi Martynov, Selvakumar & Jacobus. *Zootaxa*, 4975(3): 451-482, 2021

The species *Serratella palatovi* was described by Alexander V. Martynov, C. Selvakumar, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth, Bikramjit Sinha and Luke M. Jacobus based on a Holotype collected from Thailand, Chiang Mai Province, Chom Thong District, stream, main source of the Klang Phat River (18.577542°N and 98.527056°E) and two Paratypes collected from Tale Valley, Lower Subansiri district, Arunachal Pradesh, India (27.537201°N and 93.959883°E) and Nawakot & Sindu Districts, 1/2 mi north of Gulbhanjyang (on lower trail), Nepal. The type specimens have been deposited in ZSI-SRC and NMNH-NASU. The species is named in honor of Dr. Dmitry M. Palatov, friend of the first author and specialist in aquatic invertebrates of the Palearctic and Indomalayan realms, who collected this species in Thailand.

Serratella palatovi Martynov *et al.*, 2021

Torleya dibruensis Selvakumar *et al.*, 2021

Genus: *Torleya* Lestage, 1917

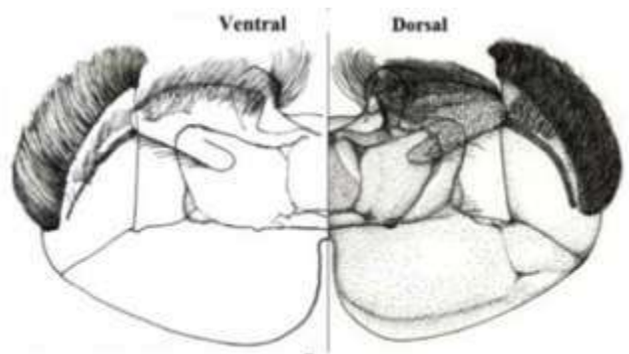
Torleya dibruensis Selvakumar, Martynov & Jacobus. *Zootaxa*, 4975(3): 451-482, 2021

The species *Torleya dibruensis* was described by Alexander V. Martynov, C. Selvakumar, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth, Bikramjit Sinha and Luke M. Jacobus based on a Holotype and one Paratype collected from Arunachal Pradesh, Papum Pare district, Dibru River (27.147655°N and 93.74908°E) and two Paratypes collected from Paniya stream, Lower Subansiri district, Arunachal Pradesh (27.81791°N, 94.09502°E). The type specimens have been deposited in ZSI-SRC. The species is named after the type locality, Dibru River, Arunachal Pradesh.

Torleya simbalbarensis Selvakumar, Subramanian, Martynov & Jacobus. *Zootaxa*, 4975(3): 451-482, 2021

The species *Torleya simbalbarensis* was described by Alexander V. Martynov, C. Selvakumar, K.A. Subramanian, K.G. Sivaramakrishnan, M. Vasanth, Bikramjit Sinha and Luke M. Jacobus based on a Holotype collected from Himachal Pradesh, Sirmour District, Simbalbara Wildlife Sanctuary, stream (30.44°N and 77.53°E). The type specimens have been deposited in ZSI-SRC. The species is named after the type locality, Simbalbara Wildlife Sanctuary, Himachal Pradesh.

Torleya simbalbarensis Selvakumar *et al.*, 2021



Afronurus meenmutti Balasubramanian & Muthukatturaja, 2021

Fameily: HEPTAGENIIDAE
Genus: *Afronurus* Lestage, 1924

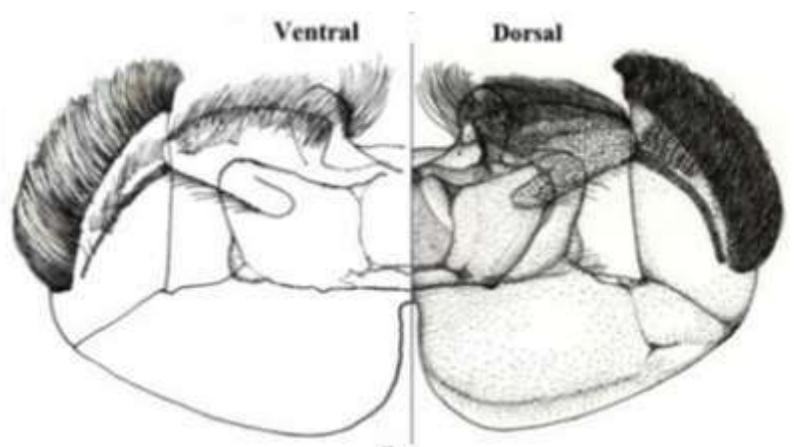
Afronurus meenmutti Balasubramanian & Muthukatturaja. *Journal of Threatened Taxa*, 13(14): 20272-20277, 2021

The species *Afronurus meenmutti* was described by Marimuthu Muthukatturaja and Chellaiah Balasubramanian based on a Holotype and five Paratypes collected from Kerala, Trivandrum district, Kallar, Kallar River (08.7110N, 77.1280E, 839 m). The type specimens have been deposited in ZSI-SRC. The species is named after the place of collection, Meenmutti falls of Kallar River, Thiruvanandhapuram district, Kerala.

Genus: *Epeorus* Eaton, 1881

Epeorus munnarensis Muthukatturaja & Balasubramanian. *J. ent. Res.*, 45(3): 545-548, 2021

The species *Epeorus munnarensis* was described by Marimuthu Muthukatturaja and Chellaiah Balasubramanian based on a Holotype and ten Paratypes collected from Kerala, Idukki district, Periyavarai stream, Munnar (10.109476°N and 77.057512°E). The type specimens have been deposited in ZSI-SRC. The species name *munnarensis* refers to the locality, where the new species was collected.



Epeorus munnarensis Muthukatturaja & Balasubramanian, 2021

Isonychia (Isonychia) radhae Balasubramanian & Muthukatturaja, 2021

Family: ISONYCHIIDAE
Genus: *Isonychia* Eaton, 1871

Isonychia (Isonychia) radhae Balasubramanian & Muthukatturaja. *Zootaxa*, 4908(2): 283-291, 2021

The species *Isonychia (Isonychia) radhae* was described by M. Muthukatturaja, C. Balasubramanian, T. Rathinakumar and K. G. Sivaramakrishnan based on a Holotype and eleven Paratypes collected from Karnataka, Dakshina Kannada district, Kapila River, Parpikal (12°58'20.7912''N and 77°34'50.3148''E, 152 m). The type specimens have been deposited in ZSI-SRC. The species *radhae* is named in honor of Dr. Radha Thiagarajan Chettiyar, former president of Thiagarajar College, Madurai.

Family: LEPTOPHLEBIIDAE
Genus: *Choroterpes* Eaton, 1881

Choroterpes (Choroterpes) andamanensis Vasanth, Subramanian & Selvakumar. *Zootaxa*, 5076(1): 0569-070, 2021

The species *Choroterpes (Choroterpes) andamanensis* was described by M. Vasanth, K.A. Subramanian, C. Sevlakumar, T. Kubendran and K.G. Sivaramakrishnan based on a Holotype and three Paratypes collected from Andaman and Nicobar Islands, Botanical Garden, Nayachaar (92.6741°N and 11.5738°E, 54 m). The type specimens have been deposited in ZSI-SRC. The species is named after the type locality, Andaman Islands.

Choroterpes (Choroterpes) andamanensis Vasanth *et al.*, 2021

Edmundsula meghamalaiensis Vasanth *et al.*, 2021

Genus: *Edmundsula* Sivaramakrishnan, 1985

Edmundsula meghamalaiensis Vasanth, Subramanian & Selvakumar. *Zootaxa*, 5076(1): 0569-070, 2021

The species *Edmundsula meghamalaiensis* was described by M. Vasanth, K.A. Subramanian, C. Sevlakumar, T. Kubendran and K.G. Sivaramakrishnan based on a Holotype and ten Paratypes collected from Tamil Nadu, Theni district, Suruli colony, Upper Manalar stream (09.59167N and 077.34261E, 1530 m) and fourteen Paratypes collected from Kerala, Trivandrum district, Peppara Wildlife Sanctuary, Pandipath stream (08.67741N, 077.19390E, 1326 m). The type specimens have been deposited in ZSI-SRC. The species is named after the type locality, Meghamalai WLS, Theni district, Tamil Nadu, India.

Megaglena agasthiya
Vasanth *et al.*, 2021

Genus: *Megaglena* Peters & Edmunds, 1970

Megaglena agasthiya Vasanth, Subramanian & Selvakumar. *Zootaxa*, 5076(1): 0569-070, 2021

The species *Megaglena agasthiya* was described by M. Vasanth, K.A. Subramanian, C. Sevlakumar, T. Kubendran and K.G. Sivaramakrishnan based on a Holotype and five Paratypes collected from Tamil Nadu, Trivandrum district, Peppara Wildlife Sanctuary, Pandipath stream (8.67741°N and 77.19390°E, 1326 m). The type specimens have been deposited in ZSI-SRC. The species is named after the mythological Hindu sage Agasthya, who is believed to reside in the hills of the Southern Western Ghats from where the type specimens were collected. Treat as noun in apposition.

Family: TELOGANODIDAE
Genus: *Dudgeodes* Sartori, 2008

Dudgeodes sartorii Srinivasan, Sivaruben, Barathy & Isack. *Zootaxa*, 4990(3): 571-576, 2021

The species *Dudgeodes sartorii* was described by Pandiarajan Srinivasan, T. Sivaruban, S. Barathy and Rajasekaran Isack based on a Holotype and three Paratypes collected from Tamil Nadu, Theni district, Megamalai hills, Manalar bridge (9°69833'N and 77°40083'E, 1422 m). The type specimens have been deposited in ZSI-SRC and AMC. This species is dedicated to Dr. Michel Sartori for his outstanding contribution to the Oriental Teloganodidae.

Dudgeodes sartorii Srinivasan *et al.*, 2021

Sparsorythus nanjangudensis Muthukatturaja & Balasubramanian, 2021

Family: TRICORYTHIDAE
Genus: *Sparsorythus* Sroka & Soldán, 2008

Sparsorythus nanjangudensis Muthukatturaja & Balasubramanian. *Zootaxa*, 5040(3): 439-447, 2021

The species *Sparsorythus nanjangudensis* was described by Marimuthu Muthukatturaja and Chellaiah Balasubramanian based on a Holotype and seven Paratypes collected from Karnataka, Mysore district, Nanjangud, Kabini River (12.121630°N and 76.696019°E, 652 m). The type specimens have been deposited in ZSI-SRC. Species name *nanjangudensis* refers to the locality Nanjangud, Mysore district, where the new species was collected.

Sparsorythus srokai Srinivasan, Sivaruben, Barathy & Isack. *Zootaxa*, 5061(1): 185-191, 2021

The species *Sparsorythus srokai* was described by Pandiarajan Srinivasan, T. Sivaruban, S. Barathy and Rajasekaran Isack based on a Holotype and eight Paratypes collected from Tamil Nadu, Theni district, Veerapandi River (9.9663N and 77.4353 E, 308 m). The type specimens have been deposited in ZSI-SRC and AMC. This species is dedicated to Dr. Pavel Sroka for his contribution to Oriental Tricorythidae.

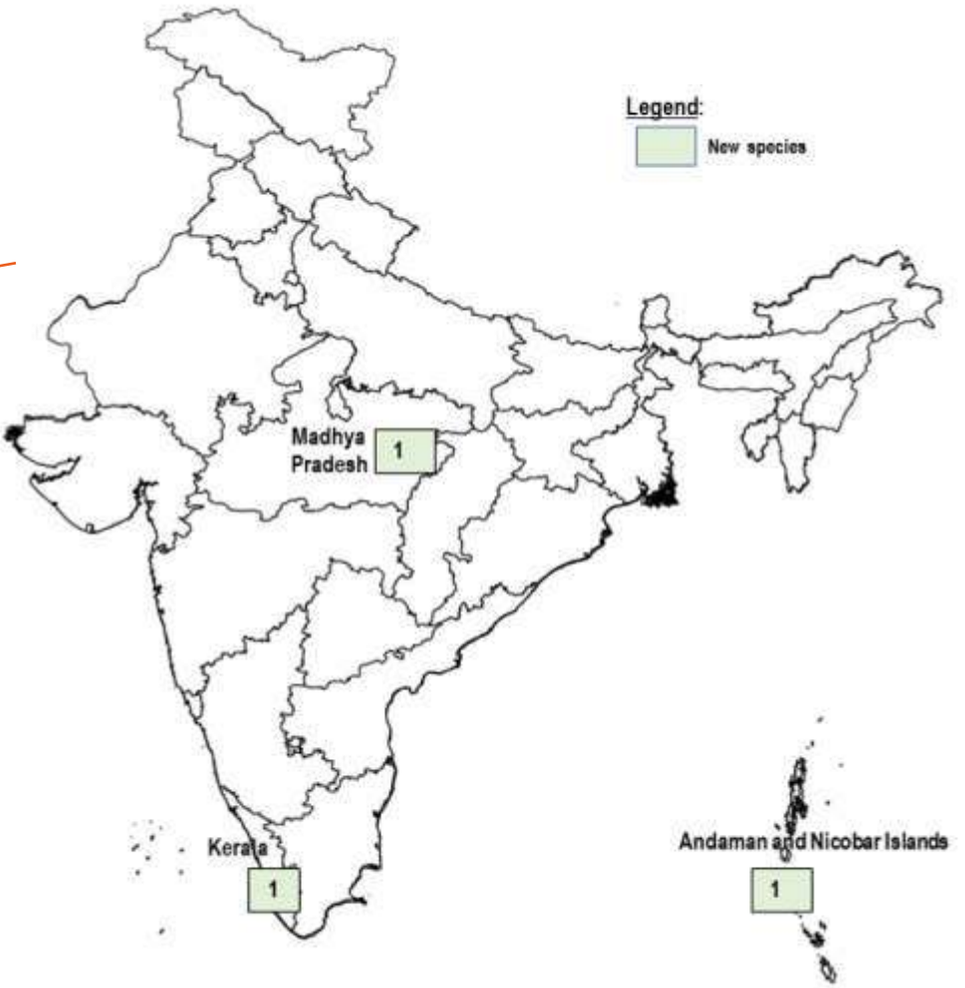
Sparsorythus srokai Srinivasan *et al.*, 2021

Sparsorythus sivaramakrishnani Sivaruban, Srinivasan, Barathy, Rosi & Isack. *Zootaxa*, 4915(2): 237-245, 2021

The species *Sparsorythus sivaramakrishnani* was described by T. Sivaruban, Pandiarajan Srinivasan, S. Barathy, M. Bernath Rosi and Rajasekaran Isack based on a Holotype and three Paratypes collected from Tamil Nadu, Namakkal district, Thuraiyur, Pullian cholai (11.2668 N and 78.4361 E, 1190 m). The type specimens have been deposited in AMC. This species is dedicated to our revered Mentor Dr. K.G. Sivaramakrishnan, for his outstanding contribution to the Indian Ephemeroptera.

Sparsorythus sivaramakrishnani Sivaruban *et al.*, 2021

3.7.13 NEUROPTERA



Neuroptera, popularly known as lacewings is one of the ancient holometabolous insect orders of superorder Neuropterida. Lacewings play a significant role in integrated pest management as predators of aphids, mites and several other agricultural pests and also as the valuable indicator for assessing ecological statement of a habitat. The importance of natural enemies like parasitoids and predators for controlling pests in agro- ecosystem is gaining lot of attention, as their presence in field crops, orchards and vegetables have been a subject for many biological studies for reducing the usage of insecticide and thereby environment pollution. Globally, they are represented by approximately 5, 937 species under 16 families. India is home for 332 species under 116 genera belonging to 11 families. One species each from Andaman and Nicobar Islands, Madhya Pradesh and Kerala have been described this year.

Family: CHRYSOPIDAE
Genus: *Joguina* Navás, 1912

Joguina unimaculata Winterton, Balakrishnan & Chenthamarakshan. *Zootaxa*, 4970(3): 577-585, 2021

The species *Joguina unimaculata* was described by Shaun L. Winterton, Suryanarayanan Thangalazhi Balakrishnan and Bijoy Chenthamarakshan based on a Holotype collected from Kerala, Palakkad district, Pudunagaram (10.6853 and 76.6858, 104 m). The type specimen has been deposited in ZSI-WGRC. The species name is derived from the Latin—unus, one; maculatus, spot, stain, referring to the single pustule in each wing.

Joguina unimaculata Winterton *et al.*, 2021

Family: MANTISPIDAE
Genus: *Euclimacia* Enderlein, 1910

Euclimacia similis Kaur, Pandher, Chandra & Dubey. *Zootaxa*, 5068(3): 355-377, 2021

The species *Euclimacia similis* was described by Simarjit Kaur, Manpreet Singh Pandher, Kailash Chandra and Anil Kumar Dubey based on a Holotype collected from Madhya Pradesh, Karmajhiri, Seoni. The type specimens have been deposited in NZSI. The species is named 'similis' due to its general resemblance with *E. flavocincta* Stitz.

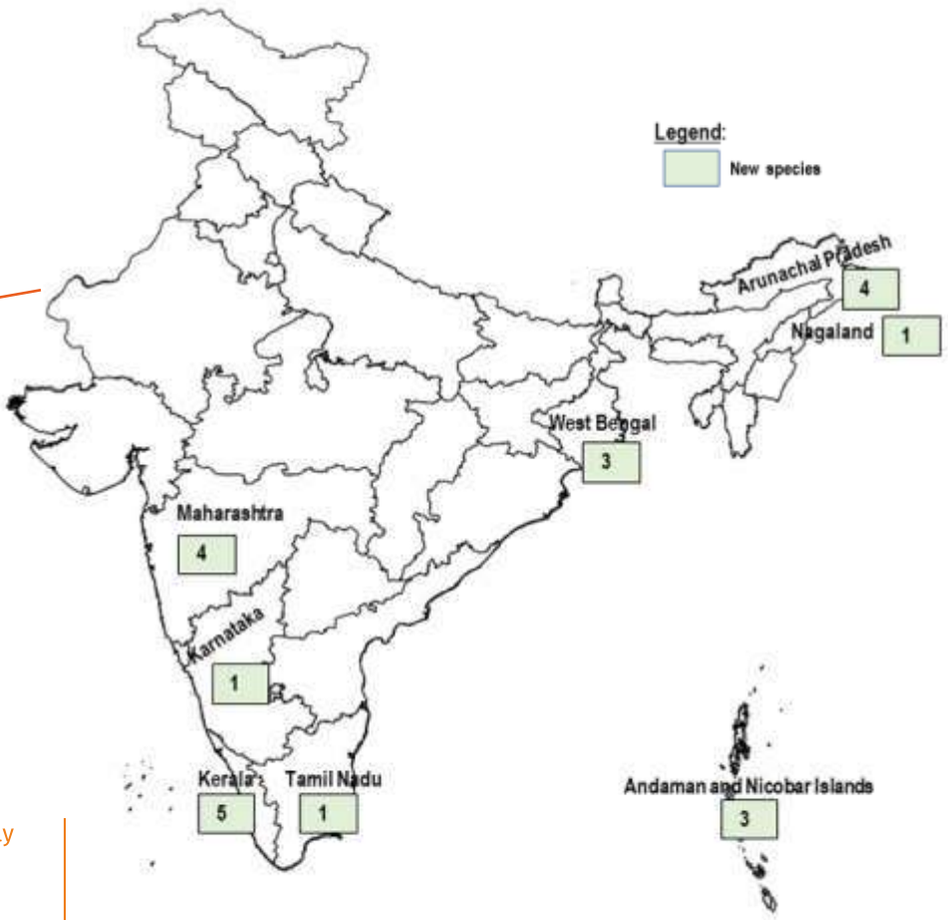
Euclimacia similis Kaur *et al.*, 2021

Euclimacia nicobarica Kaur *et al.*, 2021

Euclimacia nicobarica Kaur, Pandher, Chandra & Dubey. *Zootaxa*, 5068(3): 355-377, 2021

The species *Euclimacia nicobarica* was described by Simarjit Kaur, Manpreet Singh Pandher, Kailash Chandra and Anil Kumar Dubey based on a Holotype collected from Andaman and Nicobar Islands, Port Blair, Bird watch tower. The type specimens have been deposited in NZSI. The species is named after the type locality Nicobar.

3.8 CRUSTACEA



Crustaceans include the popularly known animals like prawns, shrimps, crabs, hermit crabs, woodlice, fice-lice, barnacles, lobsters as well as many planktonic forms like cladocerans, copepods, ostracods, mysids, cumaceans, tanaidaeceans, lucifers etc. It is one of the majaor suphylums under phylum Arthropoda with a maximum number of aquatic forms and is more diverse in shape and size. The significance of crustaceans is immense and highly varied. They are ecologically valuable, commercially important, and even used as aesthetic animals, as fish bait and in traditional medicine. Crustaceans are ecologically important in food chain as scavengers and in beach bio-turbation, while most cirripeds act as bio-foulers and bio-indicators of heavy metals. Limnorids and sphaeromatids often cause damage to wooden structures and live mangroves. Number of species in world is -67,735, while in India it is 3983 species.

This year a total of 22 new Crustacean species are described from India: Kerala (5), Arunachal Pradesh (4), Maharashtra (4), Andaman and Nicobar Islands (3), West Bengal (3), Karnataka (1), Tamil Nadu (1), Nagaland (1).

Phylum: ARTHROPODA
Class: CRUSTACEA
Order: DECAPODA
Family: ALPHEIDAE
Genus: *Alpheus* Fabricius, 1798

Alpheus mannarensis Purushothaman, Abhilash, Kumar & Lal. *Zootaxa*, 5026(1): 127-135, 2021

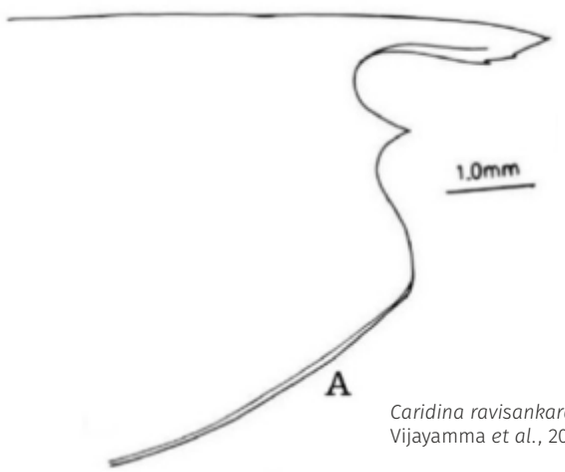
The species *Alpheus mannarensis* was described by P. Purushothman , P. Abhilash , T.T. Ajith Kumar, K. K. Lal based on a Holotype collected from Tamil Nadu, Gulf of Mannar region, Indian Ocean (08°42'N and 078°24', 15 m) and Paratypes collected from Tamil Nadu, Thoothukudi coast, Gulf of Mannar region, Indian Ocean. The type specimens have been deposited in NBFGR. The species is named after the type location, Gulf of Mannar.

Alpheus mannarensis
Purushothaman *et al.*, 2021

Family: ATYIDAE
Genus: *Caridina* H. Milne-Edwards, 1837

Caridina ravisankarani Vijayamma, Dhamorikar & Manchi. *Zootaxa*, 5057(3): 402-414, 2021

The species *Caridina ravisankarani* was described by Jayachandran Kunjuraman Vijayamma, Amruta Dhamorikar and Shirish Manchi based on a Holotype and two Paratypes collected from Andaman and Nicobar Islands, shallow pools of the cave identified as CN2 of Interview Island (12°52'51.12" N and 92°41'42.32" E). The type specimens have been deposited in the ICAR-CMFRI. The species is named in honour of the renowned ornithologist and conservation biologist Dr. Ravi Sankaran, who pioneered cave studies in the Andaman and Nicobar Islands. He had first systematically documented the caves in the Andaman and Nicobar Islands while searching for populations of the cave-dwelling Ediblenest Swiftlet, A. fuciphagus Thunberg, 1812 and his dream and motivation led to the cave faunal study initiated in the Andaman Islands today.



Caridina ravisankarani Vijayamma *et al.*, 2021

Tritodynamia bengalensis Trivedi *et al.*, 2021

Genus: *Tritodynamia* Ortmann, 1894

Tritodynamia bengalensis Trivedi, Mitra & Ng. *Zootaxa*, 4938(3): 325-330, 2021

The species *Tritodynamia bengalensis* was described by Jigneshkumar N. Trivedi, Santanu Mitra and Peter K.L. Ng based on a Holotype collected from West Bengal, Shankarpur fishing harbor. The type specimens have been deposited Zoological Survey of India, ZSI, Kolkata, India. The species name is named after the state of West Bengal in India, the type locality of the species.

Family: GECARCINUCIDAE
Genus: *Ghatiana* Pati & Sharma, 2014

Ghatiana durrelli Pati & Thackeray. *Zoosystema*, 43 (26): 627-647, 2021

The species *Ghatiana durrelli* was described by Sameer K. Pati and Tejas Thackeray based on a Holotype and six Paratypes collected from Maharashtra, Satara district, Ramban Trail, Koyna Wildlife Sanctuary (17°25'58" N and 73°42'32" E, 940 m). The type specimens have been deposited in ZSI-WRC. The species name honours British naturalist, Gerald Malcolm Durrell for his in situ and ex situ conservation efforts. The specific epithet is thus conceived as a noun in the genitive singular.

Ghatiana durrelli Pati & Thackeray, 2021

Ghatiana rouxi Pati & Thackeray. *Zoosystema*, 43 (26): 627-647, 2021

The species *Ghatiana rouxi* was described by Sameer K. Pati and Tejas Thackeray based on a Holotype and three Paratypes collected from Karnataka, Uttara Kannada district, Shirley Waterfall (14°52'55" N and 74°39'46" E, 168 m) and four Paratypes collected from different localities of Karnataka and Goa. The type specimens have been deposited in ZSI-WRC. The species is named after the Swiss zoologist, Dr Jean Roux for his contributions on the study of crabs of the Western Ghats. The species name is conceived as a noun in the genitive singular.

Ghatiana rouxi Pati & Thackeray, 2021

Sahyadriana inopinata Pati & Thackeray, 2021

Genus: *Sahyadriana* Pati & Thackeray, 2018

Sahyadriana inopinata Pati & Thackeray. *Zoosystema*, 43 (26): 627-647, 2021

The species *Sahyadriana inopinata* was described by Sameer K. Pati and Tejas Thackeray based on a Holotype and seven Paratypes collected from Maharashtra, Satara district, Dhobi Waterfall, Mahabaleshwar (17°56'13" N and 73°38'45" E, 1075 m). The type specimens have been deposited in ZSI-WRC. The species name is an adjective in the Latin nominative singular meaning unexpected, referring to the unexpected discovery of the species from the type locality of a congener, i.e., *S. triangulus*.

Sahyadriana keshari Pati & Thackeray. *Zoosystema*, 43 (26): 627-647, 2021

The species *Sahyadriana keshari* was described by Sameer K. Pati and Tejas Thackeray based on a Holotype and twelve Paratypes collected from Maharashtra, Nashik district, Bramhagiri, near Trimbak (19°54'46" N and 73°31'4" E, 1048 m). The type specimens have been deposited in ZSI-WRC. The species name, derived from the Marathi language for orange coloured, refers to live colouration of the crab. The name is used as a Latin noun in apposition.

Sahyadriana keshari Pati & Thackeray, 2021

Sahyadriana tamhini Pati & Thackeray. *Zoosystema*, 43 (26): 627-647, 2021

The species *Sahyadriana tamhini* was described by Sameer K. Pati and Tejas Thackeray based on a Holotype and two Paratypes collected from Maharashtra, Pune district, Tamhini Ghat (18°28'37" N and 73°25'1" E, 621 m) and six Paratypes collected from different localities of Pune district. The type specimens have been deposited in ZSI-WRC. The species is named after the type locality, Tamhini Ghat, a hotspot for wildlife in Maharashtra that hosts rich biodiversity and many endemic species, including that of the freshwater crabs. The species name is used as a Latin noun in apposition.

Sahyadriana tamhini Pati & Thackeray, 2021

Rajathelphusa muni
Raj *et al.*, 2021

Genus: *Rajathelphusa* Raj, Biju Kumar & Ng, 2021

Rajathelphusa muni Raj, Biju Kumar & Ng. *Zoological Studies*, 60: 14, 2021

The genus *Rajathelphusa* and the species *Rajathelphusa muni* was described by Smrithy Raj, Appukuttannair Biju Kumar and Peter K.L. Ng based on a Holotype and one Paratype collected from Kerala, Idukki district, deep burrows near to Kovilkadavu (10.261413°N and 77.183799°E). The type specimens have been deposited in DABFUK. The species is named after the saints (in Malayalam, 'muni') who used to take shelter in the dolmens (locally known as 'muniyara') in Kovilkadavu, a historic place in the Idukki district of Kerala where the new species was found. The name is used as a noun in apposition.

Rajathelphusa ala Raj, Biju Kumar & Ng. *Zoological Studies*, 60: 14, 2021

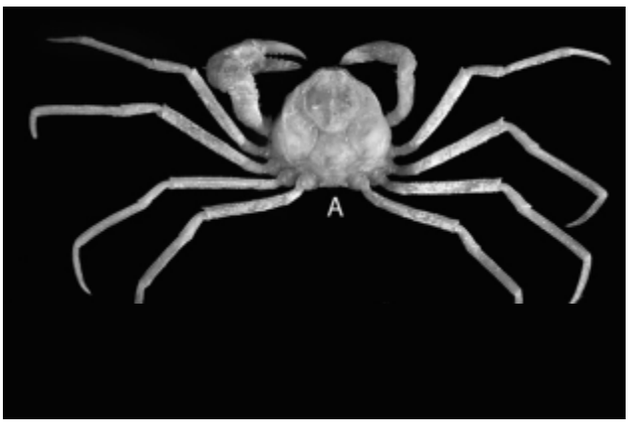
The genus *Rajathelphusa* and the species *Rajathelphusa ala* was described by Smrithy Raj, Appukuttannair Biju Kumar and Peter K.L. Ng based on a Holotype and sixteen Paratypes collected from Kerala, Idukki district, in shallow to deep burrows near Rajakumari (9.966911°N and 77.129715°E). The type specimens have been deposited in ZSI-WGRC and DABFUK. The name of the species, which lives in deep burrows, alludes to the deep rock shelters tribal people in the region used to live in, which they name as 'alas" (ala, singular). The name is used as a noun in apposition.

Rajathelphusa ala
Raj *et al.*, 2021

Family: HYMENOSOMATIDAE
Genus: *Neorhynchoplax* Holthuis, 1968

Neorhynchoplax devroyi Mitra & Ng. *Crustaceana*, 94 (11-12): 1345-1357, 2021

The species *Neorhynchoplax devroyi* was described by Santanu Mitra and Peter K.L. Ng based on a Holotype and eight Paratypes collected from West Bengal, 24 Parganas (N) district, Hooghly, Barrackpore. The type specimens have been deposited in ZSI, Kolkata and DABFUK. The species is named after Malay Dev Roy, who during his time as curator of Crustacea in ZSI, made substantial contributions to Indian carcinology. The name consequently is to be treated as a noun in the genitivesingular.



Neorhynchoplax devroyi
Mitra & Ng et al., 2021

Macrobrachium ramae Das, Pahari & Bhattacharya. *Zootaxa*, 4952(3): 540-550, 2021

The species *Macrobrachium ramae* was described by Mitali Das, Priti Ranjan Pahari and Tanmay Bhattacharya based on a Holotype, Allotype and four Paratypes collected from West Bengal, Rupnarayana river, Charsankarara, Tamluk (87°55'17.0004''E and 22°17'25.0008''N). The type specimens have been deposited in the faunal depository of the Zoological Survey of India, Kolkata, West Bengal, India. This new species is named in loving memory of the grandmother of the corresponding author (MD), late Rama Sengupta, who was a constant inspiration to her.The species name is a noun in the genitive singular.

Family: PALAEMONIDAE
Genus: *Macrobrachium* Spence Bate, 1868

Macrobrachium ramae Das *et al.*, 2021

Abormon capillosum
Mitra *et al.*, 2021

Family: POTAMIDAE
Genus: *Abormon* Mitra, Pati & Ng, 2021

Abormon capillosum Mitra, Pati & Ng. *Nauplius*, 29: e2021014, 2021

The species *Abormon capillosum* was described by Santanu Mitra, Sameer K. Pati and Peter K.L. Ng based on a Holotype and two Paratypes collected from Arunachal Pradesh, Upper Siang District, Tulung Village, near Tutting, Abor Hills (29.006°N and 94.897°E) and eighteen Paratypes collected from different localities of Upper Siang District, Arunachal Pradesh. The type specimens have been deposited in ZSIK-NZC. The species name is derived from the Latin '*capillosus*' for very hairy, alluding to the dense setae covering the carapace and pereiopods of the crab.

Abormon praecalvum Mitra, Pati & Ng. *Nauplius*, 29: e2021014, 2021

The species *Abormon praecalvum* was described by Santanu Mitra, Sameer K. Pati and Peter K.L. Ng based on a Holotype collected from Arunachal Pradesh, Upper Siang District, Dambung Stream, approximately 1.7 km from Hawa Camp, Mouling National Park, Abor Hills (28.686°N and 94.969°E) and eighteen Paratypes collected from different localities of Upper Siang District, Arunachal Pradesh. The type specimens have been deposited in ZSI-WRC. The species name is derived from the Latin '*praecalvus*' for 'becoming bald', referring to the presence of only a few scattered setae on the carapace and pereiopods of the crab.

Abormon praecalvum Mitra *et al.*, 2021

Potamiscus chizami Pati *et al.*, 2021

Genus: *Potamiscus* Alcock (1909)

Potamiscus chizami Pati. *Nauplius*, 29: e2021006, 2021

The species *Potamiscus chizami* was described by Sameer K. Pati based on a Holotype and two Paratypes collected from Arunachal Pradesh, Upper Siang District, Tulung Village, near Tutting, Abor Hills (29.006°N and 94.897°E, 1424 m) and eighteen additional materials collected from different localities of Upper Siang District, Arunachal Pradesh. The type specimens have been deposited in ZSIK-NZC. The species name is derived from the Latin '*capillosus*' for very hairy, alluding to the dense setae covering the carapace and pereiopods of the crab.

Potamiscus mima Pati. *Nauplius*, 29: e2021006, 2021

The species *Potamiscus mima* was described by Sameer K. Pati based on a Holotype, four Paratypes and thirteen additional materials collected from Nagaland, Kohima district, Mima (25.591°N and 94.110°E, 2105 m). The type specimens have been deposited in ZSIK-NZC. The species is named after the type locality, Mima, a large village in the Kohima District of Nagaland State, India. Used as a noun in apposition.

Potamiscus mima Pati, 2021

Genus: *Teretamon* Yeo and Ng, 2007

Teretamon kapota Mitra & Pati. *Rec. zool. Surv. India*, 121(1): 01-09, 2021

The species *Teretamon kapota* was described by Santanu Mitra and Sameer Kumar Pati based on a Holotype collected from Arunachal Pradesh, East Siang district, small hill stream connected to Sibyia River, near Siluk village, ca. 30 km north east of Pasighat (28.175°N and 95.470°E, 336 m) and one Paratype collected from Arunachal Pradesh, Lower Dibang Valley district, Mehao Wildlife Sanctuary, drainage between Injino River and Koronu (28.058°N and 95.935°E, 290 m). The type specimens have been deposited in ZSIK and ZSI-WRC. The species epithet used here as a Latin noun in apposition, 'kapota', the name in Sanskrit for pigeon. The terminal segment of the male first gonopod of species most resembles a pigeon's head.

Teretamon kapota
Mitra & Pati, 2021

Order: ISOPODA
Family: CYMOTHOIDAE
Genus: *Anilocra* Leach, 1818

Anilocra grandmaae Aneesh, Hadfield, Smit & Biju Kumar. *International Journal for Parasitology: Parasites and Wildlife*, 14 (2021): 321-328.

The species *Anilocra grandmaae* was described by Panakkool Thamban Aneesh, Kerry A. Hadfield, Nico J. Smit and Appukuttannair Biju Kumar based on a Holotype and three Paratypes collected from Kerala, Ponnani (10'46'57.9'' and 75'54'32''E) and four Paratypes collected from different localities of Kerala coast and Tamil Nadu. The type specimens have been deposited in ZSI-WGRC. The species name is derived from 'Grandma' in honour of the recently deceased grandmother of PTA, as a tribute to her memory. She always supported him in pursuing his education as well as his research career. This species is dedicated to all grandmothers.

Anilocra grandmaae
Aneesh *et al.*, 2021

Genus: *Lobothorax* Bleeker, 1857

Lobothorax nicosmiti Aneesh, Bruce & Kumar. *Zoological Studies*, 60: 13, 2021

The species *Lobothorax nicosmiti* was described by Panakkool Thamban Aneesh, Niel L. Bruce, Appukuttannair Biju Kumar, M. Raj Bincy and T. Mohanan Sreenath based on a Holotype and one Paratype collected from Kerala, Munambam (10.1667°N, 76.1833°E). The type specimens have been deposited in ZSI-WGRC. This species is named in honour of Dr. Nico J. Smit, Professor and Director, Unit for Environmental Sciences and Management, Water Research Group (Ecology), North West University, South Africa, recognising his contribution to knowledge of parasitology and marine isopoda of southern Africa in his role as aquatic biologist, parasitologist, taxonomist and ecologist in South Africa.

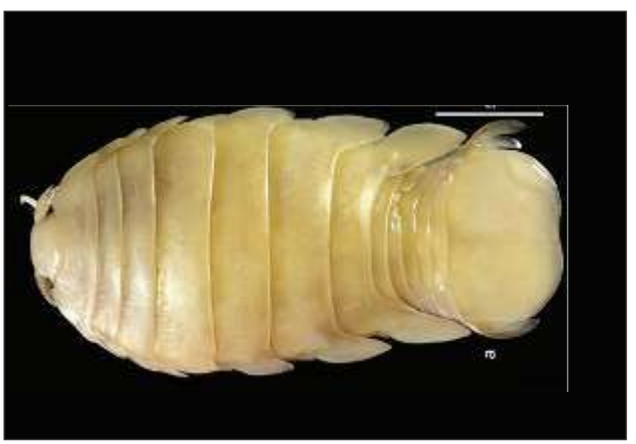
Lobothorax nicosmiti Aneesh *et al.*, 2021

Genus: *Norileca* Bruce, 1990

Norileca hathai Aneesh, Nashad & Kumar. *Marine Biology Research*, https://doi.org/10.1080/17451000.2021.2011321, 2021

The species *Norileca hathai* was described by Musaliyarakam Nashad, Panakkool Thamban Aneesh, Appukuttannair Biju Kumar and Kinattumkara Bineesh based on a Holotype and two Paratypes collected from Andaman, South Andaman of the Indian EEZ, off Burmanallah (11°31'8''N and 92°15'8''E). The type specimens have been deposited in ZSI-WGRC. This species is named in honour of Dr A. A. Mohamed Hatha, Professor and Head, Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science and Technology, Kerala, India, the mentor of the first author (MN).

Norileca hathai Aneesh *et al.*, 2021



Renocila trillesi Aneesh *et al.*, 2021

Genus: *Renocila* Miers, 1880

Renocila trillesi Aneesh, Nashad & Bijukumar, *Journal of Natural History*, https://doi.org/10.1080/00222933.2021.2019341

The species *Renocila trillesi* was described by Panakkool Thamban Aneesh and Appukuttannair Biju Kumar based on a Holotype and one Paratype collected off Junglighat, South Andaman the type specimens have been deposited in ZSI-WGRC. The species name is in honour of Prof. Jean-Paul Trilles, former Professor, University of Montpellier, Montpellier, France, a well-known fish parasitologist.

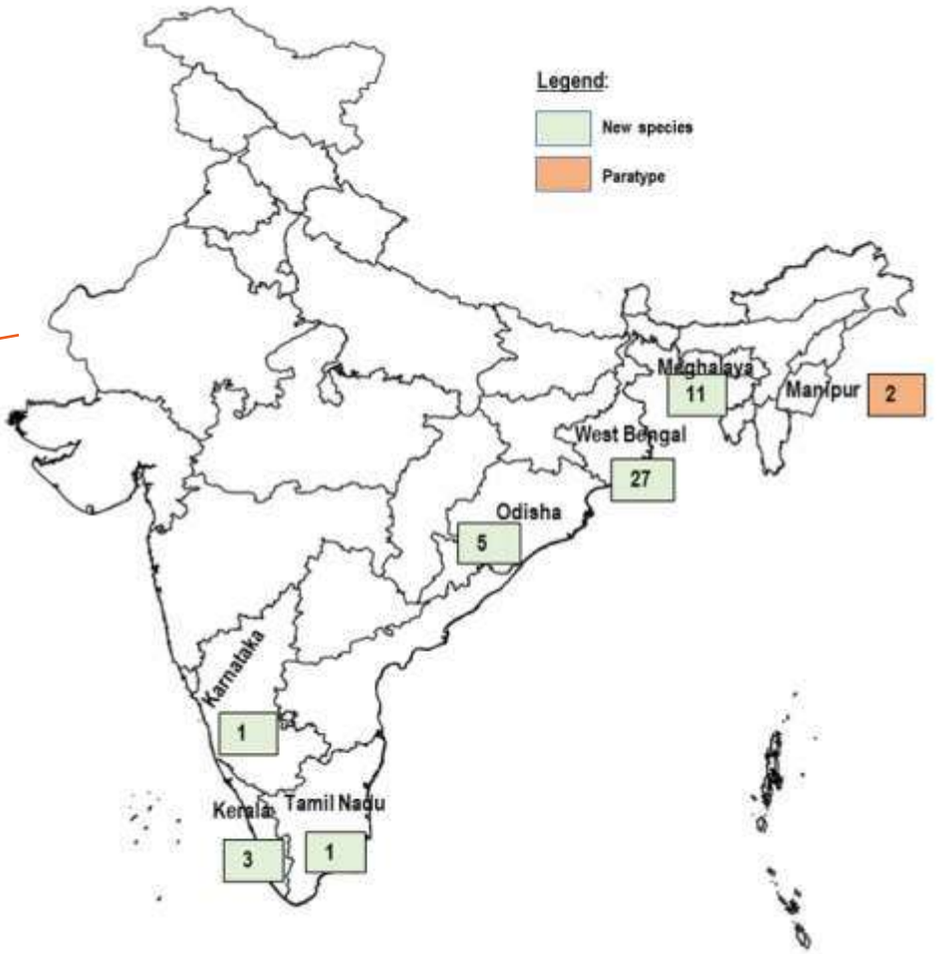
Class: MAXILLOPODA
Order: SIPHONOSTOMATOIDA
Family: PENNELLIDAE
Genus: *Lernaeenicus* Lesueur, 1824

Lernaeenicus megalaspis Aneesh, Helna, Biju Kumar & Maran. *Marine Biology Research*, 17(1): 1-11, 2021

The species *Lernaeenicus megalaspis* was described by Panakkool Thamban Aneesh, Ameri Kottarathil Helna, Appukuttannair Biju Kumar and Balu Alagar Venmathi Maran based on a Holotype and three Paratypes collected from Kerala, Kollam district, Arabian Sea, off Neendakara. The type specimens have been deposited in ZSI-WGRC. The species name is derived from the genus name of the type host *Megalaspis cordyla* (Linnaeus); noun in apposition.

Lernaeenicus megalaspis Aneesh *et al.*, 2021

3.8 ARACHNIDA



Arachnida is a class in the subphylum Chelicerata of the phylum Arthropoda. Arachnids are one of the longest-surviving and diverse groups of organisms. They are mostly terrestrial invertebrates and together with insects are the most species-rich, abundant and widely dispersed terrestrial arthropods. The class Arachnida comprises eleven orders viz. Acari, Amblypygi, Araneae, Opiliones, Palpigradi, Pseudoscorpiones, Scorpiones, Ricinulei, Schizomida, Solifugae and Uropygi. Acari is the most diverse and abundant arachnid order. The majority of arachnids play an important role in human's environment, health and agriculture. Many mite species are intermediate hosts of diseases transmissible to humans, domesticated animals and crops. They play an important role in agriculture as they increase the soil fertility, many species are plant feeders and with predatory habit used as biocontrol agent. Few mite species are important indicators of environmental pollution. Ticks exceed all other arthropods, excluding mosquitoes, in the number of diseases they transmit to humans and other animals. Spiders have a critical role as predators in regulating other arthropod populations. Spiders are important as biological control agents in agroecosystems, providers of silk for materials science and suppliers of venom for both medical and insecticide research. They can act as good ecological indicators. Apart from having ecological importance, scorpions are economically as well as medically important animals. Scorpions are consumed as food; they are kept as live pets and recent studies have proven to have anti-carcinogenic properties. In traditional beliefs, scorpions have also some medical values. Global diversity (Acari+ Araneae+ Scorpiones) is 107687, while diversity of these groups in India comprises 4836 species, of which 2426 species are endemic. Forty- eight new species belonging to Arachnida have been described from India this year with the highest number form West Bengal (27), followed by Meghalaya (11), Orissa (5), Kerala (3), Tamil Nadu (1) and Karnataka (1). Paratype of two new species are also found from Manipur.

Phylum: ARTHROPODA
Class: ARACHNIDA
Order: ARANEAE
Family: GNAPHOSIDAE
Genus: *Gaviphosa* Sankaran & Caleb, 2021

Gaviphosa kera Sankaran & Caleb. *Zootaxa*, 5040(4): 539-564, 2021

The genus *Gaviphosa* and the species *Gaviphosa kera* was described by Pradeep M. Sankaran and John T.D. Caleb based on a Holotype and one Paratype collected from Kerala, Pathanamthitta, Gavi (9°26'09.07''N and 77°09'56.78''E, 1192 m). The type specimens have been deposited in ADSH, NZC-ZSI. The genus name refers to the name of the type locality of the new species (Gavi), in combination with the terminal '-*phosa*' taken from *Gnaphosa* Latreille, 1804, which is the type species of the family. The gender is feminine. 'kera' in Sanskrit means 'coconut tree' referring to the common name, 'land of coconut trees' of the Kerala State, where the type locality of the new species is located.

Gaviphosa kera Sankaran & Caleb, 2021

Oxyopes dinendrai Sen & Sureshan, 2021

Family: OXYOPIDAE
Genus: *Oxyopes* Latreille, 1804

Oxyopes dinendrai Sen & Sureshan. *Indian Journal of Entomology*, 83(2): 174-176, 2021

The species *Oxyopes dinendrai* was described by Souvik Sen and Pavittu M Sureshan based on a Holotype collected from Kerala, Periya, Waynad. The type specimen has been deposited in ZSI-WGRC. The species is named after Prof. Dinendra Raychaudhuri, Dept. of Agricultural Biotechnology, IRDM Faculty Center, Ramakrishna Mission Vivekananda University, Narendrapur, Kolkata for the valuable contribution he has rendered to Indian arachnology.

Oxyopes scapeus Sen & Sureshan. *Indian Journal of Entomology*, 83(2): 174-176, 2021

The species *Oxyopes scapeus* was described by Souvik Sen and Pavittu M Sureshan based on a Holotype collected from Kerala, Periya, Waynad. The type specimen has been deposited in ZSI-WGRC. The species name refers to the long epigynal scape of female.

Oxyopes scapeus Sen & Sureshan, 2021

Family: SALTICIDAE
Genus: *Maripanthus* Maddison, 2020

Maripanthus gloria Caleb. *Revue suisse de Zoologie*, 128(1): 199-205, 2021

The species *Maripanthus gloria* was described by John T.D. Caleb, Clement Francis and Vijay Krishna Bhat based on a Holotype and two Paratypes collected from Karnataka, Bengaluru, Chelekere Lake (13.025689°N and 77.644119°E, 887 m). The type specimen has been deposited in National Zoological Collection, Southern Regional Centre of the Zoological Survey of India (ZSIC) and NCBS. The species is dedicated to Gloria, the daughter of the second author, for her great enthusiasm and interest during fi eld work. The species epithet is a name in apposition.

Maripanthus gloria Caleb, 2021

Family: SEGESTRIIDAE
Genus: *Indoseges* Choudhruy, Siliwal, Das & Giroti, 2021

Indoseges chilika Choudhruy, Siliwal, Das & Giroti. *Zootaxa*, 4963(1): 091-114, 2021

The species *Indoseges chilika* was described by Sudhir Ranjan Choudhury, Manju Siliwal, Sanjay Keshari Das and André Marsola Giroti based on a Holotype and three Paratypes collected from Odisha, Ganjam district, Barkud Island (19°33'22.6" N and 85°08'47.8" E, 05 m). The type specimens have been deposited in IPUM. The species epithet is a noun in apposition, referring to the Chilika lake, where the type locality, Barkud Island is located.

Indoseges chilika Choudhruy *et al.*, 2021

Indoseges malkhangiri Choudhruy, Siliwal, Das & Giroti. *Zootaxa*, 4963(1): 091-114, 2021

The genus Indoseges and the species *Indoseges malkhangiri* was described by Sudhir Ranjan Choudhury, Manju Siliwal, Sanjay Keshari Das and André Marsola Giroti based on a Holotype and eight Paratypes collected from Odisha, Malkangiri district, Malkangiri town (18°21'46.3" N and 81°54' 43.8" E, 235 m). The type specimens have been deposited in IPUM. The generic name is a combination of two words, 'Indo' and 'seges', Indo, relates to India from where the new genus is discovered and seges, refers to 'Segestriidae', the family name to which the new genus belongs. The species epithet is a noun in apposition, referring to the type locality, Malkangiri in Odisha.

Indoseges malkhangiri Choudhruy *et al.*, 2021

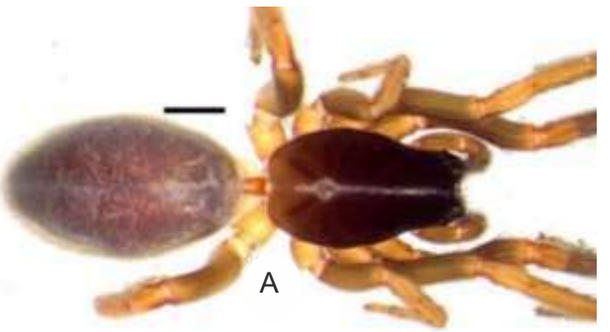
Indoseges narayani Choudhruy, Siliwal, Das & Giroti. *Zootaxa*, 4963(1): 091-114, 2021

The species *Indoseges narayani* was described by Sudhir Ranjan Choudhury, Manju Siliwal, Sanjay Keshari Das and André Marsola Giroti based on a Holotype and two Paratypes collected from Odisha, Ganjam district, Narayani (19°41'52.3" N and 85°09'13.5" E, 138 m). The type specimens have been deposited in IPUM. The species epithet is a noun in apposition, referring to the type locality Narayani.

Indoseges narayani Choudhruy *et al.*, 2021

Indoseges satkosia Choudhruy, Siliwal, Das & Giroti. *Zootaxa*, 4963(1): 091-114, 2021

The species *Indoseges satkosia* was described by Sudhir Ranjan Choudhury, Manju Siliwal, Sanjay Keshari Das and André Marsola Giroti based on a Holotype and two Paratypes collected from Odisha, Anugul district, Tuluka road (20°36'19.9" N and 84°57'22.0" E, 178 m). The type specimens have been deposited in IPUM. The species epithet is a noun in apposition, referring to the type locality, Satkosia.



Indoseges satkosia Choudhruy *et al.*, 2021

Indoseges sushildutta Choudhruy *et al.*, 2021

Indoseges sushildutta Choudhruy, Siliwal, Das & Giroti. *Zootaxa*, 4963(1): 091-114, 2021

The species *Indoseges sushildutta* was described by Sudhir Ranjan Choudhury, Manju Siliwal, Sanjay Keshari Das and André Marsola Giroti based on a Holotype and eight Paratypes collected from Odisha, Malkangiri district, Govindpali ghati (18°36'34.3" N and 82°18'12.3" E, 248 m). The type specimens have been deposited in IPUM. The species epithet is a noun in apposition, in honor of renowned herpetologist, Prof. Sushil Kumar Dutta for encouraging and supporting our studies on spiders in Odisha.

Order: MESOSTIGMATA
Family: PHYTOSEIIDAE
Genus: *Amblyseiulella* Muma, 1961

Amblyseiulella tibouchina Molla & Karmakar. *Zootaxa*, 5057(3): 364-384, 2021

The species *Amblyseiulella tibouchina* was described by Md. Iftiar Hossain Molla and Krishna Karmakar based on a Holotype and seven Paratypes collected from West Bengal, Kalimpong, Rishyap (27°10'2" N and 88°39'29" E, 2097 m). The type specimens have been deposited in NZC and BCKV. The specific name *tibouchina* refers to the type host plant, *Tibouchina urvilleana* from where the new species were collected.

Amblyseiulella tibouchina Molla & Karmakar, 2021

Amblyseius azaliae Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Amblyseius azaliae* was described by Anamika Kar and Krishna Karmakar based on a Holotype and two Paratypes collected from Meghalaya, Ri-Bhoi, Upper Shillong (25°32'09"N and 91°49'29"E, 1589 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *azaliae* refers to the host plant azalea (*Rhododendron* sp.) of the new species.

Amblyseius azaliae Kar & Karmakar, 2021

Amblyseius meghalayensis Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Amblyseius meghalayensis* was described by Anamika Kar and Krishna Karmakar based on a Holotype and three Paratypes collected from Meghalaya, West Jaintia Hills, Jaintia Hills (25°20'31"N and 91°53'19"E, 1496 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *meghalayensis* refers to the type locality Meghalaya of the new species.

Amblyseius meghalayensis Kar & Karmakar, 2021

Amblyseius rishyapensis Molla & Karmakar. *Zootaxa*, 5057(3): 364-384, 2021

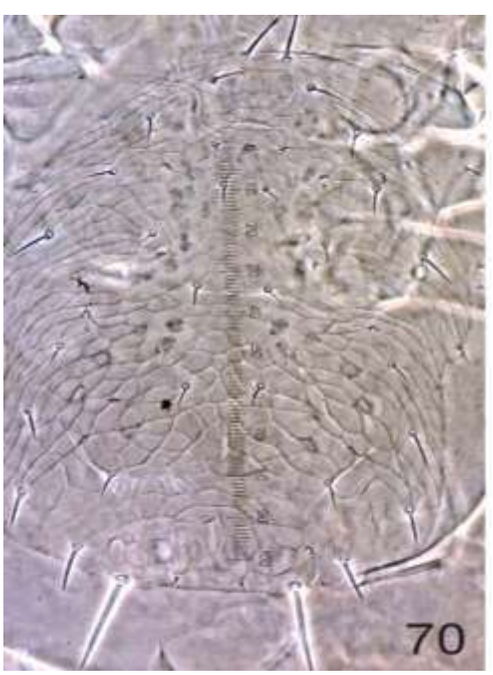
The species *Amblyseius rishyapensis* was described by Md. Iftiar Hossain Molla and Krishna Karmakar based on a Holotype and five Paratypes collected from West Bengal, Kalimpong, Rishyap (27°10'2"N and 88°39'29"E, 2097 m) and one Paratype collected from West Bengal, Kalimpong, Ramdhura (27°7'17"N and 88°34'1"E, 1514 m). The type specimens have been deposited in NZC and BCKV. The specific name *rishyapensis* refers to the type locality "Rishyap" a village of Kalimpong district in the state of West Bengal.

Amblyseius rishyapensis Molla & Karmakar, 2021

Genus: *Euseius* De Leon, 1967

Euseius dwakiensis Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Euseius dwakiensis* was described by Anamika Kar and Krishna Karmakar based on a Holotype and five Paratypes collected from Meghalaya, West Jaintia Hills, Dwaki (25°131"N and 91°58'16"E, 520 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *dwakiensis* refers to the type locality "Dwaki" from where this new species was collected.



Euseius dwakiensis Kar & Karmakar, 2021

Euseius fascae Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Euseius fascae* was described by Anamika Kar and Krishna Karmakar based on a Holotype and twelve Paratypes collected from Meghalaya, Ri-Bhoi, Barapani (25°40'52"N and 91°54'41"E, 973 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *fascae* refers to the unique annuli present at the basal part of calyx of the newspecies.

Euseius fascae Kar & Karmakar, 2021

Genus: *Okiseius* Ehara, 1967

Okiseius jainticus Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Okiseius jainticus* was described by Anamika Kar and Krishna Karmakar based on a Holotype collected from Meghalaya, West Jaintia Hills (25°21'44"N and 91°52' 40"E, 1933 m) and six Paratypes collected from Meghalaya, East Khasi Hills, Mawkdok (25°24'30"N and 91°46'44"E, 1806 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *jainticus* refers to the Jaintia Hills, the habitat of the new species.

Okiseius jainticus Kar & Karmakar, 2021

Okiseius ramdhuracus Molla & Karmakar. *Zootaxa*, 5057(3): 364-384, 2021

The species *Okiseius ramdhuracus* was described by Md. Iftiar Hossain Molla and Krishna Karmakar based on a Holotype and three Paratypes collected from West Bengal, Kalimpong, Ramdhura (27°7'17"N and 88°34'1"E, 1514 m). The type specimens have been deposited in NZC and BCKV. The specific name *ramdhuracus* refers to the type locality of this species "Ramdhura" a village of the Kalimpong district in the state of West Bengal.

Okiseius ramdhuracus Molla & Karmakar, 2021

Okiseius roseus Molla & Karmakar. *Zootaxa*, 5057(3): 364-384, 2021

The species *Okiseius roseus* was described by Md. Iftiar Hossain Molla and Krishna Karmakar based on a Holotype and three Paratypes collected from West Bengal, Kalimpong, Daragaon (27°2'17"N and 88°41'43"E, 1140 m). The type specimens have been deposited in NZC and BCKV. The specific name *roseus* refers to the type host plant, Rosa chinensis from where the new species were collected.

Okiseius roseus Molla & Karmakar, 2021

Okiseius unisetatus Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Okiseius unisetatus* was described by Anamika Kar and Krishna Karmakar based on a Holotype and two Paratypes collected from Meghalaya, West Jaintia Hills, Dwaki (25°13'1"N and 91°58'16"E, 520 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *unisetatus* refers to the uniform serration pattern of dorsal setae of new species.

Okiseius unisetatus Kar & Karmakar, 2021

Phytoseius aonlae Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

Phytoseius aonlae Kar & Karmakar, 2021

The species *Phytoseius aonlae* was described by Anamika Kar and Krishna Karmakar based on a Holotype and two Paratypes collected from Meghalaya, Dwaki (25°13'1"N and 91°58'16"E, 520 m) and five Paratypes collected from Manipur, Bishnupur, Keibul Lamjao National Park (24°28'24"N and 93°49'1"E, 781 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *aonlae* refers to the host plant from where the species was collected.

Phytoseius clavus Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

Phytoseius clavus Kar & Karmakar, 2021

The species *Phytoseius clavus* was described by Anamika Kar and Krishna Karmakar based on a Holotype and two Paratypes collected from Meghalaya, Upper Shillong (25°32'9"N and 91°49'29"E, 1589 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *clavus* refers to the "pin-shaped" prodorsal setae of this new species.

Phytoseius mauritiana Bhowmik & Karmakar. *Zootaxa*, 4975(3): 401-450, 2021

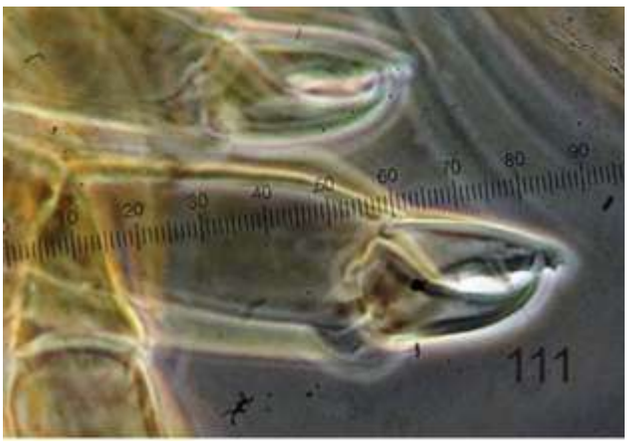
Phytoseius mauritiana Bhowmik & Karmakar, 2021

The species *Phytoseius mauritiana* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and five Paratypes collected from West Bengal, Kalyani, (22° 58'30.30"N and 88°26'4.23"E, 11 m). The type specimens have been deposited in NZC, Kolkata. The specific name *mauritiana* refers to the plant *Ziziphus mauritiana* Lam. from where the type specimens were collected.

Genus: *Proprioseiopsis* Muma, 1961

Proprioseiopsis amari Bhowmik & Karmakar. *Zootaxa*, 4975(3): 401-450, 2021

The species *Proprioseiopsis amari* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and one Paratype collected from West Bengal, Bankura, Jhilimili (22°49'0.1" N and 86°37'0.0" E, 228 m). The type specimens have been deposited in NZC, Kolkata. The specific name *amari* is dedicated to the late Professor Amar Kumar Somchoudhury, who has contributed significantly on different aspects of mite pests management during his period at Bidhan Chandra Krishi Viswavidyalaya.



Proprioseiopsis amari
Bhowmik & Karmakar, 2021

Typhlodromips cinchonai
Molla & Karmakar, 2021

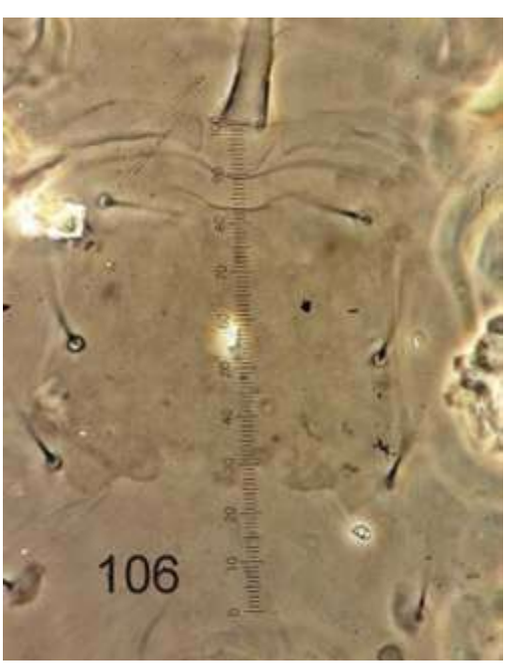
Genus: *Typhlodromips* De Leon, 1965

Typhlodromips cinchonai Molla & Karmakar. *Zootaxa*, 5057(3): 364-384, 2021

The species *Typhlodromips cinchonai* was described by Md. Iftiar Hossain Molla and Krishna Karmakar based on a Holotype and nine Paratypes collected from West Bengal, Kalimpong, Ramdhura (27°7'17"N and 88°34'1"E, 1514 m) and six paratypes collected from West Bengal, Kalimpong, Rishyap (27°10'2"N and 88°39'29"E, 2097 m). The type specimens have been deposited in NZC and BCKV. The specific name *cinchonai* refers to the type host plant, *Cinchona officinalis* (L.) (a medicinal plant from which quinine is prepared) from where the new species were collected.

Typhlodromips jhilimiliensis Bhowmik & Karmakar. *Zootaxa*, 4975(3): 401-450, 2021

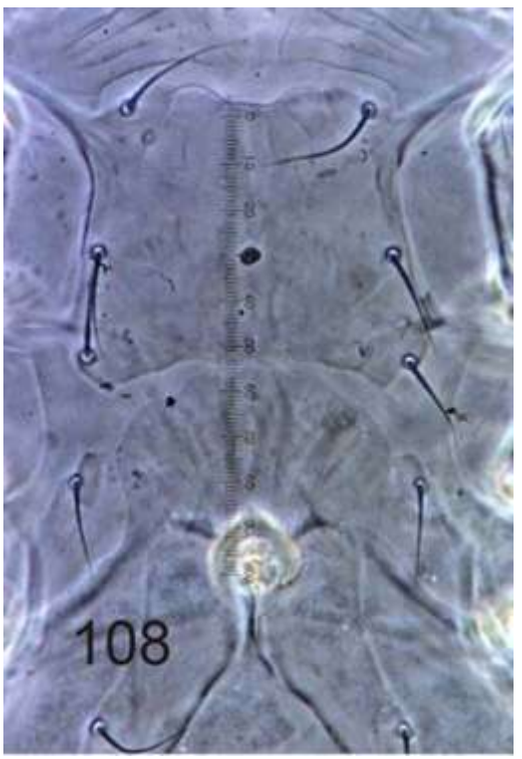
The species *Typhlodromips jhilimiliensis* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and two Paratypes collected from West Bengal, Bankura, Jhilimili (22°49'0.12"N and 86°37'0.12"E, 228 m). The type specimens have been deposited in NZC, Kolkata. The specific name *jhilmiliensis* refers to the locality from where the holotype of this species was collected.



Typhlodromips jhilimiliensis
Bhowmik & Karmakar, 2021

Typhlodromips neosyzygii Bhowmik & Karmakar. *Zootaxa*, 4975(3): 401-450, 2021

The species *Typhlodromips neosyzygii* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and one Paratype collected from West Bengal, Dakshin Dinajpur, Patiram (25°20'5.56"N and 88°45'41.11"E, 31 m). The type specimens have been deposited in NZC, Kolkata. The specific name is *neosyzygii* is given because the present species is very close to *T. syzygii*.



Typhlodromips neosyzygii Bhowmik & Karmakar, 2021

Genus: *Typhlodromus* Scheuten, 1857

Typhlodromus (Anthoseius) adhatoda Karmakar, Molla, Kar & Bala. *Zootaxa*, 4949(3): 541-556, 2021

The species *Typhlodromus (Anthoseius) adhatoda* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and five Paratypes collected from West Bengal, Birbhum, Rasulpur (23°59'54" N and 87°44'46" E, 39 m). The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific name adhatoda refers to the type host plant, Justicia adatoda from where the new species were collected.

Typhlodromus (Anthoseius) adhatoda Karmakar *et al.*, 2021

Typhlodromus (Anthoseius) barapanicus Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

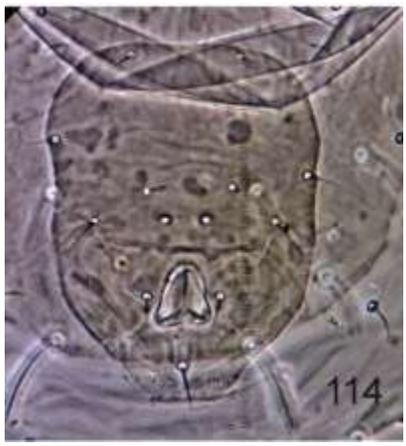
The species *Typhlodromus (Anthoseius) barapanicus* was described by Anamika Kar and Krishna Karmakar based on a Holotype and three Paratypes collected from Meghalaya, Barapani (25°40'52"N and 91°54'41"E, 973 m) and two Paratypes collected from Manipur, from Loktak (24°33'1.0"N and 93°47'20"E, 768 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *barapanicus* refers to the type locality "Barapani" of Meghalaya from wherethis new species was collected.

Typhlodromus (Anthoseius) barapanicus Kar & Karmakar, 2021

Typhlodromus (Anthoseius) bengalensis Karmakar, Molla, Kar & Bala. *Zootaxa*, 4949(3): 541-556, 2021

The species *Typhlodromus (Anthoseius) bengalensis* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and six Paratypes collected from West Bengal, Hooghly, Akna (22°58'48" N and 88°20'46" E, 11 m). The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific name *bengalensis* refers to the host plant species *Ficus bengalensis* from where this new species was collected.

Typhlodromus (Anthoseius) bengalensis Karmakar *et al.*, 2021



Typhlodromus (Anthoseius) bolpurensis Bhowmik & Karmakar, 2021

Typhlodromus (Anthoseius) bolpurensis Bhowmik & Karmakar. Zootaxa, 4975(3): 401-450, 2021

The species *Typhlodromus (Anthoseius) bolpurensis* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and three Paratypes collected from West Bengal, Birbhum, Bolpur, Surul (23°40'13.04" N and 87°39'25.03" E, 58 m). The type specimens have been deposited in NZC, Kolkata. The specific name *bolpurensis* refers to the locality, Bolpur in the Birbum district of West Bengal and is famous for Viswavarati University from where the type of this species was collected.

Typhlodromus (Anthoseius) bulbosis Karmakar, Molla, Kar & Bala. *Zootaxa*, 4949(3): 541-556, 2021

The species *Typhlodromus (Anthoseius) bulbosis* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and five Paratypes collected from West Bengal, Hooghly, Akna (22°58'48"N and 88°20'46"E, 11 m). The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific name *bulbosis* refers to the bulbous tip of dorsal shield and leg setae of the new species.

Typhlodromus (Anthoseius) bulbosis Karmakar *et al.*, 2021

Typhlodromus (Anthoseius) campana Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Typhlodromus (Anthoseius) campana* was described by Anamika Kar and Krishna Karmakar based on a Holotype and two Paratypes collected from Meghalaya, East Khasi Hills, Mawkdok (25°24'30"N and 91°46'44"E, 1806 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *campana* refers to the unique bell-shaped spermatheca of the new species.

Typhlodromus (Anthoseius) campana Kar & Karmakar, 2021

Typhlodromus (Anthoseius) cherrapunjiensis Kar & Karmakar. *Zootaxa*, 5068(3): 301-354, 2021

The species *Typhlodromus (Anthoseius) cherrapunjiensis* was described by Anamika Kar and Krishna Karmakar based on a Holotype and five Paratypes collected from Meghalaya, East Khasi Hills, Cherrapunji (25°24'30"N and 91°46'44"E, 1806 m). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata and Acarological laboratory, Department of Entomology, BCKV, Mohanpur, Nadia, West Bengal, India. The specific name *cherrapunjiensis* refers to the type locality of the new species.

Typhlodromus (Anthoseius) cherrapunjiensis Kar & Karmakar, 2021

Typhlodromus (Anthoseius) sagaricus Karmakar, Molla, Kar & Bala. *Zootaxa*, 4949(3): 541-556, 2021

The species *Typhlodromus (Anthoseius) sagaricus* was described by Sagarika Bhowmik and Krishna Karmakar based on a Holotype and five Paratypes collected from West Bengal, South 24 Parganas, Sagar Island (21°43'29.1" N and 88°07'14.4" E, 7 m). The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific name sagaricus refers to the type locality "Sagar Island" from where this species was collected.

Typhlodromus (Anthoseius) sagaricus Karmakar *et al.*, 2021

Order: PSEUDOSCORPIONIDA
Family: STERNOPHORIDAE
Genus: *Afrosternophorus* Beier, 1967

Afrosternophorus longus Mathew & Joseph. *International Journal of Entomology Research*, 6(3): 161-164, 2021

The species *Afrosternophorus longus* was described by Aneesh V. Mathew and Mathew M. Joseph based on a Holotype and twenty-nine Paratypes collected from Tamil Nadu, Yercaud, Kanavaipudur (11°54'44" N and 78°11'1" E, 490 m). The type specimens have been deposited in ADSH. The specific epithet is a Latin adjective and refers to the longest pedipalp of the known species (*longus* = long).

Afrosternophorus longus Mathew & Joseph, 2021

Order: TROMBIDIFORMES
Family: TARSONEMIDAE
Genus: *Bongotarsonemus* Mondal & Karmakar, 2021

Bongotarsonemus bicornus Mondal & Karmakar. *Zootaxa*, 5072(6): 575-591, 2021

The genus *Bongotarsonemus* and the species *Bongotarsonemus bicornus* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and nine Paratypes collected from West Bengal, Darjeeling, Rock Garden (27°01'32" N and 88°14'16" E). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata. The species name bicornus is derived from two Latin words viz. '*bi*' meaning two and '*cornu*' meaning horn like projection referring the pair of sclerotized anterior prodorsal horns characteristic of this species.

Bongotarsonemus bicornus Mondal & Karmakar, 2021

Bongotarsonemus unicornus Mondal & Karmakar. *Zootaxa*, 5072(6): 575-591, 2021

The genus *Bongotarsonemus* and the species *Bongotarsonemus unicornus* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and fifteen Paratypes collected from West Bengal, Darjeeling, Rock Garden (27°01'32"N and 88°14'16"E). The type specimens have been deposited in NZC, Zoological Survey of India, Kolkata. The species name *unicornus* is derived from two Latin words viz. 'uni' meaning one and '*cornu*' meaning hornlike projection referring to single sclerotized anterior prodorsal horn characteristic of the females of this species.

Bongotarsonemus unicornus Mondal & Karmakar, 2021

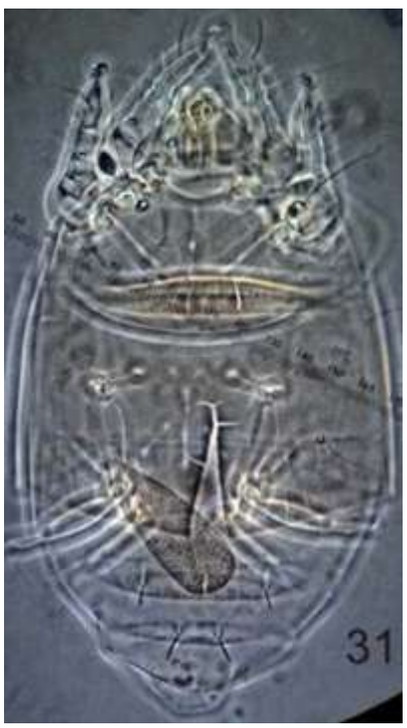
Genus: *Floridotarsonemus* Attiah, 1970

Floridotarsonemus kanthali Karmakar & Mondal. *Systematic & Applied Acarology*, 26(6): 1109-1125, 2021

The species *Floridotarsonemus kanthali* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and twelve Paratypes collected from West Bengal, Mondouri Farm of BCKV (22°56'9"N and 88°30'26"E, 8 m). The type specimen has been deposited in NZC, BCKV and National Pusa Collection, Indian Agricultural Research Institute, New Delhi. The specific epithet *kanthali* is derived from Bengali word kathal which refers to the host plant of the type specimens, Jackfruit, *Artocarpus heterophyllus* (Moraceae).

Floridotarsonemus kanthali Karmakar & Mondal, 2021

Floridotarsonemus kukri Karmakar & Mondal. *Systematic & Applied Acarology*, 26(6): 1109-1125, 2021

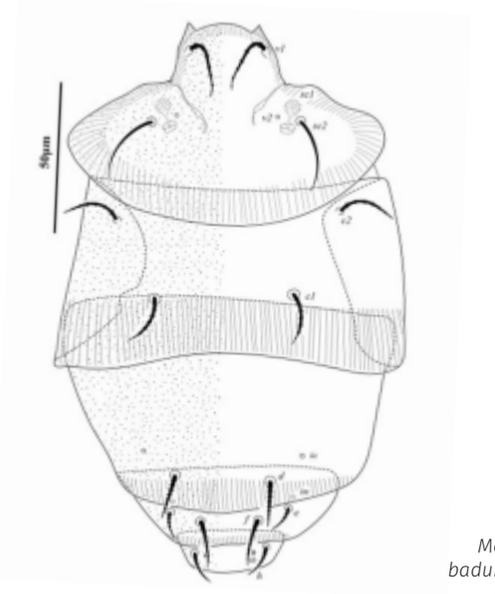


Floridotarsonemus kukri Karmakar & Mondal, 2021

The species *Floridotarsonemus kukri* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and ten Paratypes collected from West Bengal, Kalimpong district, Rishyap village (27°06'26" N and 88°39'08" E, 2080 m) and fourteen Paratypes collected from different localities of Darjeeling and Kalimpong distict, West Bengal. The type specimen has been deposited in NZC, BCKV and National Pusa Collection, Indian Agricultural Research Institute, New Delhi. The specific epithet *kukri* is derived from Nepali word 'Kukri' or 'Khukuri' which refers to a type of traditional weapon with recurved blade used by the Napalese and Gurkha peoples of Indian subcontinent. This character reflects the shape of claw on leg IV in the male of the new species.

Metatarsonemus badurkani Karmakar & Mondal. *Zootaxa*, 4942(2): 22-251, 2021

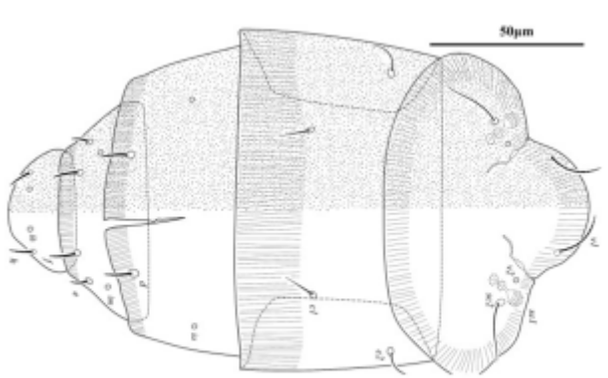
The species *Metatarsonemus badurkani* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and thirteen Paratypes collected from West Bengal, Maslandapur (22°50'52"N and 88°45'31"E, 9m) and eight Paratypes collected from Jaguli (22°55'46"N and 88°32'57"E, 8 m). The type specimens have been deposited in the National Zoological Collection of Zoological Survey of India, Kolkata and National Pusa Collection, Indian Agricultural Research Institute, New Delhi and Acarology Laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific epithet *badurkani* derived from the Bengali words *Badur* meaning bat (Chiroptera) and kan meaning ear which together refers to the bat-ear like angular projections of the anterior prodorsalshield.



Metatarsonemus badurkani Karmakar & Mondal, 2021

Metatarsonemus connexus Karmakar & Mondal. *International Journal of Acarology*, https://doi.org/10.1080/01647954.2021.1976274, 2021

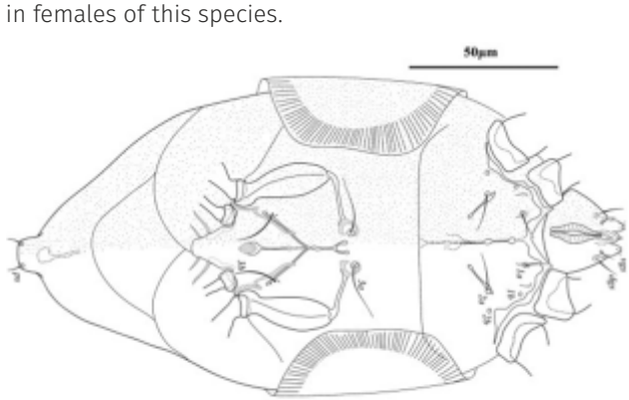
The species *Metatarsonemus connexus* was described by Priyankar Mondal, Moumi Ganguly and Krishna Karmakar based on a Holotype and twelve Paratypes collected from West Bengal, Kalimpong district, Ramadhura village (27°07'37"N and 88°34'04"E). The type specimen has been deposited in National Zoological Collection of Zoological Survey of India, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The species name *connexus* is derived from the Latin word "connexus" meaning "association," which refers to the association of this species with psyllid galls on leaves of *Annona* sp. (Annonaceae).



Metatarsonemus connexus Karmakar & Mondal, 2021

Metatarsonemus diplojuga Karmakar, Ganguly & Mondal. *International Journal of Acarology*, https://doi.org/10.1080/01647954.2021.1976274, 2021

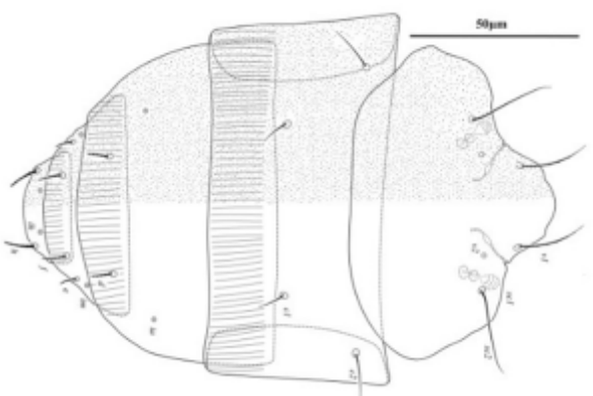
The species *Metatarsonemus diplojuga* was described by Priyankar Mondal, Moumi Ganguly and Krishna Karmakar based on a Holotype and nine Paratypes collected from West Bengal, Kalimpong district, Rishyap village (27°06'22" N and 88°39'08" E). The type specimen has been deposited in National Zoological Collection of Zoological Survey of India, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The species name diplojuga (noun in apposition) is derived from two Latin words "*diplo*" meaning double and "*jugum*" (plural-juga) meaning ridge-like structure, which refers to two pairs of cuticular ridges flanking the tegula in females of this species.



Metatarsonemus diplojuga Karmakar et al., 2021

Metatarsonemus infundibulum Karmakar & Mondal. *International Journal of Acarology,* https://doi.org/10.1080/01647954.2021.1976274, 2021

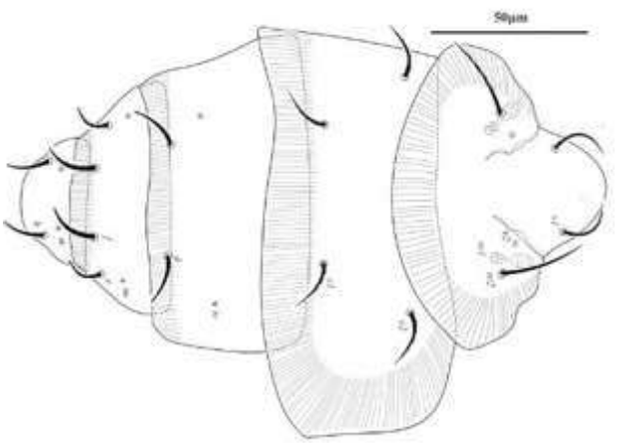
The species *Metatarsonemus infundibulum* was described by Priyankar Mondal, Moumi Ganguly and Krishna Karmakar based on a Holotype and ten Paratypes collected from West Bengal, Kalimpong district, Daragaon village (27°02'17"N and 88°41'43"E). The type specimen has been deposited in National Zoological Collection of Zoological Survey of India, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The species name infundibulum (noun in apposition) is derived from the Latin word "*infundibulum*" meaning funnel-shaped structure, which refers to the funnel-like alignment of a pair of coxis ternal fissures above the tegula in female.



Metatarsonemus infundibulum Karmakar & Mondal, 2021

Metatarsonemus shirishi Karmakar & Mondal. *Zootaxa*, 4942(2): 22-251, 2021

The species *Metatarsonemus shirishi* was described by Priyankar Mondal and Krishna Karmakar based on a Holotype and seventeen Paratypes collected from West Bengal, Kalyani (22°59'20"N and 88°27'52"E, 9 m). The type specimens have been deposited in the National Zoological Collection of Zoological Survey of India, Kolkata and National Pusa Collection, Indian Agricultural Research Institute, New Delhi and Acarology Laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific epithet shirishi derived from the Bengali word Shirish refers to the local name of Albizia lebbeck, the habitat of the holotype.



Metatarsonemus shirishi Karmakar & Mondal, 2021

Genus: *Steneotarsonemus* Beer, 1954

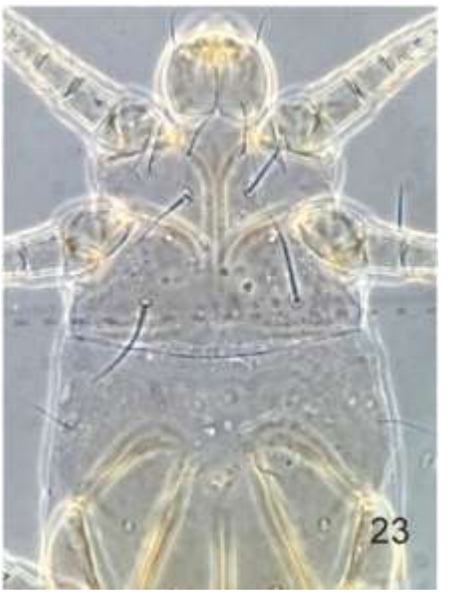
Steneotarsonemus (Steneotarsonemoides) indianensis Karmakar & Mondal. *International Journal of Acarology,* https://doi.org/10.1080/01647954.2021.1900912

The species *Steneotarsonemus (Steneotarsonemoides) indianensis* was described by Priyankar Mondal, Moumi Ganguly, Krishna Karmakar, Antonio C. Lofego and Gilberto J. de Moraes based on a Holotype and twenty-eight Paratypes collected from West Bengal, wetlands of North 24 Parganas. The type specimens have been deposited in National Zoological Collection of Zoological Survey of India, Kolkata, National Pusa Collection, Indian Agricultural Research Institute, New Delhi and Acarology laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, India. The specific name *indianensis* refers to the country (India) where the holotype and all paratypes were collected.

Steneotarsonemus (Steneotarsonemoides) indianensis Karmakar & Mondal, 2021

Steneotarsonemus amlisoae Ganguly, Mondal & Karmakar. *Zootaxa*, 5023(3): 405-420, 2021

The species *Steneotarsonemus amlisoae* was described by Moumi Ganguly, Priyankar Mondal and Krishna Karmakar based on a Holotype and eight Paratypes collected from West Bengal, Darjeeling district, Sevoke (26°52'43" N and 88°28'29" E, 100 m) and eleven Paratypes collected from West Bengal, Kalimpong district, Kolakham (27°06'07"N and 88°40'46"E, 1720 m). The type specimens have been deposited in the National Zoological Collection of Zoological Survey of India, Kolkata and Acarology laboratory, Department of Agricultural Entomology, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, India. The species name *amlisoae* refers to the local name of the host plant *Thysanolaena latifolia* in Nepali language.



Steneotarsonemus amlisoae Ganguly *et al.*, 2021

Genus: *Tarsonemus* Canestrini & Fanzago, 1876

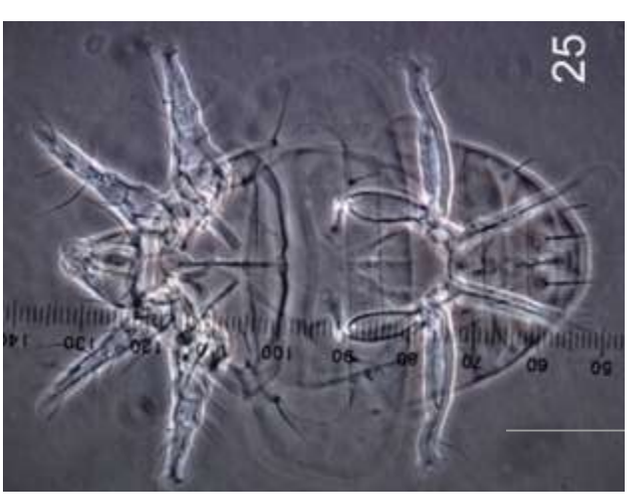
Tarsonemus mondouriensis Karmakar & Ganguly. *Journal of Natural History*, 55(41-42): 2569-2588, 2021

The species *Tarsonemus mondouriensis* was described by Priyankar Mondal, Moumi Ganguly, Krishna Karmakar and Gilberto J. de Moraes based on a Holotype and five Paratypes collected from West Bengal, Mondouri (22.9363oN and 88.5086oE) and five Paratypes collected from West Bengal, Tepul village (22.8805°N and 88.7869°E). The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific epithet *mondouriensis* refers to Mondouri Farm of Bidhan Chandra Krishi Viswavidyalaya, where the holotype specimens were collected.

Tarsonemus mondouriensis Karmakar & Ganguly, 2021

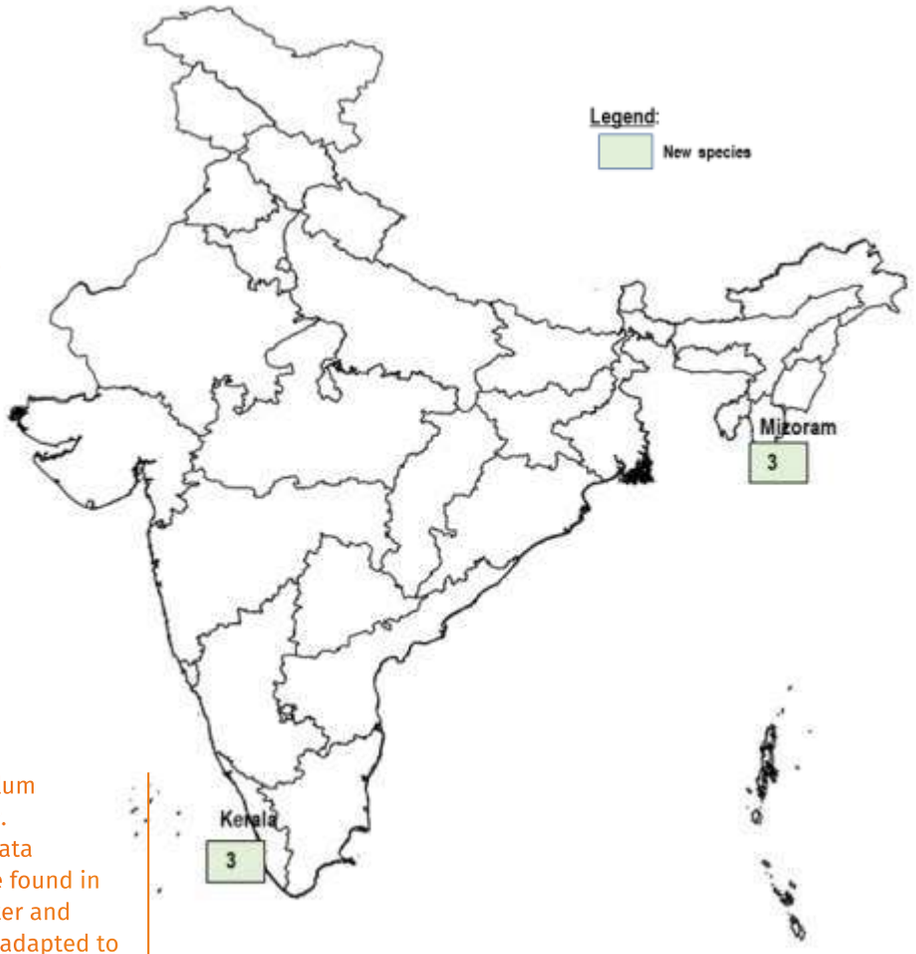
Tarsonemus narkelae Karmakar & Mondal. *Journal of Natural History*, 55(41-42): 2569-2588, 2021

The species *Tarsonemus narkelae* was described by Priyankar Mondal, Moumi Ganguly, Krishna Karmakar and Gilberto J. de Moraes based on a Holotype and eight Paratypes collected from West Bengal, Mondouri (22.9363°N and 88.5086°E) and fourteen Paratypes collected from different localities of West Bengal. The type specimens have been deposited in the NZC, Kolkata and Acarology Laboratory, Department of Agricultural Entomology, Faculty of Agriculture, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal, India. The specific epithet *narkelae* is derived from the Bengali word '*narkel*', which refers to the coconut plant from which this species was first collected.



Tarsonemus narkelae Karmakar & Mondal, 2021

3.20 ANNELIDA

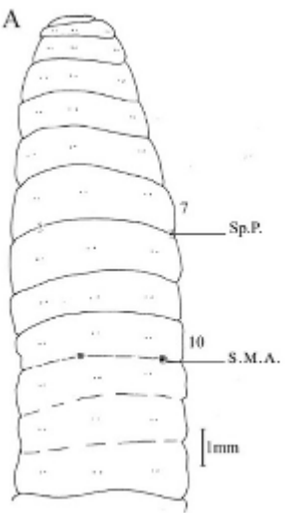


The true segmented worm or the Phylum Annelida is composed of two class viz. Polychaeta (bristle worms) and Clitellata (Oligochaeta and Hirudinea). They are found in both terrestrial and aquatic (freshwater and marine) environments, and some are adapted to parasitism. Polychaetes (Bristle worms) are the most common macro-fauna in marine and coastal environments, ranging from the intertidal zone to the deep sea. They are an important component of the marine food chain, particularly for benthic fishes and other bottom feeders, and they play a key role in the benthic ecosystem's stability and functioning. Earthworms are considered terrestrial ecosystem engineers and their feeding and burrowing activities plays an important role in churning and aerating the soil Earthworms feed on organic matter and thereby release the nutrients available for plants, because of these properties, earthworms became an important biological material for vermitechnology. Hirudinea (Leeches) are considered as derivatives of oligochaetes, as few Chaetae still present in Acanthobdella, thought to be the connecting link. Globally the number of known species under the phylum Annelida is estimated at about 20,000 species The annelid fauna of India is comprised of 1352 species including Polychaetes 727 species, Oligochaeta (earthworms 451 species and aquatic oligochaete 92 species) and leeches 80 species. Among them 88 Polychaetes species, 345 earthworm species and 50 species of leeches are endemic to India. This year 6 new species have been described from India, 3 each from Mizoram and Kerala.

Phylum: ANNELIDA
Class: CLITELLATA
Order: MONILIGASTRIDA
Family: MONILIGASTRIDAE
Genus: *Moniligaster* Perrier, 1872

Moniligaster bahli Narayanan & Julka. *Zootaxa*, 4949(2): 381-397, 2021

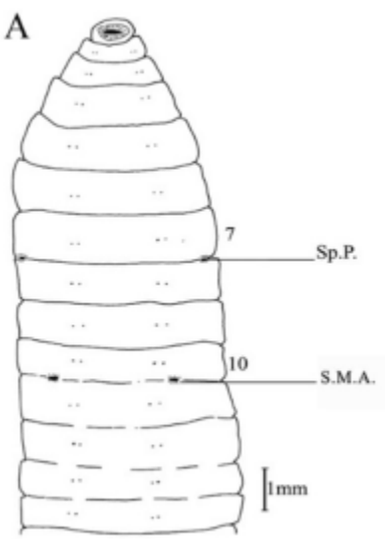
The species *Moniligaster bahli* was described by S. Prasanth Narayanan, S. Sathrumithra, R. Anuja, G. Christopher, A.P. Thomas and J.M. Julka based on a Holotype and seven Paratypes collected from Kerala, Palakkad district, Vengolimala in Parambikulam Tiger Reserve, 3 km from Parambikulam (10°25'19.1"N and 76°48'59.7"E). The type specimens have been deposited in the ZSI-WGRC. The species is named after the renowned Indian zoologist, the late Prof. K.N. Bahl (1891–1954), who, in the first half of the last century, made tremendous contributions to the understanding of the excretory system in earthworms.



Moniligaster bahli
Narayanan & Julka, 2021

Moniligaster blakemorei Narayanan & Julka. *Zootaxa*, 4949(2): 381-397, 2021

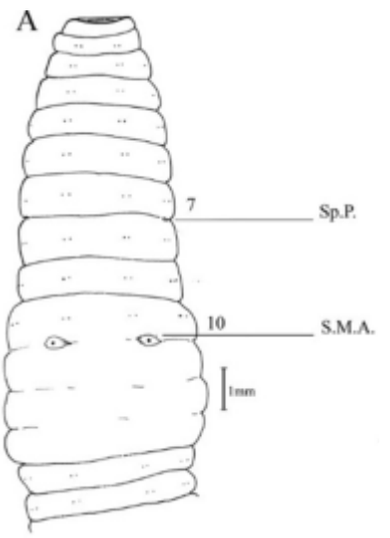
The species *Moniligaster blakemorei* was described by S. Prasanth Narayanan, S. Sathrumithra, R. Anuja, G. Christopher, A.P. Thomas and J.M. Julka based on a Holotype and one Paratype collected from Kerala, Pathanamthitta district, evergreen forest, between Aranamoozhi and Ilampampa, 7 km from Aranamoozhi (9°18'51.6"N and 77°7'24.1"E). The type specimens have been deposited in the ZSI-WGRC. The species is named after Dr. Robert J. Blakemore, the renowned Australian earthworm taxonomist.



Moniligaster blakemorei
Narayanan & Julka, 2021

Moniligaster keralensis Narayanan & Julka. *Zootaxa*, 4949(2): 381-397, 2021

The species *Moniligaster keralensis* was described by S. Prasanth Narayanan, S. Sathrumithra, R. Anuja, G. Christopher, A.P. Thomas and J.M. Julka based on a Holotype and four Paratypes collected from Kerala, Pathanamthitta district, evergreen forest, Kurichikanam in Konni Reserve Forest, 10 km from Kokkathodu (9°12'17.8"N and 77°00'36.3"E). The type specimens have been deposited in the ZSI-WGRC. The specific epithet '*keralensis*' is derived from the name of the Indian state of Kerala, where this species was collected.



Moniligaster keralensis
Narayanan & Julka, 2021

Order: OPISTHOPORA
Family: OCTOCHAETIDAE
Genus: *Eutyphoeus* Michaelsen, 1900

Eutyphoeus phawngpuiensis Tiwari, Lone, Thakur, James & Yadav. *Zootaxa*, 5005(1): 041-061, 2021

The species *Eutyphoeus phawngpuiensis* was described by Nalini Tiwari, Azhar Rashid Lone, Samrendra Singh Thakur, Samuel W. James and Shweta Yadav based on a Holotype collected from Mizoram, Lawngtlai district, Phawngpui Blue Mountain National Park (22°67'06"N and 93°03'41"E) and four Paratypes collected from different localities of Phawngpui Blue Mountain National Park, Mizoram. The type specimens have been deposited in the DHSGV-ZDM. The species name "*phawngpuiensis*" is derived from its type habitation the Phawngpui Blue Mountain National park, Mizoram.

Eutyphoeus phawngpuiensis
Tiwari *et al.*, 2021

Eutyphoeus serei Tiwari, Lone, Thakur, James & Yadav. *Zootaxa*, 5005(1): 041-061, 2021

The species *Eutyphoeus serei* was described by Nalini Tiwari, Azhar Rashid Lone, Samrendra Singh Thakur, Samuel W. James and Shweta Yadav based on a Holotype and one Paratype collected from Mizoram, range terei, village serei, Dampa Tiger Reserve Forest (24°05'08" N and 92°48'02" E). The type specimens have been deposited in the ZSI-CZRC and DHSGV-ZDM. The species name "*serei*" is derived from the Serei village in which the type's habitation is found.

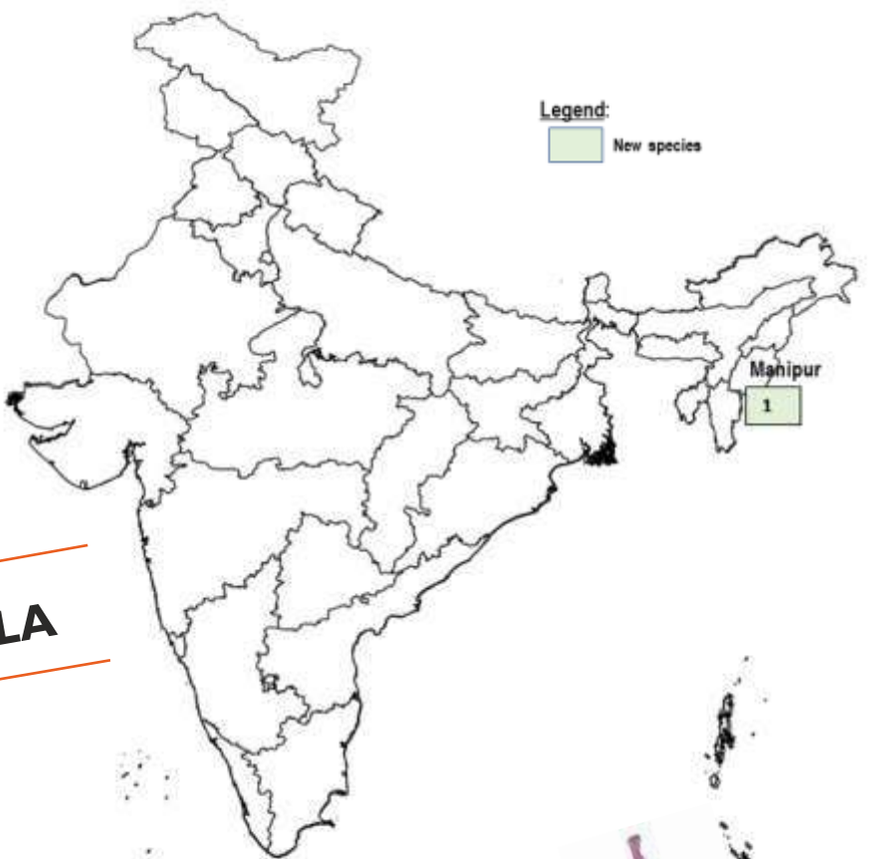
Eutyphoeus serei
Tiwari *et al.*, 2021

Eutyphoeus tawi Tiwari, Lone, Thakur, James & Yadav. *Zootaxa*, 5005(1): 041-061, 2021

The species *Eutyphoeus tawi* was described by Nalini Tiwari, Azhar Rashid Lone, Samrendra Singh Thakur, Samuel W. James and Shweta Yadav based on a Holotype collected from Mizoram, Hualtu, core area, Tawi Wild Life Sanctuary (23°54'89" N and 92°91'52.6" E) and four Paratypes collected from different localities of Tawi Wild Life Sanctuary, Mizoram. The type specimens have been deposited in the ZSI-CZRC and DHSGV-ZDM. The species name "*tawi*" is derived from Tawi Wild Life Sanctuary in which the habitation of its type is found.

Eutyphoeus tawi Tiwari *et al.*, 2021

3.11 ACANTHOCEPHALA



This year only one new species of Acanthocephala has been described from Manipur, India.

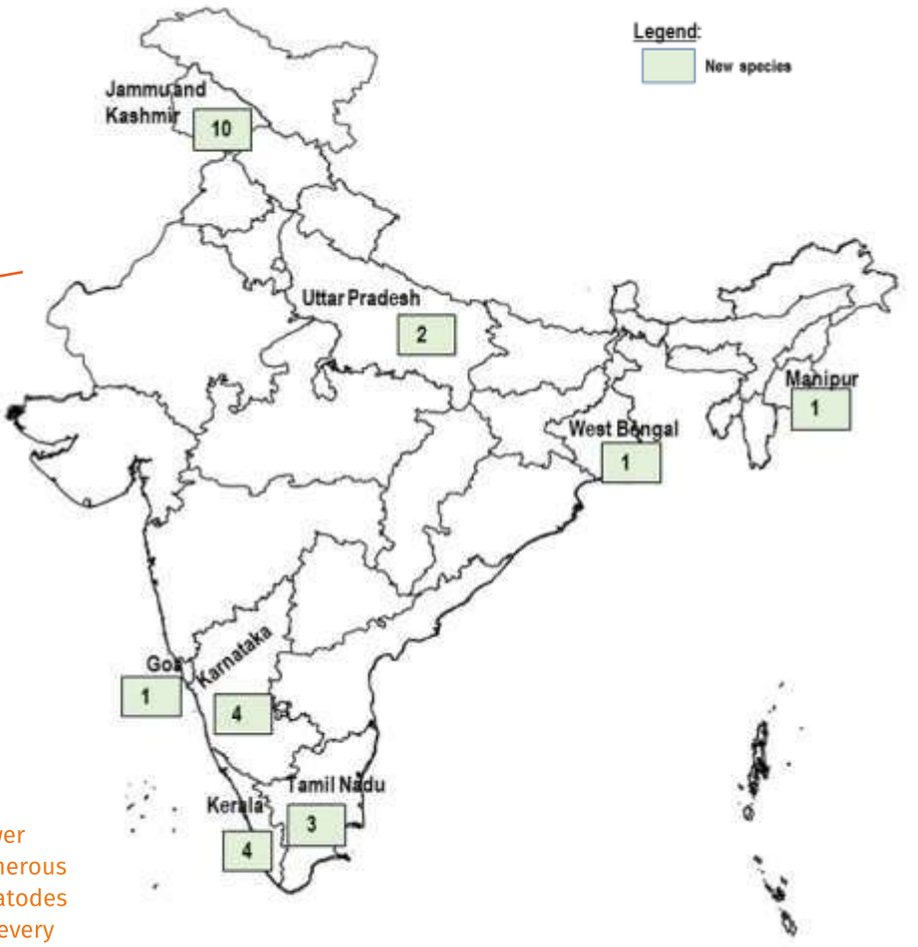
Phylum: ACANTHOCEPHALA
Class: EOACANTHOCEPHALA
Order: GYRACANTHOCEPHALA
Family: QUADRIGYRIDAE
Genus: *Pallisentis* Van Cleave, 1928

Pallisentis heingangyensis Devi & Gambhir. *Flora and Fauna*, 27(1): 133-138, 2021

The species *Pallisentis heingangyensis* was described by N. Pengki Devi and R.K. Gambhir based on a Holotype and one Paratype collected from Manipur, Imphal-east, Heingang river (24°54'8.451"N to 24°49'24.695"N and 93°56'38.739"E to 93°55'4.426"E). The type specimens have been deposited in the Meuseum of Parasitology Section of, Centre of Advanced Studies in Life Sciences, Manipur University, Canchipur, Imphal, Manipur (India). The species is named after the name of locality from where it has been recovered that is "Heingang" river.

Pallisentis heingangyensis Devi & Gambhir, 2021

3.12 NEMATODA

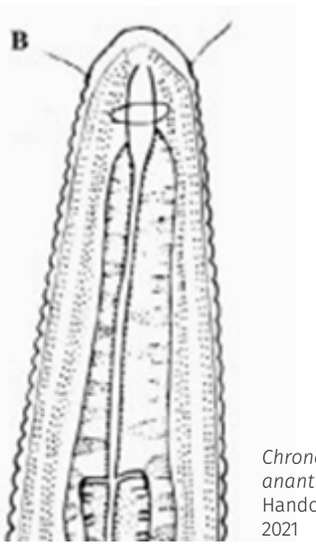


Nematodes are highly diversified lower invertebrates, perhaps the most numerous multicellular animals on earth. Nematodes have been successful in adapting to every ecosystem, from soils to freshwater to marine ecosystem, and they have been reported from polar regions to the tropics and are found from highest to lowest elevations, even in oceanic trenches and also within the earth's lithosphere and recently have reported the viable soil nematodes from the samples of Pleistocene permafrost deposits. Estimated diversity in the world: 26646 recorded species with 8359 species parasitic in vertebrates, 10681 species free-living, 4105 species parasitic in plants and 3501 species parasitic in invertebrate hosts. Number of Species reported from India: 2990.Nematodes are harmful as causing damage to plants and causing several diseases in animals and humans. On the other hand, they are highly beneficial as biological control agents, Bacterial and fungal feeding nematodes are important soil mineralizers and decomposers, utilized in Long Term Ecological Studies, Climate changes in Antarctica and Model system for studying developmental studies, genetics etc. This year a total of 26 new species belonging to Phylum Nematoda have been described from India, 10 from Kashmir, 4 each from Karnataka and Kerala, 3 from Tamil Nadu, 2 from Uttar Pradesh and 1 each from Manipur, Goa and West Bengal.

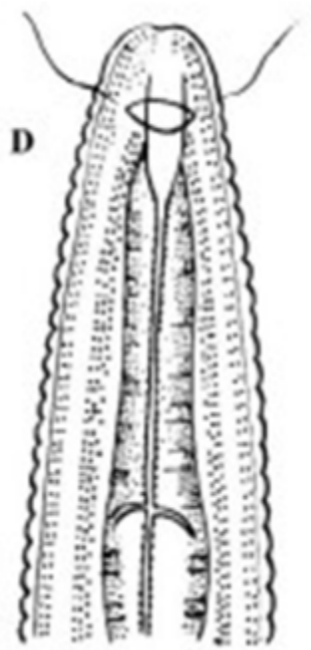
Phylum: NEMATODA
Class: CHROMADOREA
Order: PLECTIDA
Family: CHRONOGASTRIDAE
Genus: *Chronogaster* Cobb, 1913

Chronogaster anantnagiensis Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Chronogaster anantnagiensis* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and seven Paratypes collected from Anantnag, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name refers to the type locality Anantnag.



Chronogaster anantnagiensis Handoo *et al.*, 2021



Chronogaster mustafaensis Handoo *et al.*, 2021

Chronogaster mustafaensis Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Chronogaster mustafaensis* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and eight Paratypes collected from Tral, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name is given in honor of my loving father for his support, constant encouragement, love, care, guidance, prayers and above all his service to the entire family, friends and community of Narwara, Srinagar, Kashmir.

Order: RHABDITIDA
Family: DIPLOGASTERIDAE
Genus: *Oigolaimella* Paramonov, 1952

Oigolaimella trilineata Mahboob, Chavan, Nazir, Mustaqim, Jahan & Tahseen. *Zoologischer Anzeiger*, 295(2021): 163-190, 2021

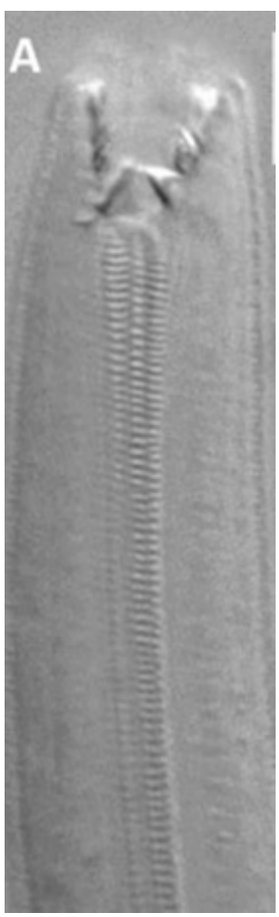
The species *Oigolaimella trilineata* was described by M. Mahboob, Satish N. Chavan, N. Nazir, M. Mustaqim, R. Jahan and Q. Tahseen based on a Holotype and twenty-two Paratypes collected from Uttar Pradesh, Aligarh, Aligarh Fort (27˚92'82''N and 78˚06'09''E) and Uttar Pradesh, Moradabad district (28˚50'27.8304''N and 78˚47'43.1484''E). The type specimens have been deposited in the nematode collection of Department of Zoology, Aligarh Muslim University, Aligarh, Uttar Pradesh and Swedish Natural History Museum, Stockholm, Sweden.

Oigolaimella trilineata Mahboob *et al.*, 2021

Genus: *Pristionchus* Kreis 1932

Pristionchus glomerata Gupta, Tahseen & Borges. https://doi.org/10.1101/2021.05.17.444399, 2021

The species *Pristionchus glomerata* was described by Satyajeet Gupta, Qudsia Tahseen and Renee M. Borges based on a Holotype and ten Paratypes collected from Karnataka, Bangalore, in and around the campus of Indian Institute of Science (13.0219°N and 77.5671°E). The type specimens have been deposited in the Indian Institute of Science, Bangalore, Karnataka, India and National Nematode Collection, Indian Agricultural Research Institute, New Delhi. The species name "*glomerata*" derived from *Ficus glomerata*, is a synonym of *Ficus racemosa*.



Pristionchus glomerata Gupta *et al.*, 2012

Genus: *Teratodiplogaster* Kanzaki et al., 2009

Teratodiplogaster glomerata Gupta, Tahseen & Borges. https://doi.org/10.1101/2021.05.17.444399, 2021

The species *Teratodiplogaster glomerata* was described by Satyajeet Gupta, Qudsia Tahseen and Renee M. Borges based on a Holotype and eleven Paratypes collected from Karnataka, Bangalore, in and around the campus of Indian Institute of Science (13.0219°N and 77.5671°E). The type specimens have been deposited in the Indian Institute of Science, Bangalore, Karnataka, India and National Nematode Collection, Indian Agricultural Research Institute, New Delhi. The species name "*glomerata*" derived from Ficus glomerata, is a synonym of *Ficus racemosa*.

Teratodiplogaster glomerata Gupta *et al.*, 2021

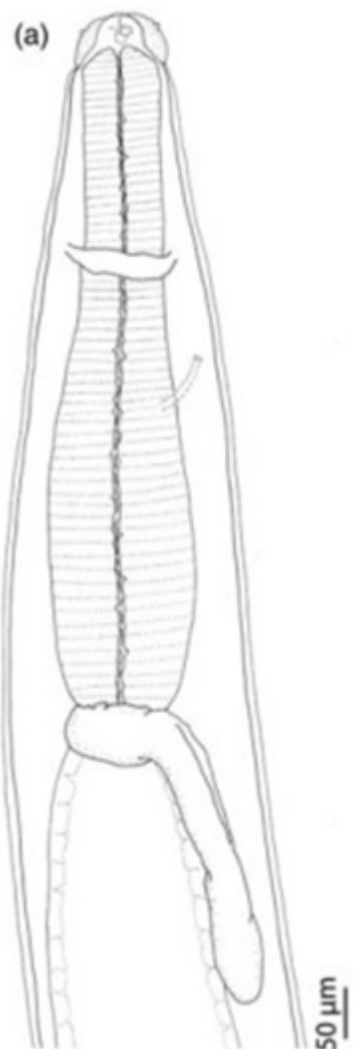
Family: RAPHIDASCARIDIDAE

Genus: *Raphidascaris* Railliet & Henry, 1915

Raphidascaris mundeswariensis Patra, Choudhury, Thorn & Ash. *Journal of Helminthology*, 95, e41: 1-8, 2021

The species *Raphidascaris mundeswariensis* was described by B.K. Patra, A. Choudhury, R. Thorn and A. Ash based on a Holotype, Allotype and Paratypes collected from West Bengal, Hooghly, Ranjitbati, Mundeswari River (22°40'59.6"N and 87°53'24.5"E). The type specimens have been deposited in ZSI-Kolkata. The species name is derived from the Mundeswari River, the type locality of this parasite.

Raphidascaris mundeswariensis Patra *et al.*, 2021



Family: RHABDITIDAE

Genus: *Distolabrellus* Anderson, 1983

Distolabrellus vulvatus Khatoon & Ahmad. *Indian Journal of Nematology*, 51(1): 51-60, 2021

The species *Distolabrellus vulvatus* was described by Sobia Khatoon and Irfan Ahmad based on a Holotype and nineteen Paratypes collected from Uttar Pradesh, Aligarh, Aligarh Muslim University. The type specimens have been deposited in the nematode collection of Department of Zoology, Aligarh Muslim University, Aligarh. The name of the species is based on the presence of cuticle surrounding vulva.

Distolabrellus vulvatus Khatoon & Ahmad, 2021

Order: OXYURIDA
Family: THELASTOMATIDAE
Genus: *Cameronia* Basir, 1948

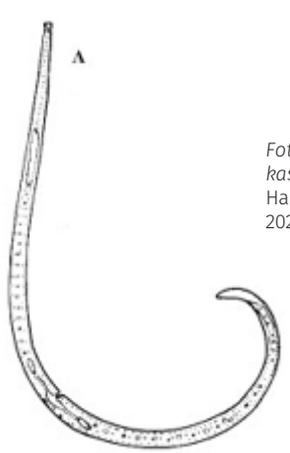
Cameronia conoides Shanjoy & Gambhir

The species *Cameronia conoides* was described by Laishram Shanjoy and R.K. Gambhir based on nematodes collected from unidentified burrowing insect from Khordak village of Thanga, Manipur. The type specimens have been deposited in the Department of Zoology, Manipur University.The species is named on the basis of conoid shaped tail.

Class: ENOPLEA
Order: DORYLAIMIDA
Family: BELONDIRIDAE
Genus: *Fotedaronema* Handoo, Kantor & Khan, 2021

Fotedaronema kashmiriensis Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Fotedaronema kashmiriensis* was described by Zafar Ahmad, Mihail radu Kantor and Ekramullah Khan based on a Holotype and eight Paratypes collected from Sonamarg, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name refers to the type locality Kashmir.



Fotedaronema kashmiriensis Handoo *et al.*, 2021

Genus: *Paraoxydirus* Jairajpuri & Ahmad, 1979

Paraoxydirus indicus Kumar & Ahmad. *Helminthologia*, 58(3): 292-314, 2021

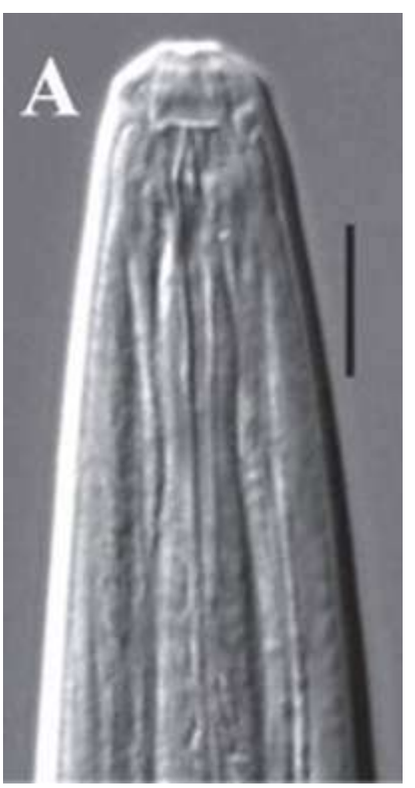
The species *Paraoxydirus indicus* was described by S. Kumar and W. Ahmad based on a Holotype and Paratypes collected from Kerala, Malapuram, Chungathara (11°20'1.1"N and 76°16'32.44"E). The type specimens have been deposited with the nematode collection of the Department of Zoology, Aligarh Muslim University, India. The new species is named after its type locality, India.

Paraoxydirus indicus Kumar & Ahmad, 2021

Paraoxydirus vulvalpapillatus Kumar & Ahmad. *Helminthologia*, 58(3): 292-314, 2021

The species *Paraoxydirus vulvalpapillatus* was described by S. Kumar and W. Ahmad based on a Holotype and two Paratypes collected from South Goa, Cuncolim (15°10'38.28" N and 73°59'38.11" E). The type specimens have been deposited with the nematode collection of the Department of Zoology, Aligarh Muslim University, India. The new species is named vulvalpapillatus because of the presence of vulval papillae.

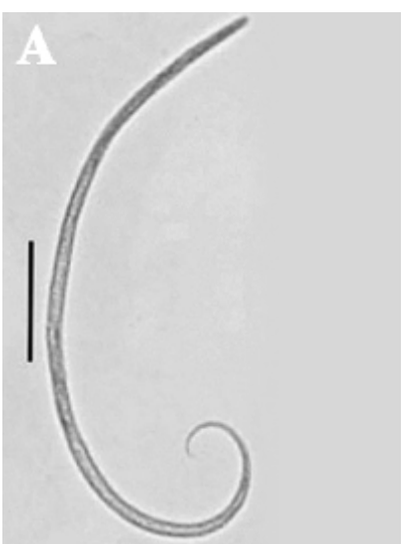
Paraoxydirus vulvalpapillatus Kumar & Ahmad, 2021



Family: CHRYSONEMATIDAE
Genus: *Chrysonema* Thorne, 1929

Chrysonema minor Imran & Ahmad. *Annales Zoologici*, 71(1): 7-20, 2021

The species *Crateronema minor* was described by Zarrin Imran and Shahnaz and Wasim Ahmad based on a Holotype and 2 Paratypes collected from Kerala, Palakkad, Aagali Forest Range (10°47'4.9308" N and 76°39'11.3220" E). The type specimens have been deposited with the nematode collection of the Department of Zoology, Aligarh Muslim University, India. The new species is named *C. minor* because of small body size.



Chrysonema minor Imran & Ahmad, 2021

Genus: *Chrysonema* Siddiqi, 1969

Crateronema tropicum Imran & Ahmad. *Annales Zoologici*, 71(1): 7-20, 2021

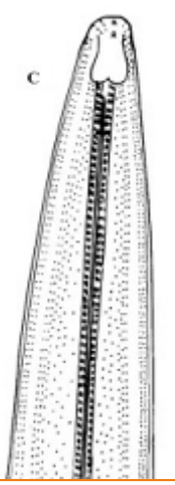
The species *Crateronema tropicum* was described by Zarrin Imran and Shahnaz and Wasim Ahmad based on a Holotype and nine Paratypes collected from Tamil Nadu, Nilgiri district, Naduvattam (11°30'28.06"N and 76°29'4.16"E). The type specimens have been deposited with the nematode collection of the Department of Zoology, Aligarh Muslim University, India. The new species is named *C. tropicum* sp. nov. because it was collected from tropical habitat.

Crateronema tropicum Imran & Ahmad, 2021

Family: LONGIDORIDAE
Genus: *Longidorus* Micoletzky, 1922

Longidorus goldeni Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Longidorus goldeni* was described by Zafar Ahmad, Mihail radu Kantor and Ekramullah Khan based on a Holotype and six Paratypes collected from Sopore, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name is given in honor of Dr. A.M. Golden for his outstanding contribution to Nematology and for the guidance he provided to senior author while working with him in his Laboratory as well as he also established Nematode Taxonomy Program and USDA Nematode Collection at Beltsville, Maryland, USA.



Longidorus goldeni Handoo *et al.*, 2021

Family: NORDIIDAE
Genus: *Kochinema* Heyns, 1963

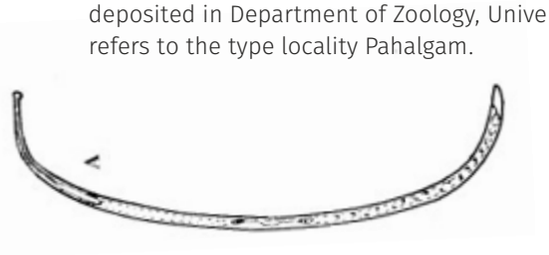
Kochinema kanganiensis Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Kochinema kanganiensis* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and ten Paratypes collected from Kangan, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name refers to the type locality Kangan.

Kochinema kanganiensis Handoo *et al.*, 2021

Kochinema pahalgamiensis Handoo, Kantor & Khan. *Pakistan Journal of Nematology,* 39(1): 24-40, 2021

The species *Kochinema pahalgamiensis* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a H A)type and six Paratypes collected from Pahalgam, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name refers to the type locality Pahalgam.

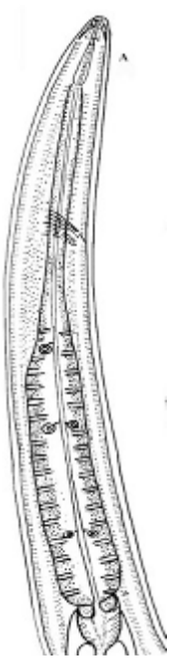


Kochinema pahalgamiensis Handoo *et al.*, 2021

Genus *Parasicagutter* Handoo, Kantor & Khan, 2021

Parasicagutter chitwoodi Handoo, Kantor & Khan. *Pakistan Journal of Nematology,* 39(1): 24-40, 2021

The species *Parasicagutter chitwoodi* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and eight Paratypes collected from Pattan, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name is given in honor of Dr. D.J. Chitwood, former Research Leader of Nematology and then Mycology and Nematology Genetic Diversity and Biology Laboratory, USDA, ARS, Northeast Area, Beltsville, Maryland, USA for his outstanding contribution to Nematology

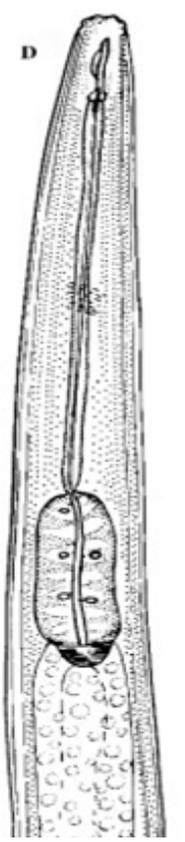


Parasicagutter chitwoodi Handoo *et al.*, 2021

Family: TYLENCHOLAIMELLIDAE
Genus: *Tylencholaimellus* Cobb, 1915

Tylencholaimellus brassicas Handoo, Kantor & Khan. *Pakistan Journal of Nematology,* 39(1): 24-40, 2021

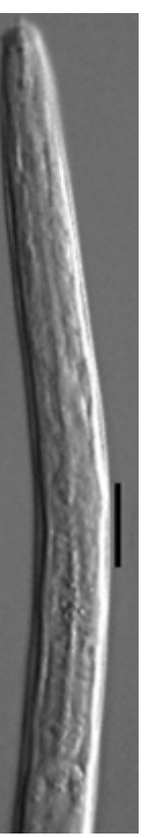
The species T*ylencholaimellus brassicas* was described byZafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and eight Paratypes collected from Pulwama, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir.



Tylencholaimellus brassicas Handoo *et al.*, 2021

Tylencholaimus macroamphidius Islam & Ahmad. *European Journal of Taxonomy,* 774: 58-105, 2021

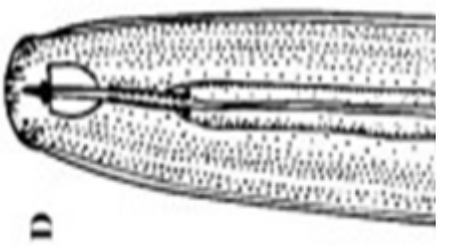
The species *Tylencholaimus macroamphidius* was described by Md Niraul Islam and Wasim Ahmad based on a Holotype and nine Paratypes collected from Tamil Nadu, Nilgiri Hill, Naduvattum (11o28'37.8''N and 76o32'36.7', 5-15 cm). The type specimens have been deposited in AMU and nematode collection of the Zoological Survey of India, Kolkata, India. The new species is named *Tylencholaimus macroamphidius* sp. nov. because of its characteristically large amphids.



Tylencholaimus macroamphidius Islam & Ahmad, 2021

Tylencholaimus orientalis Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

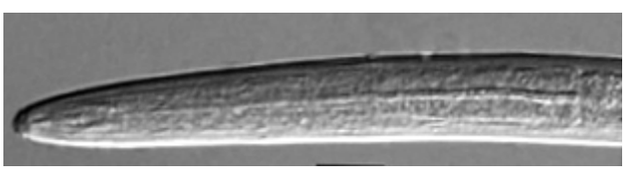
The species *Tylencholaimus orientalis* was described by Zafar Ahmad Handoo, Mihail Radu Kantor and Ekramullah Khan based on a Holotype and thirteen Paratypes collected from Handwara, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir.



Tylencholaimus orientalis Handoo *et al.*, 2021

Tylencholaimus shamimi Islam & Ahmad. *European Journal of Taxonomy*, 774: 58-105, 2021

The species *Tylencholaimus shamimi* was described by Md Niraul Islam and Wasim Ahmad based on a Holotype and eight Paratypes collected from Kerala, Idukki, Kudyathoor (9o49'37.2''N and 76o47'45.6'', 5-15 cm). The type specimens have been deposited in AMU and nematode collection of the Zoological Survey of India, Kolkata, India. The new species is named after Prof. Mohammad Shamim Jairajpuri in recognition of his contribution to nematode taxonomy.



Tylencholaimus shamimi Islam & Ahmad, 2021

Tylencholaimus southindicus Islam & Ahmad. *European Journal of Taxonomy*, 774: 58-105, 2021

The species *Tylencholaimus southindicus* was described by Md Niraul Islam and Wasim Ahmad based on a Holotype and eighteen Paratypes collected from Kerala, Ernakulam district, Manikandanchal (10o09'28.8''N and 76o47'56.4'', 5-15 cm). The type specimens have been deposited in AMU and nematode collection of the Zoological Survey of India, Kolkata, India. The new species is named *Tylencholaimus southindicus* sp. nov. because of its distribution in south India.

Tylencholaimus southindicus Islam & Ahmad, 2021

Tylencholaimus striatus Islam & Ahmad. *European Journal of Taxonomy*, 774: 58-105, 2021

The species *Tylencholaimus striatus* was described by Md Niraul Islam and Wasim Ahmad based on a Holotype and four Paratypes collected from Karnataka, Kodagu district, Bhagamandala (12°23'29.1''N and 75°31'50.0''E, 5-15 cm). The type specimens have been deposited in AMU and nematode collection of the Zoological Survey of India, Kolkata, India. The new species is named *Tylencholaimus striatus* sp. nov. because of its distinctly striated cuticle.

Tylencholaimus striatus Islam & Ahmad, 2021

Tylencholaimus tamiliensis Islam & Ahmad. *European Journal of Taxonomy*, 774: 58-105, 2021

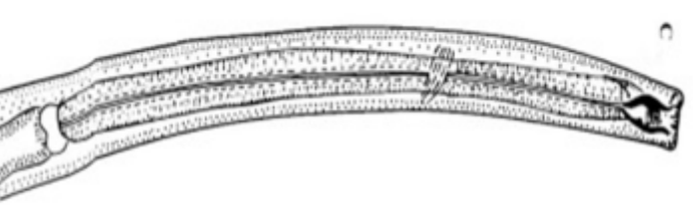
The species *Tylencholaimus tamiliensis* was described by Md Niraul Islam and Wasim Ahmad based on a Holotype and nine Paratypes collected from Tamil Nadu, Nilgiris district, Naduvattum (11°28'37.8'' N and 76°32'36.7''E, 5-15 cm). The type specimens have been deposited in AMU and nematode collection of the Zoological Survey of India, Kolkata, India. The new species is named *Tylencholaimus tamiliensis* sp. nov. because of its type locality Tamil Nadu.

Tylencholaimus tamiliensis Islam & Ahmad, 2021

Order: MONONCHIDA
Family: MONONCHIDAE
Genus: *Mylonchulus* Cobb, 1916

Mylonchulus shamimi Handoo, Kantor & Khan. *Pakistan Journal of Nematology*, 39(1): 24-40, 2021

The species *Mylonchulus shamimi* was described by Zafar Ahmad, Mihail radu Kantor and Ekramullah Khan based on a Holotype and ten Paratypes collected from Sonamarg, Kashmir. The type specimens have been deposited in Department of Zoology, University of Kashmir. The species name is given in honor of Dr. Shamim Jairajpuri, former Head, Section of Nematology, Department of Zoology, Aligarh Muslim University, Aligarh, and Vice Chancellor of Maulana Azad National Urdu University, Hyderabad, India for his outstanding contribution to Nematology and for the Lab facilities and help provided to the senior author at Aligarh Muslim University, Aligarh, India during the beginning of his Ph. D work.

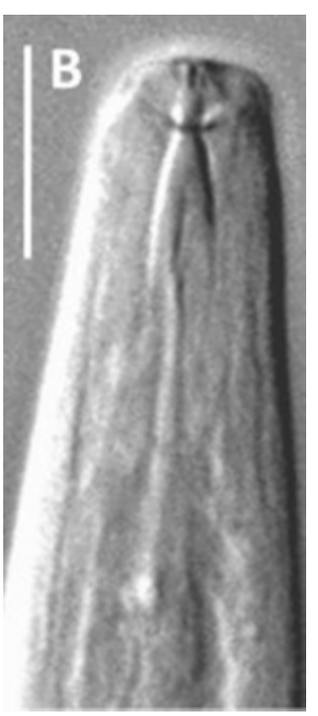


Mylonchulus shamimi Handoo *et al.*, 2021

Order: APHELENCHIDA
Family: APHELENCHOIDIDAE
Genus: *Ficophagus* Davies, Ye, Kanzaki, Bartholomaeus, Zeng & Giblin-Davis, 2015

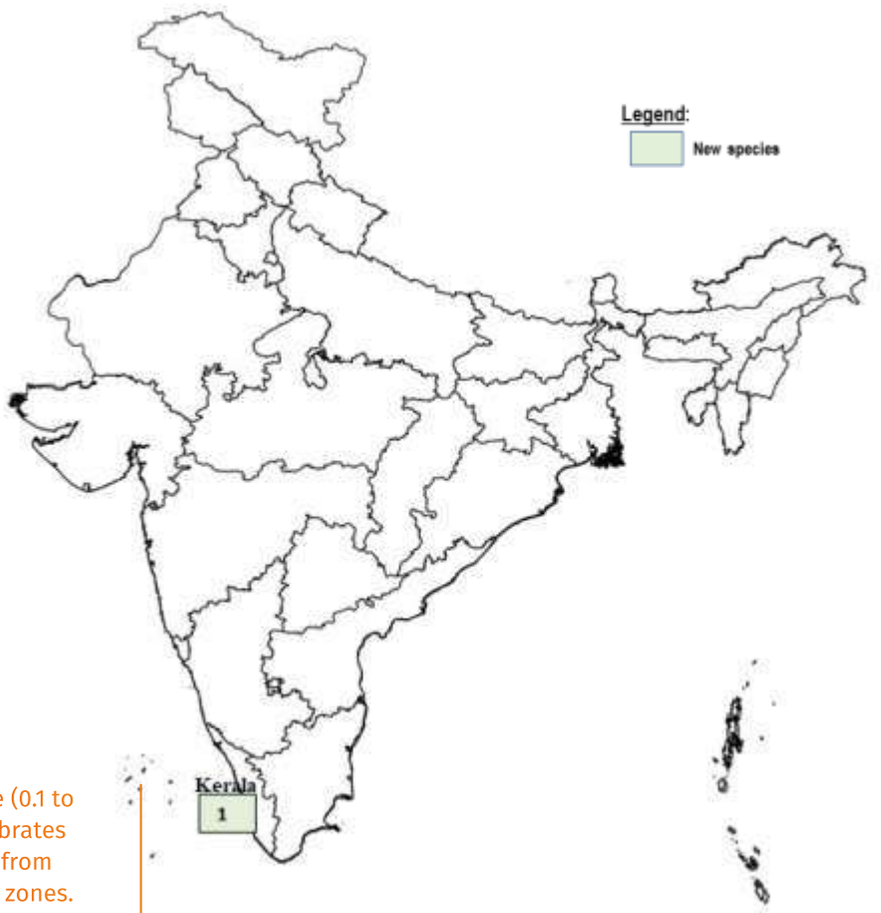
Ficophagus glomerata Gupta, Tahseen & Borges. https://doi.org/10.1101/ 2021.05.17.444399, 2021

The species *Ficophagus glomerata* was described by Satyajeet Gupta, Qudsia Tahseen, renee M. Borges based on a Holotype and twenty Paratypes collected from Karnataka, Bangalore, campus of Indian Institute of Science (13.0219°''N and 77.5671°''E). The type specimens have been deposited in Indian Institute of Science, Bangalore, Karnataka and National Nematode Collection, Indian Agricultural Research Institute, New Delhi. The species name "*glomerata*" derived from *Ficus glomerata*, is a synonym of *Ficus racemosa*.



Ficophagus glomerata Gupta *et al.*, 2021

3.13 TARDIGRADA



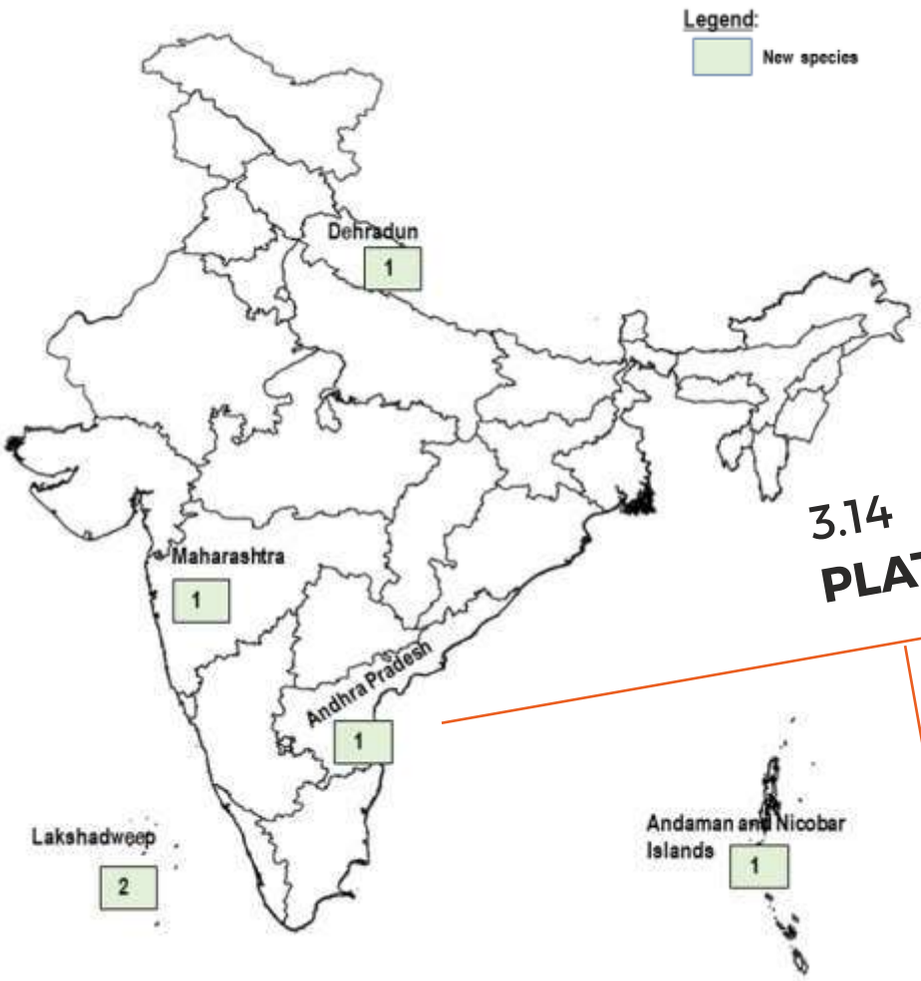
The phylum Tardigrada includes minute (0.1 to 1mm), segmented, eight-legged invertebrates that dwell in a variety of environments from terrestrial to aquatic and in all climatic zones. When in stress tardigrades tend to go into anhydrobiosis and form a 'tun' around themselves, which help them to survive severe harsh environment which can be fatal to most of other organisms. This unique ability helps them to survive from severe burst of UV radiation, heavy metal contamination, hydrothermal vents of deep sea and even in space vacuum. In this 'tun' state tardigrade can stay alive for up to more than 30 years. Due to this unique capability of survival, tardigrades are now one of the most sought after laboratory models for stress biology, physiology and developmental biology. Tardigrades are nature's pioneers, colonizing new, potentially harsh environments, providing food for larger creatures that follow. Tardigrades can survive the vacuum of space, zero temperatures and radiation – and their DNA may be the missing link to long-distance space travel. Experts believe the creature's DNA could be used to genetically modify humans and develop synthetic proteins, allowing them to withstand the deadly effects of spaceflight, specifically radiation. These synthetic proteins could be used, for example, to preserve organs needed for transplants, potentially keeping organs viable for longer than is possible by storing them on ice as tardigrades have the ability to shut down temporarily without causing harm to its cells. Diversity in world comprise 1380 species, while India has only 39 species recorded so far. This year from India one new species of Tardigrada has been described from Kerala.

Phylum: TARDIGRADA
Class: HETEROTARDIGRADA
Order: ARTHROTARDIGRADA
Family: STYGARCTIDAE
Genus: *Stygarctus* Schulz, 1951

Stygarctus keralensis Vishnudattan, Bijoy Nandan, Hansen & Jayachandrann. *Zootaxa*, 4985(3): 381-391, 2021

The species *Stygarctus keralensis* was described by N.K. Vishnudattan, S. Bijoy Nandan, J.G. Hansen and P.R. Jayachandran based on a Holotype and one Paratype collected from Kerala, Vadakara beach (11°60.077'N and 75°57.702'E). The type specimens have been deposited in the CUSAT. The specific epithet, keralensis refers to the Kerala state, where the type locality Vadakara is situated. Kerala is one of the popular maritime state of India, situated at its southwestern coast.

Stygarctus keralensis Vishnudattan *et al.*, 2021



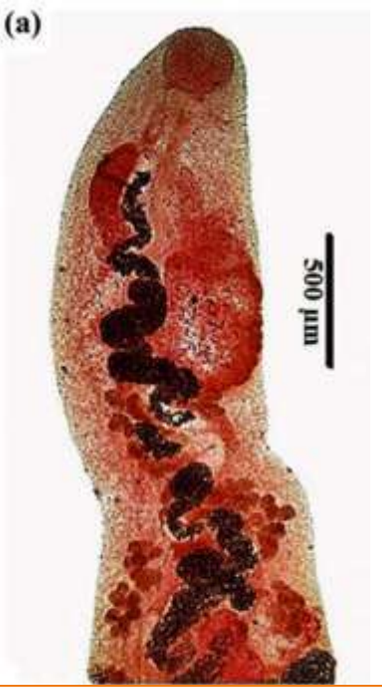
3.14 PLATYHELMINTHES

Platyhelminthes are triploblastic, bilaterally symmetrical, dorsoventrally flattened, acoelomate flatworms with organ grade of construction. Platyhelminthes includes such animals as the freshwater planarian, marine flatworms, and parasitic worms that parasitize other organisms including humans. Many flatworms like Planarians and Turbellarians are good biological control agents, while many play role as decomposers. Apart form this they have harmful role as blood fukes, lung flukes and intestinal flukes Global diversity is represented by 29,487 species, while diversity in India comprises 1,793 species.

A total of 6 new species of Platyhelminthes have been described this year from India, of which 2 are from Lakshadweep and 1 species each from Dehradun, Maharashtra, Andhra Pradesh and Andaman Island.

Phylum: PLATYHELMINTHES
Class: TREMATODA
Order: PLAGIORCHIIDA
Family: HAEMATOLOECHIDAE
Genus: *Haematoloechus* Loss, 1899

Haematoloechus dehradunensis Maity, Rizvi & Bursey. *Acta Parasitologica*, https://doi.org/10.1007/s11686-021-00469-2



Haematoloechus dehradunensis Maity *et al.*, 2021

The species *Haematoloechus dehradunensis* was described by Pallab Maity, Anjum N. Rizvi and Charles R. Bursey based on a Holotype and one Paratype collected from Dehradun, Lakhwad Range, Village Budhna (30°29.317'N and 77°52.923'E, 612 m). The type specimens have been deposited in ZSI-HQ. The new species is named after the type locality.

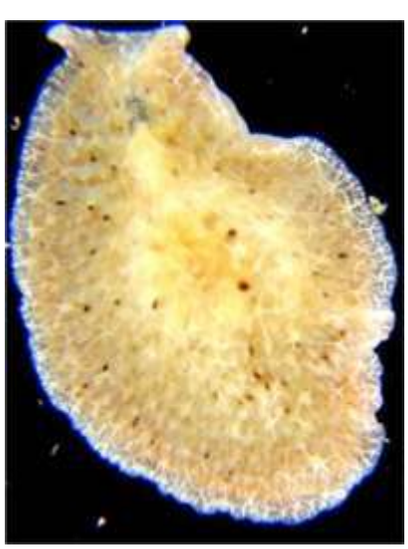
Order: DIPLOSTOMIDA
Family: APOROCOTYLIDAE
Genus: *Cardicola*, Short, 1953

Cardicola polynemi Gudivada & Vankara. *Uttar Pradesh Journal of Zoology*, 42(2): 66-74.

The species *Cardicola polynemi* was described by Mani Gudivada & Anu Prasanna Vankara based on a Holotype and Paratypes collected from marine threadfin fish, *Eleutheronema tetradactylum* Shaw, 1804 of Visakhapatnam coast. The type specimens have been deposited in the Department of Zoology, Andhra University, Visakhapatnam.

Class: TURBELLARIA
Order: POLYCLADIDA
Family: EURYLEPTIDAE
Genus: *Cycloporus* Lang, 1884

Cycloporus decoratus Pitale & Apte. *Zootaxa*, 5052(4): 486-500, 2021



Cycloporus decoratus Pitale & Apte, 2021

The species *Cycloporus decoratus* was described by Reshma Pitale and Deepak Apte based on a Holotype and one Paratype collected from Maharashtra, Mumbai, Haji Ali Bay (18.980672°N and 72.805896°E) and one Paratype collected from Maharashtra, Mumbai, Ratnagiri, Mandvi (16.988357°N, 73.274498°E). The type specimens have been deposited in the polyclad collection of BNHS. The species name is derived from the Latin word decoratus meaning adorning or beautified, referring to the beautiful dorsal pattern of the species.

Genus: *Eurylepta* Ehrenberg, 1831

***Eurylepta alicula* Pitale & Apte. *Zootaxa*, 5052(4): 486-500, 2021**

Eurylepta alicula Pitale & Apte, 2021

The species *Eurylepta alicula* was described by Reshma Pitale and Deepak Apte based on a Holotype and two Paratypes collected from Andaman Islands, Craggy Island (13.22421°N and 93.057941°E). The type specimens have been deposited in the polyclad collection of BNHS. The species name is derived from the Latin word *alicula* meaning light coat or cloak, referring to the coat or covering of papillae over the dorsal surface of the species.

Family: PSEUDOCEROTIDAE
Genus: *Pseudoceros* Lang, 1884

***Pseudoceros bipurpurea* Dixit, Manjebrayakath & Saravanane. *Journal of the Marine Biological Association of the United Kingdom*, 1–11. https://doi.org/10.1017/S0025315421000151, 2021**

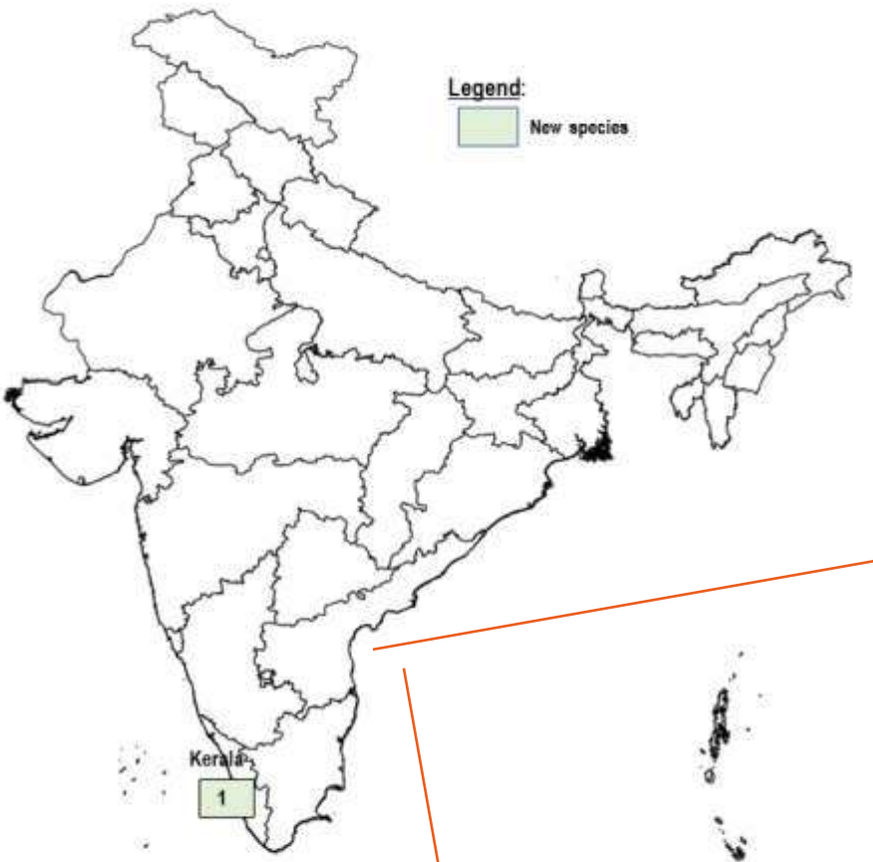
Pseudoceros bipurpurea Dixit *et al.*, 2021

The species *Pseudoceros bipurpurea* was described by Sudhanshu Dixit, Hashim Manjebrayakath and Narayanane Saravanane based on a Holotype collected from Lakshadweep, Agatti Island, Solar Point (10°50'28''N and 72°11'30''E). The type specimens have been deposited in the CMLRE, Kochi, India. The specific name *bipurpurea* is a compound Latin noun meaning 'two purple' refers to the characteristic dorsal colour pattern, two (*bi*) purple (*purpura* in Latin) regions of dense purple spots surrounding the orange median line.

***Pseudoceros galaxea* Dixit, Manjebrayakath & Saravanane. *Journal of the Marine Biological Association of the United Kingdom*, 1–11. https://doi.org/10.1017/S0025315421000151, 2021**

The species *Pseudoceros galaxea* was described by Sudhanshu Dixit, Hashim Manjebrayakath and Narayanane Saravanane based on a Holotype and one Paratype collected from Lakshadweep, Agatti Island, CMLRE field research station (10°50'38''N and 72°11'17''E). The type specimens have been deposited in the CMLRE, Kochi, India. The specific name *galaxea* is the Latin genitive form of galaxias (galaxy), which means 'belong to the galaxy' and refers to the colour pattern resembling the stars in a galaxy.

Pseudoceros galaxea Dixit *et al.*, 2021



CNIDARIA 3.15

The Phylum Cnidaria represents exclusively aquatic diploblastic fauna communities which are mostly found in marine habitats across the world. These are presently categorized under six classes such as Anthozoa, Cubozoa, Hydrozoa, Myxozoa, Scyphozoa, and Staurozoa whereas hard corals, stony corals, fire corals, soft corals, sea pens, sea whips, sea fans, black corals, sea anemones, jellyfish, sea firs, Portuguese man-of-war, etc. are commonly known names. These groups of animals are seen to represent two forms viz. medusa- free-swimming or floating mode of life and polyp- sessile part of life form. All the species of cnidarians are carnivorous while cnidae and tentacles take active roles in the capture of prey whereas most of the species are dependent on endosymbiotic algae or zooxanthellae to meet their nutritional need, and a few are parasites. Cnidarians are the major building blocks of coral reef ecosystems of the world's oceans especially the complex structure of shallow tropical waters. As per the recent species database, a total of 11993 species of cnidarians are reported from the world's oceans whereas India shares 1459 species. A total of 14 species of endemic cnidarians are reported from Indian waters. This year one new species of Cnidaria has been described from Kerala.

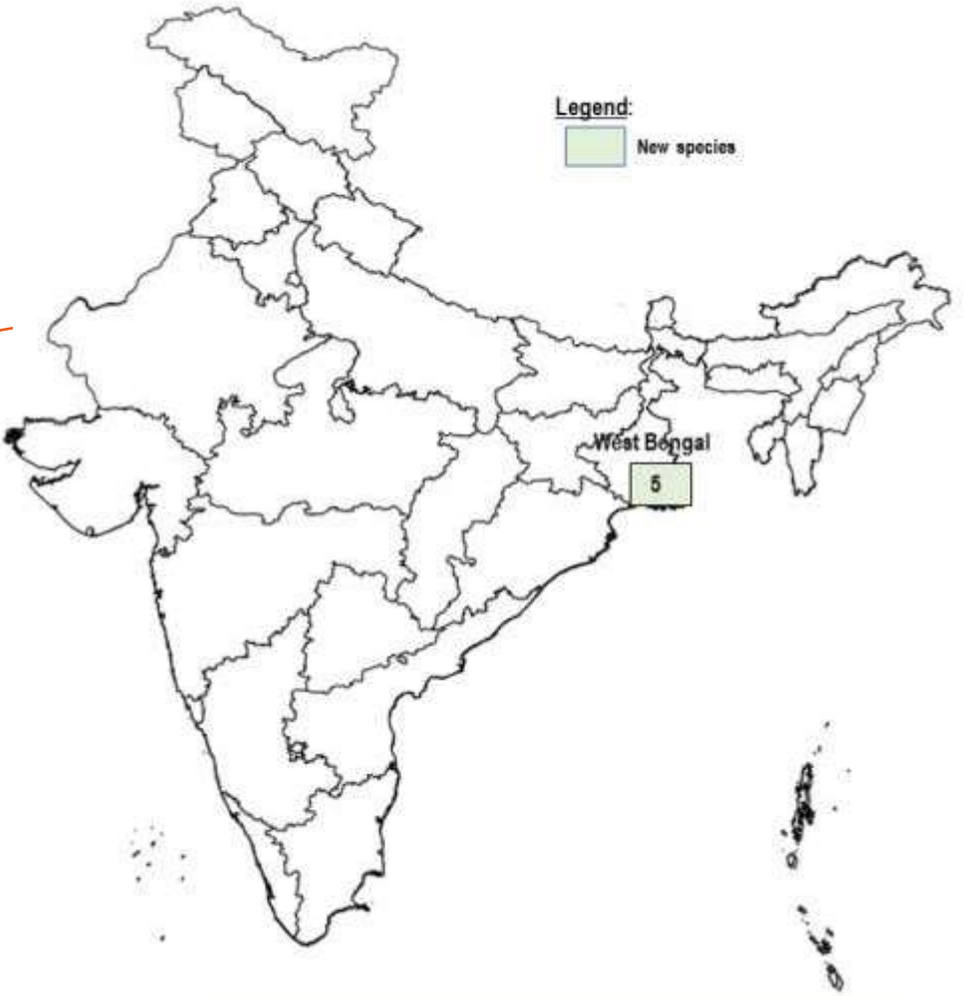
Phylum: CNIDARIA
Class: MYXOSPOREA
Order: BIVALVULIDA
Family: MYXOBOLIDAE
Genus: *Myxobolus* Butschli, 1882

Myxobolus cochinensis Correya, Vijayagopal & Sanil. *J Parasit Dis.*, doi.org/10.1007/s12639-021-01376-z

The species *Myxobolus cochinensis* was described by Mary Soniya Correya, P. Vijayagopal and N. K. Sanil based on myxospores collected from the gill filaments of the fish, *Planiliza macrolepis* (Mugilidae) Smith, 1846, from ochin backwaters, Southwestcoast of India (9.9312_ N,76.2673_ E). The Voucher specimen (air-dried, Giemsa-stained myxospores) have been deposited in the parasite collections of the Marine Biodiversity Museum, Central Marine Fisheries Research Institute, Kerala. The species named after the locality from where the parasite was recovered.

Myxobolus cochinensis Correya *et al.*, 2021

3.16 PROTOZOA



Protists are single-celled eukaryotic microorganisms which colonize and inhabit virtually all environments where eukaryotic life has been found and thus, are one of the most successful groups on the earth. They range in size from 1µm Protozoans are motile and nearly all possess flagella, pseudopodia or cilia, in one or more stages of their life. They are common predators on bacteria, testate amoeba, algae, fungi, diatoms and other small organisms, and thus serves as an important link in cycling of nutrients for the benefit of other life forms. Their sensitivity towards any change in the environment (diversity, as well as the structure and functional characteristics) contain immense information to develop and test them as bioindicators for evaluating environmental health. Many protists species can be considered as a highly valuable bioindicators in water quality analysis as well as model laboratory organism for various in-depth studies due to their ability to growth rapidly, having high turnover rates and short generation times allowing them to response quickly to changing environmental conditions. Over 65,000 protists have been known so far from the world of which more than half are fossils and about 10,000 species are parasitic. From India, thus far nearly 3400 species of protists have been recorded, including the parasitic. This year 5 new protozoan species have been described from India, all from the state of West Bengal.

Phylum: APICOMPLEXA
Class: GREGARINOMORPHEA
Order: ARTHROGREGARIDA
Family: MONOCYSTIDAE
Genus: *Monocystis* Stein, 1848

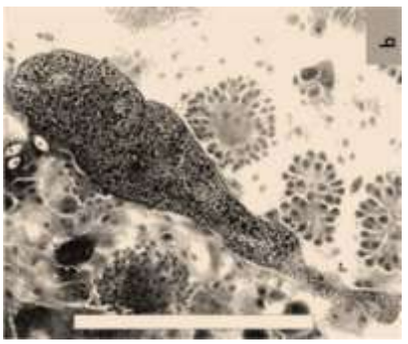
Monocystis elliptoidum Bhowmik, Kindu & Bandyopadhyay. *Uttar Pradesh Journal of Zoology*, 42(20): 128-145, 2021

The species *Monocystis elliptoidum* was described by Biplab Bhowmik, Beauty Kundu and Probir Kumar Bandyopadhyay based on a Holotype and Paratypes collected from West Bengal, Murshidabad, Bharatpur (23.88736°N and 88.08235°E). The type specimens have been deposited in the Parasitology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, West Bengal and national collection of the Zoological Survey of India. The species name "*elliptoidum*" is given after the shape of the parasite under discussion.

Monocystis elliptoidum Bhowmik *et al.*, 2021

Monocystis pontoscolexae Bhowmik, Kundu & Bandyopadhyay. *Uttar Pradesh Journal of Zoology*, 42(20): 128-145, 2021

The species *Monocystis pontoscolexae* was described by Biplab Bhowmik, Beauty Kundu and Probir Kumar Bandyopadhyay based on a Holotype and Paratypes collected from West Bengal, Paschim Medinipur, Belda (22.070992°N and 87.336639°E). The type specimens have been deposited in the Parasitology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, West Bengal and national collection of the Zoological Survey of India. The species name "*pontoscolexae*" is given after the generic name of the host earthworm *Pontoscolex corethrurus*.



Monocystis pontoscolexae
Bhowmik *et al.*, 2021

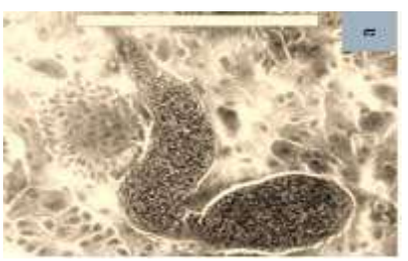
Monocystis dolium
Bhowmik *et al.*, 2021

Monocystis dolium Bhowmik, Kundu & Bandyopadhyay. *Uttar Pradesh Journal of Zoology*, 42(20): 128-145, 2021

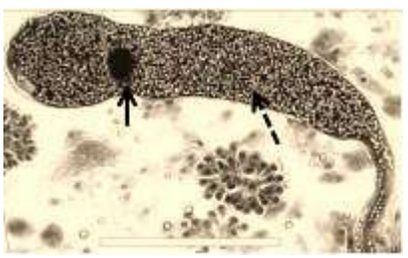
The species *Monocystis dolium* was described by Biplab Bhowmik, Beauty Kundu and Probir Kumar Bandyopadhyay based on a Holotype and Paratypes collected from West Bengal, Bardhaman, Rasulpur (23.184437°N and 88.029237°E). The type specimens have been deposited in the Parasitology Laboratory, Department of Zoology, University of Kalyani, West Bengal and National collection of the Zoological Survey of India. The species name "*dolium*" given after the structure of the gamont is doliform.

Monocystis lomentum Bhowmik, Kundu & Bandyopadhyay. *Uttar Pradesh Journal of Zoology*, 42(20): 128-145, 2021

The species *Monocystis lomentum* was described by Biplab Bhowmik, Beauty Kundu and Probir Kumar Bandyopadhyay based on a Holotype and Paratypes collected from West Bengal, Nadia, Ranaghat (23.173197°N and 88.563523°E). The type specimens have been deposited in the Parasitology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, West Bengal and national collection of the Zoological Survey of India. The species name "*lomentum*" has been given after the shape of the gamont is lomentiform.



Monocystis lomentum
Bhowmik *et al.*, 2021



Monocystis asmati
Bhowmik *et al.*, 2021

Monocystis asmati Bhowmik, Kundu & Bandyopadhyay. *Uttar Pradesh Journal of Zoology*, 42(20): 128-145, 2021

The species *Monocystis asmati* was described by Biplab Bhowmik, Beauty Kundu and Probir Kumar Bandyopadhyay based on a Holotype and Paratypes collected from West Bengal, Nadia, Krishnanagar (23.39915°N and 88.49249°E). The type specimens have been deposited in the Parasitology Laboratory, Department of Zoology, University of Kalyani, Kalyani 741235, West Bengal and national collection of the Zoological Survey of India. The species name "*asmati*" has been designated after the name of the Prof. Ghazi SM Asmat, Department of Zoology, University of Chittagong, Chittagong, Bangladesh for his outstanding contribution in the field of parasitology.

4

NEW RECORDS

This year one mammalian species has been reported for the first time from India from the state of Meghalaya.

Phylum: CHORDATA
Class: MAMMALIA
Order: CHIROPTERA
Family: VESPERTILIONIDAE
Genus: *Eudiscopus* Conisbee, 1953

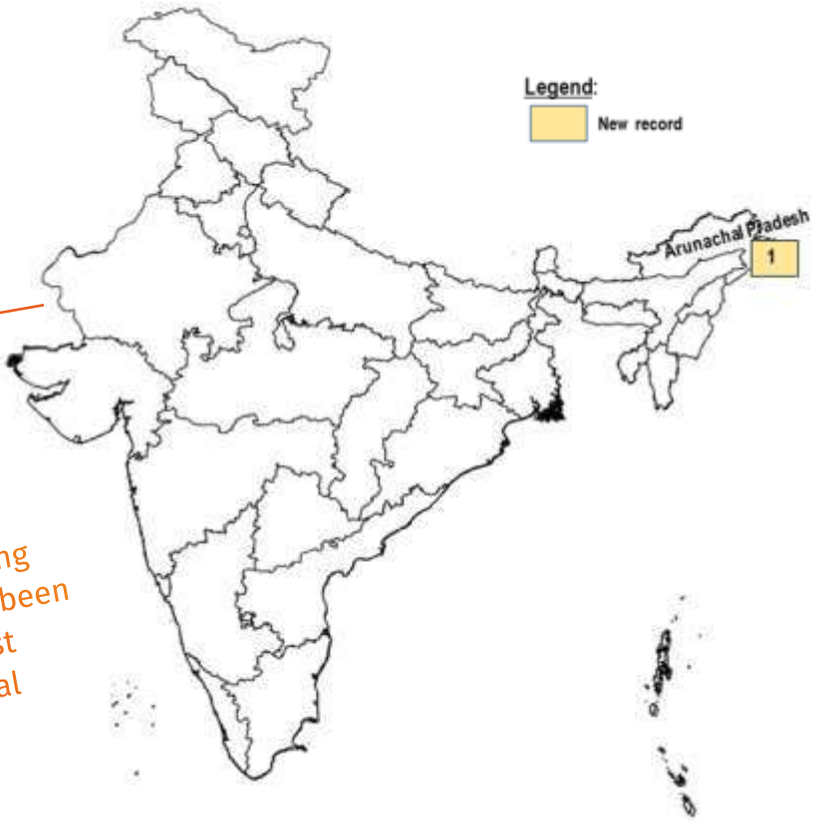
Eudiscopus denticulus (Osgood, 1932)

The species *Eudiscopus denticulus* earlier known from Myanmar, Thailand, Laos, Vietnam, Yunnan and China, has been reported for the first time from India based on a collection made from Nongkhyllem Wildlife Sanctuary, in Ri-Bhoi district (25°56'13" N and 91°46'24" E, 210 m), Meghalaya. The specimens have been deposited in the Zoological Survey of India, Shillong (ZSI). It has been published by Uttam Saikia, Rohit Chakravarty, Vishwanath D. Hegde, Asem Bipin Meetei, Sergei Kruskop, Gabor Csorba and Manuel Ruedi in the journal: *Revue suisse de Zoologie*, 128(1): 187-198, 2021.

Eudiscopus denticulus (Osgood, 1932)

4.2 AVES

One species belonging to Phylum Aves has been reported for the first time from Arunachal Pradesh, India.

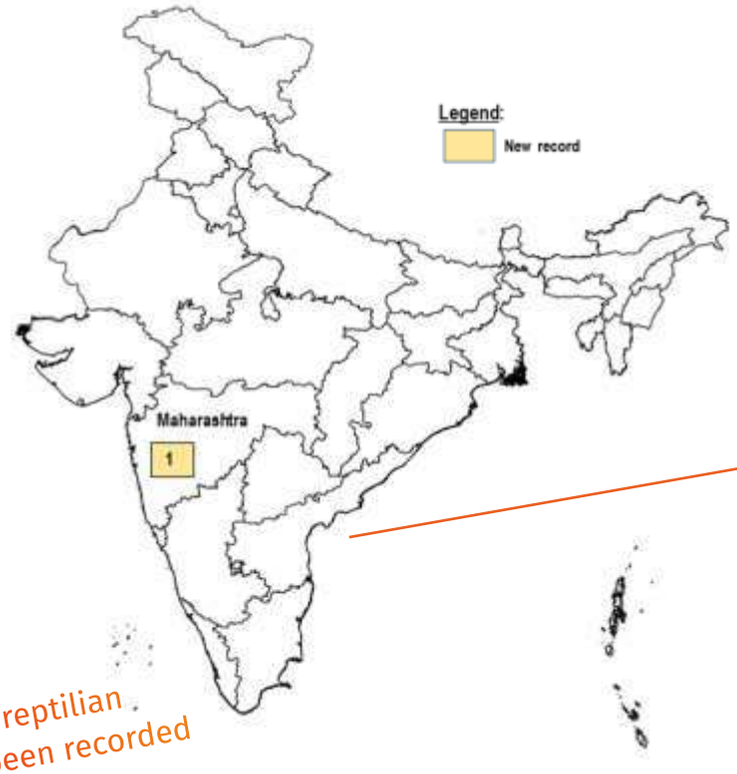


Phylum: CHORDATA
Class: AVES
Order: PASSERIFORMES
Family: FRINGILLIDAE
Genus: *Carpodacus* Kaup, 1892

Carpodacus trifasciatus Verreaux, 1871

The species *Carpodacus trifasciatus* earlier known from China, has been reported for the first time from India based on a collection made from Sela Pass, West Kameng district, Baisakhi village (27.49° N and 92.11° E, 3852 m), Arunachal Pradesh. It has been published by Atharva Singh, Himadri Sekhar Mondal and Girish Jathar in the journal: *Indian BIRDS*, 17(1): 17-18, 2021.

Carpodacus trifasciatus Verreaux, 1871



REPTILIA 4.3

This year one reptilian species has been recorded for the first time from India, from the state of Maharashtra.

Phylum: CHORDATA
Class: REPTILIA
Order: SQUAMATA
Family: COLUBRIDAE
Genus: *Ptyas* Fitzinger, 1843

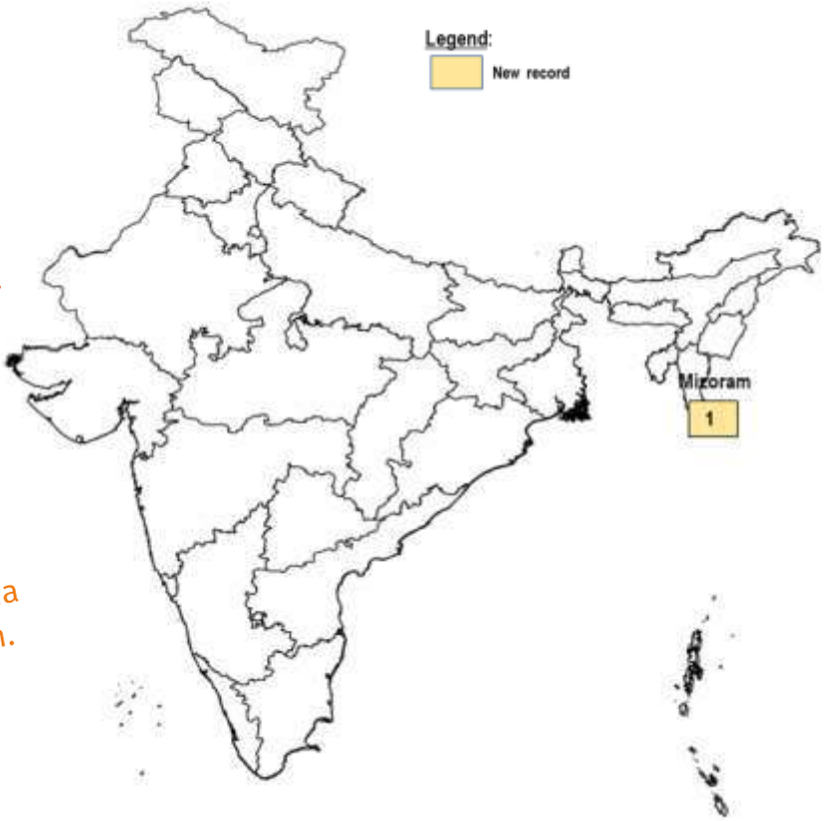
Ptyas mucosa (Linnaeus, 1758)

The species *Ptyas mucosa* earlier known from Bangladesh, eastern Iran, Turkmenistan, Afghanistan, and south-eastern Asia, has been reported for the first time from India based on a collection made from Sandipani School on Katol Bypass Road (21.170252°N and 79.025005°E), Nagpur, Maharashtra. Photographic vouchers have been submitted to the Gallery of the Indian Wildlife Rescue and Research Association (IRRA), Pune, Maharashtra, India. It has been published by Girish Choure, Shubham Adhikari, Pallavi Choure, Ajinkya Unawane, Lal Biakzuala and Hmar Tlawmte Lalremsanga in the journal: *Reptiles* and *Amphibians*, 28(2): 240-241, 2021.

Ptyas mucosa
(Linnaeus, 1758)

4.4 AMPHIBIA

This year one amphibian species has been reported for the first time from India from the state of Mizoram.



Phylum: CHORDATA
Class: AMPHIBIA
Order: ANURA
Family: RHACOPHORIDAE
Genus: *Raorchestes* Biju, Shouche, Dubois, Dutta, and Bossuyt, 2010

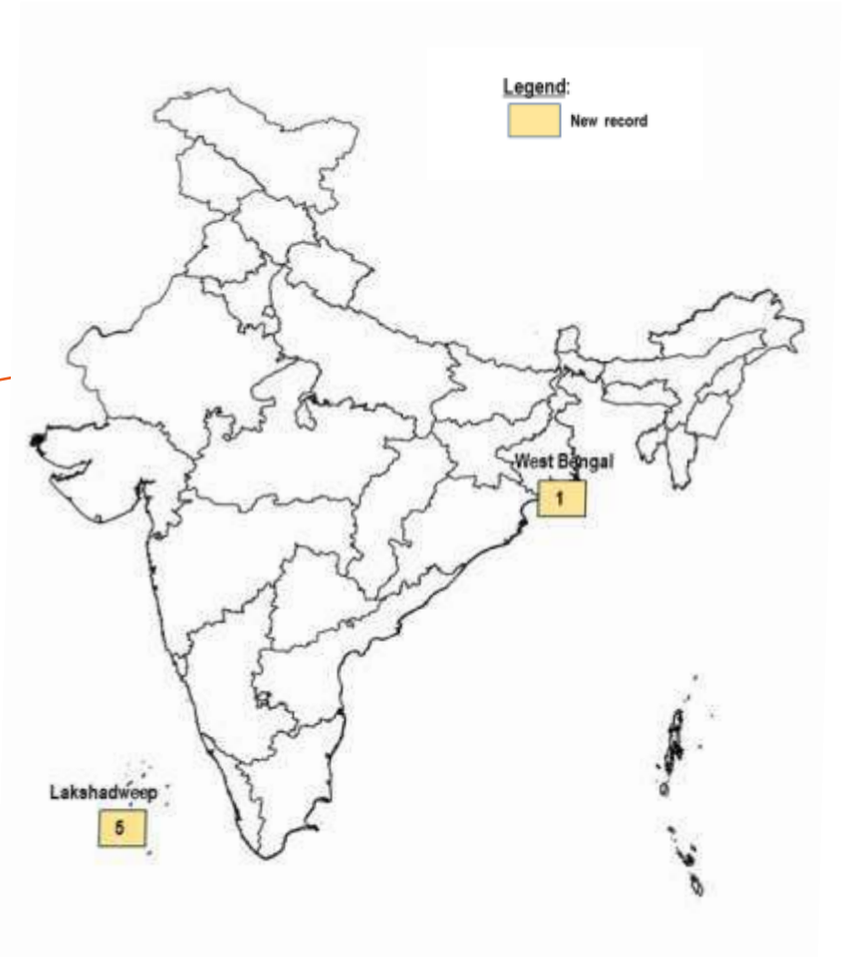
Raorchestes cangyuanensis Wu, Suwannapoom, Xu, Murphy, and Che, 2019

DNA barcoding of two rhacophorid species of the genus *Raorchestes* and *Kurixalus* that are not readily identifiable to the species level based on their morphology revealed that the species *Raorchestes* cangyuanensis which is recorded for the first time from India. It has been published by Samuel Lalronunga, Vanramliana Vanramliana, Lalramliana Lalramliana and Esther Lalhmingliani in the journal: *Zootaxa*, 4974(2), 2021. https://doi.org/10.11646/zootaxa.4974.2.7

Raorchestes cangyuanensis Wu *et al.*, 2019

4.5 PISCES

A total of six species, five from Lakshadweep and one from West Bengal have been recorded for the first time from India this year.



Phylum: CHORDATA
Class: ACTINOPTERYGII
Order: ACANTHURIFORMES
Family: ACANTHURIDAE
Genus: *Naso* Lacépède, 1801

Naso tonganus (Valenciennes, 1835)

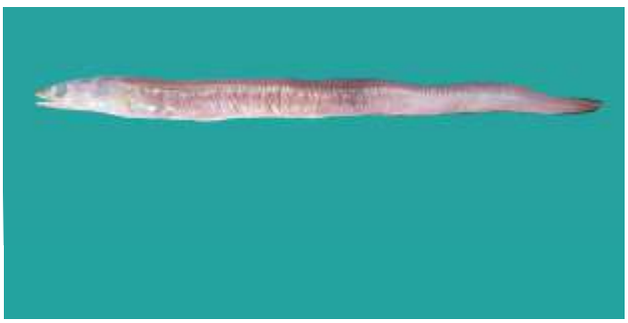
The species *Naso tonganus* earlier known from East Africa to the Samoan Islands, Australia in the south, the Ryukyu Islands in the north, has been reported for the first time from India based on a collection made from Lakshadweep archipelago. It has been published by Rajkumar Rajan, P. T. Rajan, S. S. Mishra, Abdul Raheem C.N., Shrinivaasu S., Surendar C. and Damodhar A. T. in the journal: *Marine Biodiversity Records,* 14: 14, 2021.

Naso tonganus (Valenciennes, 1835)

Order: ANGUILLIFORMES
Family: CONGRIDAE
Genus: *Ariosoma* Swainson, 1838

Ariosoma majus (Asano, 1958)

The species *Ariosoma majus* earlier known from Japan, Vietnam, Philippines and Taiwan, has been reported for the first time from India based on a collection made northern Bay of Bengal, 197 km away from the Deshpran fishing harbour (21°47.752'N and 87°52.869E), West Bengal. The specimens have been deposited in the ZSI-EBRC. It has been published by Debnayaran Roy, Tapan Khatua, Dipanjan Ray and Anil Mohapatra in the journal: *Thalassas: An International Journal of Marine Sciences,* 10.1007/s41208-020-00284-y, 2021.



Ariosoma majus (Asano, 1958)

Ecsenius yaeyamaensis (Aoyagi, 1954)

Order: BLENNIIFORMES
Family: BLENNIIDAE
Genus: *Ecsenius* McCulloch, 1923

Ecsenius yaeyamaensis (Aoyagi, 1954)

The species *Ecsenius yaeyamaensis* earlier known from Sri Lanka to Vanuatu, north to southern Japan, south to Australia and New Caledonia, has been reported for the first time from India based on a collection made from Lakshadweep archipelago. The specimens have been deposited in the ZSI-MBRC It has been published by Rajkumar Rajan, P. T. Rajan, S. S. Mishra, Abdul Raheem C.N., Shrinivaasu S., Surendar C. and Damodhar A. T. in the journal: *Marine Biodiversity Records,* 14: 14, 2021.

Order: KURTIFORMES
Family: APOGONIDAE
Genus: *Zoramia* D. S. Jordan, 1917

Zoramia virdiventer Greenfield, Langston & Randall, 2005

The species *Zoramia virdiventer* earlier known from Indonesia east to Samoa, Fiji and Marshal Island, north to Japan south to Australia, has been reported for the first time from India based on a collection made from Lakshadweep archipelago. The specimens have been deposited in the ZSI-MBRC. It has been published by Rajkumar Rajan, P. T. Rajan, S. S. Mishra, Abdul Raheem C.N., Shrinivaasu S., Surendar C. and Damodhar A. T. in the journal: *Marine Biodiversity Records,* 14: 14, 2021.

Zoramia virdiventer Greenfield, Langston & Randall, 2005

Order: PERCIFORMES
Family: SCORPAENIDAE
Genus: *Sebastapistes* T. N. Gill, 1877

Sebastapistes cyanostigma (Bleeker, 1856)

The species *Sebastapistes cyanostigma* earlier known from the Red Sea to East Africa to the Line Islands and Samoa, Australia (Queensland and the Timor Sea) in the south to Ryukyu and Ogasawara Islands in the north, has been reported for the first time from India based on a collection made from Lakshadweep archipelago. The specimens have been deposited in the ZSI-MBRC. It has been published by Rajkumar Rajan, P. T. Rajan, S. S. Mishra, Abdul Raheem C.N., Shrinivaasu S., Surendar C. and Damodhar A. T. in the journal: *Marine Biodiversity Records,* 14: 14, 2021.

Sebastapistes cyanostigma (Bleeker, 1856)

Class: CHONDRICHTHYES
Order: MYLIOBATIFORMES
Family: DASYATIDAE
Genus: *Taeniura* J. P. Müller & Henle, 1837

Taeniura meyeni Müller & Henle, 1841

The species *Taeniura meyeni* earlier known from the Red Sea, east coast of Africa east to the Marquesas Islands, north to southern Japan and Ogasawara Islands, south to Queensland (Australia), has been reported for the first time from India based on a collection made from Lakshadweep archipelago. The specimens have been deposited in the ZSI-MBRC. It has been published by Rajkumar Rajan, P. T. Rajan, S. S. Mishra, Abdul Raheem C.N., Shrinivaasu S., Surendar C. and Damodhar A. T. in the journal: *Marine Biodiversity Records,* 14: 14, 2021.

Taeniura meyeni Müller & Henle, 1841

4.6 ECHINODERMATA

One species belonging to phylum Echinodermata has been recorded from Lakshadweep for the first time from India.

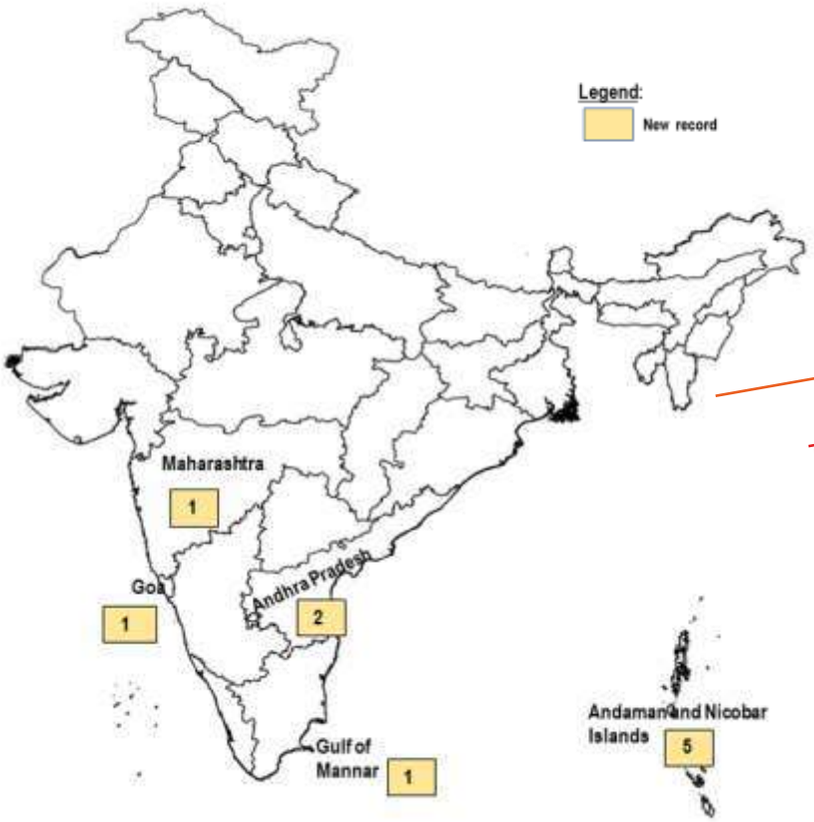
Phylum: ECHINODERMATA
Class: HOLOTHUROIDEA
Order: HOLOTHURIIDA
Family: HOLOTHURIIDAE
Genus: *Bohadschia* Jaeger, 1833

Bohadschia atra Massin, Rasolofonirina, Conand & Samyn, 1999

The species *Bohadschia atra* earlier known from Comoros Island, Kenya, Tanzania and Madagascar, has been reported for the first time from India based on a collection made from Agatti and Kadmat Islands in the Lakshadweep Archipelago, Arabian Sea. The specimens have been deposited in the ZSI-Kolkata. It has been published by Manickam Nithyanandan and Nityanandam Marimuthu in the journal: *Thalassas: An International Journal of Marine Sciences* (2021) 37:813–816, 2021

Bohadschia atra Massin *et al.*,1999

MOLLUSCA
4.7



This year a total of nine molluscan species are recorded for the first time from India, one species from both Maharashtra and Goa, five from Andaman and Nicobar Islands, two from Andhra Pradesh and one from Gulf of Munnar.

Phylum: MOLLUSCA
Class: BIVALVIA
Order: VENERIDA
Family: MACTRIDAE
Genus: *Mactra* Linnaeus, 1767

Mactra aequisulcata G.B. Sowerby III (1894)

The species *Mactra aequisulcata* earlier known from Madagascar, Coast of South Africa, Karachi Coast of Pakistan, Coast of Oman and in the North-western Persian Gulf, has been reported for the first time from India based on a collection made from Vengurla beach, West coast of India, Maharashtra and Baina beach, Goa. The specimens have been deposited in the National Zoological Collections of the Zoological Survey of India (NZSI). It has been published by Md. Hafiz, S.K. Sajan, Amit Mukhopadhyay and Basudev Tripathy in the journal: *Thalassas: An International Journal of Marine Sciences,* 10.1007/s41208-021-00311-6, 2021.

Mactra aequisulcata G.B. Sowerby III (1894)

Family: VENERIDAE
Genus: *Meretrix* Lamarck, 1799

Meretrix lusoria (Röding, 1798)

The species *Meretrix lusoria* earlier known from China, Korea, Japan, Mutsu Bay, Honshu, Sri Lanka, Malaysia, Singapore, Thailand and Taiwan, has been reported for the first time from India based on a collection made from Tummala Penta, Kavali (14°54'9.44N and 80°5'6.40" E), Andhra Pradesh. The specimens have been deposited in the National Zoological Collections of in ZSI-MBRC. It has been published by Rajendar Kumar Rupavath, Rajkumar Rajan and Vanishree Jegadeesan in the journal: *Rec. zool. Surv. India*, 13(7): 18846-18852, 2021.

Meretrix lusoria (Röding, 1798)

Order: LITTORINIMORPHA
Family: STROMBIDAE
Genus: *Euprotomus* Gill, 1870

Euprotomus bulla (Röding, 1798)

The species *Euprotomus bulla* earlier known from Pacific Ocean along Indonesia, the Ryukus (Japan) and Samoa has been reported for the first time from India based on a collection made from Shastri Nagar, Great Nicobar (06°48.227'N and 93°53.253'E), Great Nicobar Islands. The specimens have been deposited in the ZSI-ANRC. It has been published by S Rajendra and C Sivaperuman in the journal: *Natl. Acad. Sci. Lett.* 2021.10.1007/s40009-021-01049-8

Euprotomus bulla (Röding, 1798)

Class: GASTROPODA
Order: CAENOGASTROPODA
Family: CERITHIIDAE
Genus: *Clypeomorus* Jousseaume, 1888

Clypeomorus petrosa chemnitziana (Pilsbry, 1901)

The species *Clypeomorus petrosa chemnitziana* earlier known from Ryukyus, Philippines and Indonesia have been reported for the first time from India based on a collection made from Vijay Nagar (06°50'683'N and 93°53.479'E; 06°55'479'N and 93°54.243'E), Great Nicobar Islands. The specimens have been deposited in the ZSI-ANRC. It has been published by S Rajendra and C Sivaperuman in the journal: *Journal of Conchology,* 44(2): 209-211, 2021.

Clypeomorus petrosa chemnitziana (Pilsbry, 1901)

Genus: *Sinustrombus* Reeve, 1857

Sinustrombus sinuatus (Lightfoot, 1786)

The species *Sinustrombus sinuatus* earlier known from Ryukyu Islands, Taiwan, Philippines, Indonesia, New Caledonia, Solomos, New Caledonia, Fiji, Marians, Carolines, Marshalls, Micronesia, Melanesia and West Pacific has been reported for the first time from India based on a collection made from Pilobah (06°49'661'N and 93°49.539'E), Great Nicobar Islands. The specimens have been deposited in the ZSI-ANRC. It has been published by S Rajendra and C Sivaperuman in the journal: *Journal of Conchology,* 44(2): 209-211, 2021.

Sinustrombus sinuatus (Lightfoot, 1786)

Order: NEOGASTROPODA
Family: FASCIOLARIIDAE
Genus: *Filifusus* Snyder, Vermeij & Lyons, 2012

Filifuscus manuelae (Bozzetti, 2008)

The species *Filifuscus manuelae* earlier known from Southern Madagascar, has been reported for the first time from India based on a collection made from Mandapam beach (09°16.505' N; 79°08.636' E) and Palk Bay (09°17.094' N; 79°07.813' E), Gulf of Mannar. The specimens have been deposited in the National Zoological Collections of ZSI-MARC. It has been published by P C Tudu, J S Yogesh Kumara and C Venkatraman in the journal: *Indian Journal of Geo Marine Sciences,* 50(08): 670-672, 2021.

Filifuscus manuelae
(Bozzetti, 2008)

Family: TEREBRIDAE
Genus: *Hastula* H. Adams & A. Adams, 1853

Hastula anomala (Gray, 1834)

The species *Hastula anomala* earlier known from Madagascar and Philippines, has been reported for the first time from India based on a collection made from Nakkapalli (17°20.608'N and 82°43.123'E), Andhra Pradesh. The specimens have been deposited in the Marine Biology Laboratory, Department of Zoology, Andhra University. It has been published by Sonali Sanghamitra Rout, Bhagyashree Dash, Bharathi Adapa, N.V. Subba Rao, K. V. Surya Rao, Akkur Raman, Dipti Raut in the journal: *Journal of Conchology,* 44(1): 85-88, 2021.

Hastula anomala
(Gray, 1834)

Family: CONIDAE
Genus: *Conus* Linnaeus, 1758

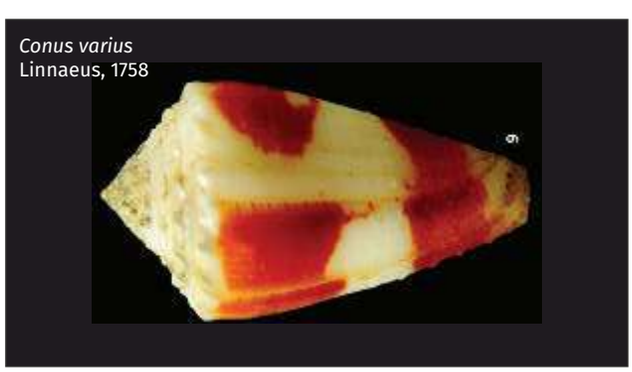
Conus sponsalis Hwass in Bruguière, 1792

The species *Conus sponsalis* earlier known from Tanzania, Hawaii, Maldives, Eilat, Gulf of Aquba & Sinai Peninsula, Aldabra Atoll, Thailand, Mascarene Basin, Rotnest Island, western Australia, Moreton Bay, Queensland, Philippines, Australia, Papua New Guinea, Philippines, China, Japan, & Korea, Christmas Island & the Cocos (Keeling) Islands, American Samoa, Fiji, French Polynesia, Guam, Palau, Papua New Guinea, & Reunion, Mayote, Seychelles Island, Mozambique, Papua New Guinea, & southern Madagascar, Oahu and Molokai, has been reported for the first time from India based on a collection made from Burmanallah (11.523N, 92.740E), South Andaman, Andaman and Nicobar Islands. The specimens have been deposited in the BNHS. It has been published by Jayaseelan Benjamin Franklin and Deepak Arun Apte in the journal: *Journal of Threatened Taxa,* 13(5): 18378-18384, 2021.

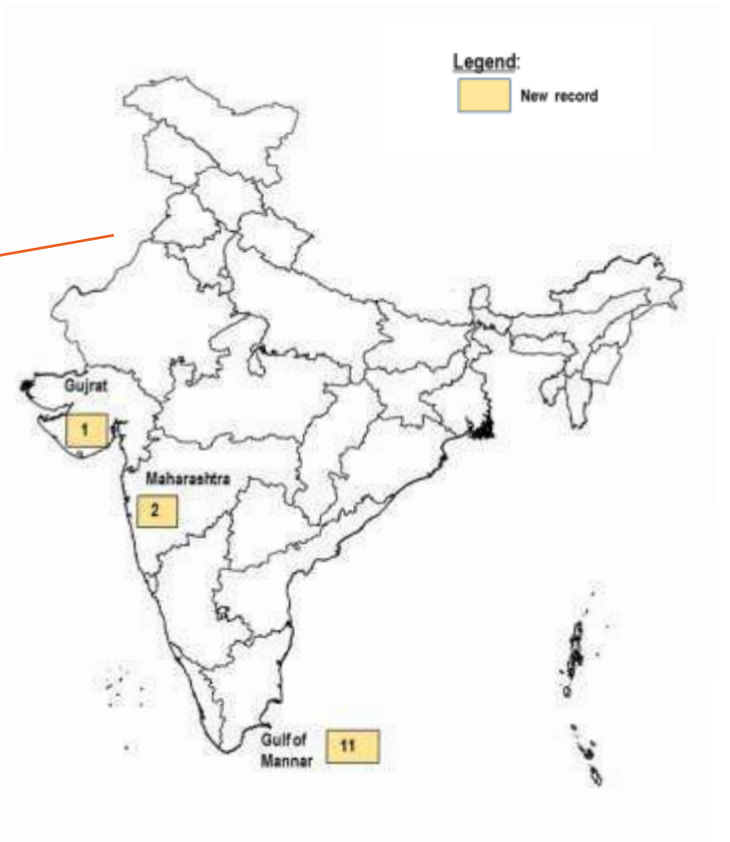
Conus sponsalis Hwass in
Bruguiere, 1798

Conus varius Linnaeus, 1758

The species *Conus varius* earlier known from southern and eastern Africa to Marshall Islands and Tuamotu Archipelago, has been reported for the first time from India based on a collection made from Aberdeen Bay (11.669N and 92.749E), South Andaman, Andaman & Nicobar Islands. The specimens have been deposited in the BNHS. It has been published by Jayaseelan Benjamin Franklin and Deepak Arun Apte in the journal: *Journal of Threatened Taxa,* 13(5): 18378-18384, 2021.



4.8 BRYOZOA



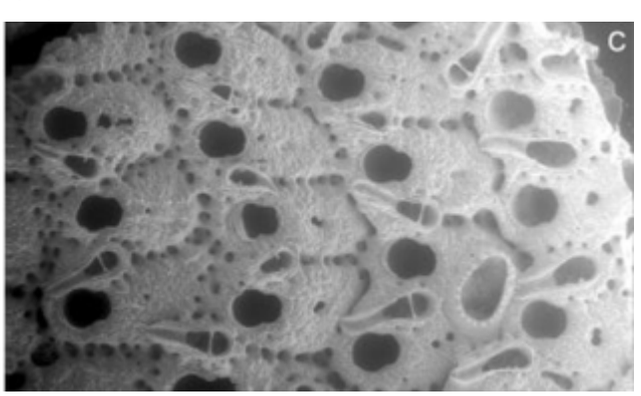
Bryozoans, commonly known as 'sea moss' are aquatic invertebrate colonial organisms. The Bryozoa, literally means ~ moss animals~ and refers to the bushy, moss-like colonies of some species. They are defined as microscopic, sessile, colonial coelomates. These groups of animals inhabit both fresh water as well as marine ecosystems. This group is known taxonomically as the Phylum Bryozoa or the Phylum Ectoprocata. It is considered as a minor-phylum and placed in between the phylum Mollusca and phylum Echinodermata. Bryozoans are biochemically important and have been proved to be a rich source of novel compounds or bioactive agents. Bryostatin-1, a compound produced by Bugula neritina has been in human Phase I clinical trials for the past 2 years and is a promising anti-tumor agent. B. dentate (Lamouroux) was shown to contain an anti-microbial blue pigment. The calcium carbonate of these animals is in a highly pure form for the utilisation in dentistry. According to the world list of Bryozoa there are 5,434 species of living bryozoans reported from all over the world (Bock P and Gordon D, 2019), among which 293 are so far reported from India.

This year a total of twelve species of Bryozoa have been reported for the first time, eleven species from Gulf of Mannar, two from Maharashtra and one from Gujrat. Among which, one species was reported from both Maharashtra and Gulf of Mannar and another species from both Gujrat and Gulf of Mannar.

Phylum: BRYOZOA
Class: GYMNOLAEMATA
Order: CHEILOSTOMATIDA
Family: ARACHNOPUSIIDAE
Genus: *Poricella* (Canu, 1904)

Poricella robusta (Hinck 1884)

The species *Poricella robusta* earlier known from Myanmar, Sri Lanka, Red Sea, Persian Gulf, and Seychelles, has been reported for the first time from India based on a collection made from Kunkeshwar Beach, Maharashtra. The specimens have been deposited in the NZC, Kolkata. It has been published by M.S. Sanjay, C. Venkatramana, S. Louisb, S. Shrinivaasuc and J. S. Yogesh Kumar in the journal: *Indian Journal of Geo Marine Sciences,* 50(09): 714-722, 2021.

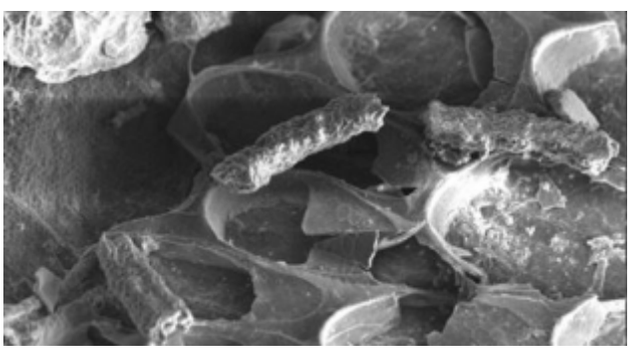


Poricella robusta (Hinck 1884)

Family: ELECTRIDAE
Genus: *Tarsocryptus* (Tilbrook, 2011)

Tarsocryptus laboriosa (Tilbrook, 2006)

The species *Tarsocryptus laboriosa* earlier known from Vanuatu, South China Sea, Lizard Island on the northern Great Barrier Reef and Indo-Philippine region, has been reported for the first time from India based on a collection made from Paliyar Munai Island, Gulf of Mannar. The specimens have been deposited in the NZC, Kolkata. It has been published by M.S. Sanjay, C. Venkatramana, S. Louisb, S. Shrinivaasuc and J. S. Yogesh Kumar in the journal: *Indian Journal of Geo Marine Sciences,* 50(09): 714-722, 2021.

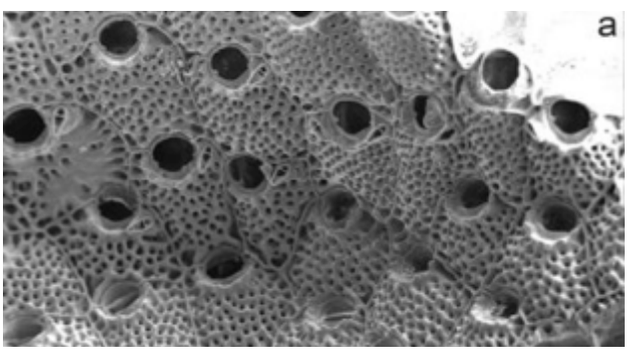


Tarsocryptus laboriosa (Tilbrook, 2006)

Family: LABIOPORELLA
Genus: *Calyptotheca* (Harmer, 1957)

Calyptotheca hastingsae (Harmer, 1957)

The species *Calyptotheca hastingsae* earlier known from Indonesia, Philippines, Queensland and Great Barrier Reef Australia, has been reported for the first time from India based on a collection made from Mandapam group of islands, Gulf of Mannar. The specimens have been deposited in the NZC, Kolkata. It has been published by M.S. Sanjay, C. Venkatramana, S. Louisb, S. Shrinivaasuc and J. S. Yogesh Kumar in the journal: *Indian Journal of Geo Marine Sciences,* 50(09): 714-722, 2021.

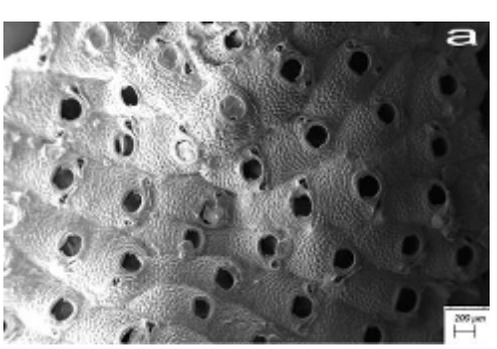


Calyptotheca hastingsae (Harmer, 1957)

Family: HIPPOPODINIDAE
Genus: *Hippopodina* (Levinsen, 1909)

Hippopodina iririkiensis (Tilbrook, 1999)

The species *Hippopodina iririkiensis* earlier known from Indo- West Pacific tropical region, from the Vanuatu Islands and north Queensland to Fiji and in west towards Philippines, Singapore, China, Sri Lanka, Mauritius, Red Sea and Mediterranean, has been reported for the first time from India based on a collection made from Paliyar Munai Island, Gulf of Mannar & Vijayadurg, Maharashtra. The specimens have been deposited in the NZC, Kolkata. It has been published by M.S. Sanjay, C. Venkatramana, S. Louisb, S. Shrinivaasuc and J. S. Yogesh Kumar in the journal: *Indian Journal of Geo Marine Sciences,* 50(09): 714-722, 2021.

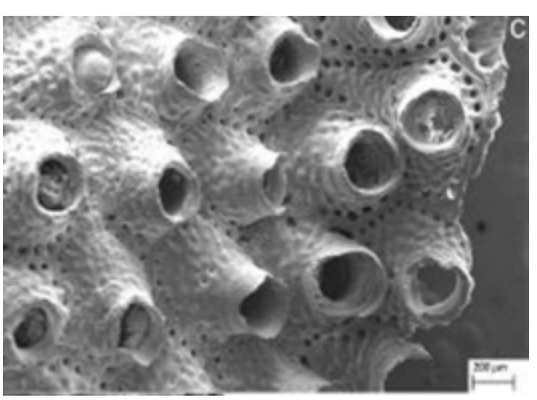


Hippopodina iririkiensis (Tilbrook, 1999)

Family: LEPRALIELLIDAE
Genus: *Drepanophora* (Harmer, 1957)

Drepanophora indica (Hayward, 1988)

The species *Drepanophora indica* earlier known from Mauritius, Poanangisu, Gulf of Emirate, has been reported for the first time from India based on a collection made from Pullivasal Island, Gulf of Mannar. The specimens have been deposited in the NZC, Kolkata. It has been published by M.S. Sanjay, C. Venkatramana, S. Louisb, S. Shrinivaasuc and J. S. Yogesh Kumar in the journal: *Indian Journal of Geo Marine Sciences,* 50(09): 714-722, 2021.

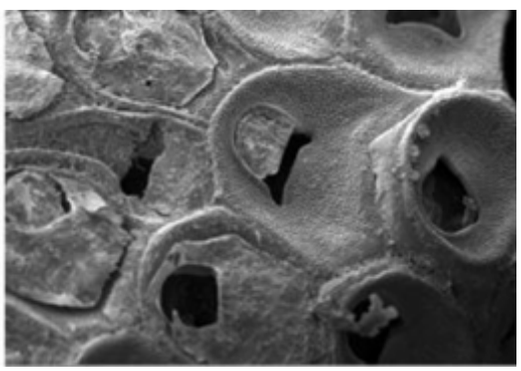


Drepanophora indica (Hayward, 1988)

Family: ONYCHOCELLIDAE
Genus: *Onychocella* Jullien, 1882

Onychocella angulosa (Reuss, 1848)

The species *Onychocella angulosa* earlier known from China sea, Philippines, Indonesia and Sri Lanka, has been reported for the first time from India based on a collection made from Mandapam coast (9.19912 and 79.07530). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.

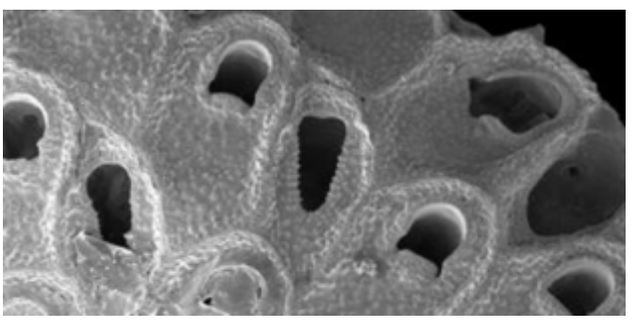


Onychocella angulosa (Reuss, 1848)

Family: PHIDOLOPORIDAE
Genus: *Plesiocleidochasma* Soule, Soule & Chaney, 1991

Smittipora philippinensis (Canu and Bassler, 1929)

The species *Smittipora philippinensis* earlier known from Philippines, Rusell Islands and Florida Islands has been reported for the first time from India based on a collection made from Manali Island (9.21564 and 79.12834). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.

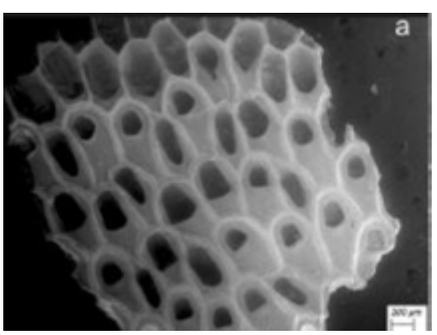


Smittipora harmeriana (Canu & Bassler, 1929)

Genus: *Smittipora* (Jullien, 1882)

Smittipora philippinensis (Canu and Bassler, 1929)

The species *Smittipora philippinensis* earlier known from Philippines, Rusell Islands and Florida Islands has been reported for the first time from India based on a collection made from Manali Island (9.21564 and 79.12834). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.

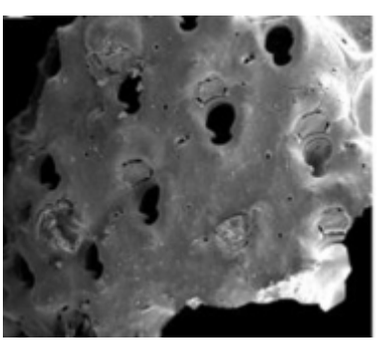


Smittipora philippinensis (Canu and Bassler, 1929)

Family: PHIDOLOPORIDAE
Genus: *Plesiocleidochasma* Soule, Soule & Chaney, 1991

Plesiocleidochasma porcellanum (Busk, 1860)

The species *Plesiocleidochasma porcellanum* earlier known from Sri Lanka, Indonesia, Philippines, Gulf of Mexico, Caribbean, Brazil and Galapagos Island, has been reported for the first time from India based on a collection made from Manali-Putti Island (9.21581 and 79.12800). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.

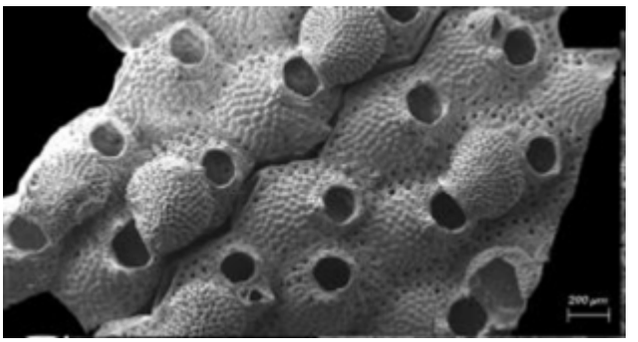


Plesiocleidochasma porcellanum (Busk, 1860)

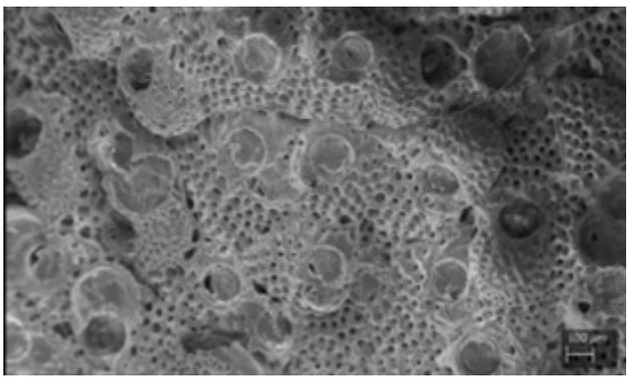
Family: ROBERTSONIDRIDAE
Genus: *Robertsonidra* Osburn, 1952

Robertsonidra argentea (Hincks, 1881)

The species *Robertsonidra argentea* earlier known from Sri Lanka, Philippines, Australia and Fiji, has been reported for the first time from India based on a collection made from Manali-Putti Island (9.21581 and 79.12800). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.



Robertsonidra argentea (Hincks, 1881)



Schizoporella errata
(Waters, 1878)

Family: SCHIZOPORELLIDAE
Genus: *Schizoporella* Hincks, 1877

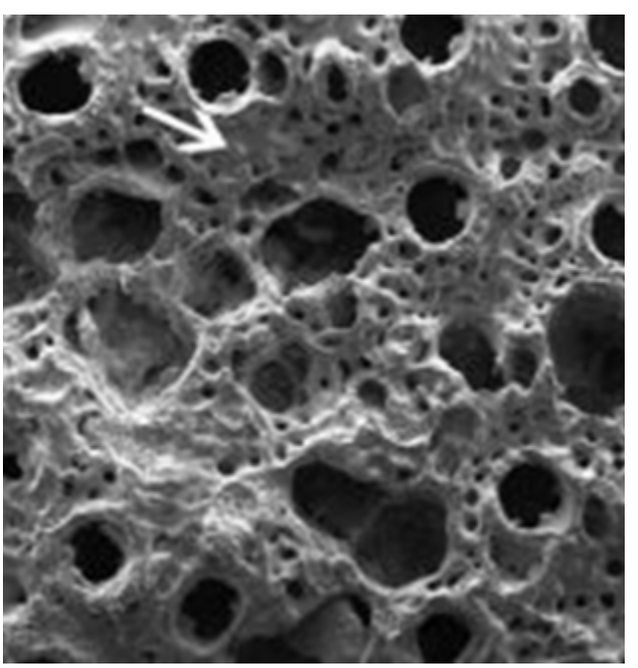
Schizoporella errata (Waters, 1878)

The species *Schizoporella errata* earlier known from California, Hawaii, American Samoa, New Zealand and Australia has been reported for the first time from India based on a collection made from Manali-Putti Island (9.21581 and 79.12800). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.

Family: SMITTINIDAE
Genus: *Parasmittina* Osburn, 1952

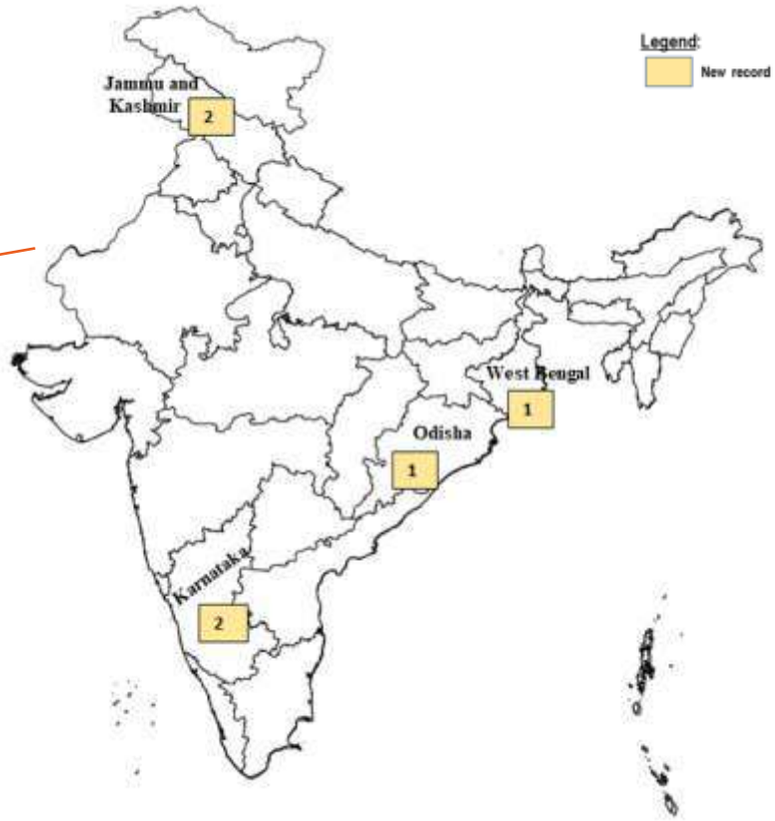
Parasmittina collifera (Robertson, 1908)

The species *Parasmittina collifera* earlier known from British Colombia, Coronados island, Southern California and San Francisco, has been reported for the first time from India based on a collection made from Manali-Putti Island (9.21581 and 79.12800). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Maria Susan Sanjay, S. Shrivivaasu, C. Venkatraman, Soja Louis and Rajappa Babu in the journal: *Regional Studies in Marine Science,* 44(2021): 101775, 2021.



Parasmittina collifera
(Robertson, 1908)

4.9 INSECTA



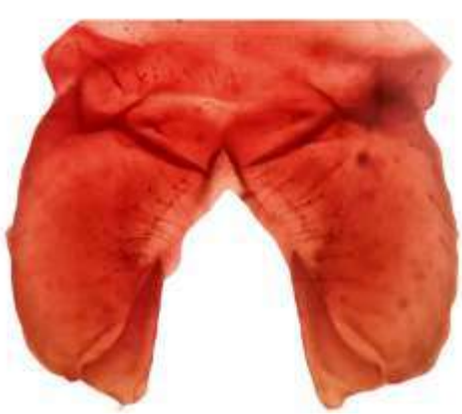
4.9.1. DIPTERA

A total of six dipteran species are recorded for the first time from India; Jammu and Kashmir (2), Karnataka (2), Odisha (1) and West Bengal (1).

Phylum: ARTHROPODA
Class: INSECTA
Order: DIPTERA
Family: CHIRONOMIDAE
Genus: *Procladius* Skuse, 1889

Procladius (Holotanypus) culiciformis (Linnaeus, 1767)

The species *Procladius (Holotanypus) culiciformis* earlier known from Palaearctic and Nearctic realms, has been reported for the first time from India based on a collection made from Susunia Hills (23.37 and 87.02), Bankura, West Bengal. The specimens have been housed in the Entomology Division, department of zoology, the University of Burdwan, West Bengal and will be deposited in the national Zoological collections (NZCI), Kolkata in due course. It has been published by Debarshi Mondal, Tuhar Mukherjee and Niladri Hazra in the journal: *J. Insect Biodiversity,* 029(1): 016-031, 2021.



Procladius (Holotanypus) culiciformis (Linnaeus, 1767)

Family: CULICIDAE
Genus: *Ochlerotatus* Lynch Arribalzaga, 1891

Ochlerotatus alternans (Westwood, 1836)

The species *Ochlerotatus alternans* has been reported for the first time from India based on a collection made from Berhampur University campus, district Ganjam, Odisha. It has been published by Goud Santhosh, Pattnaik Subasini, Hazra Rupenangshu Kumar, Panda Barsa Baisalini Bharathi Annadurai, Poopathi Subbiah in the journal: *Indian J.Nematol.*, 83(4): 580-582, 2021.

Family: SYRPHIDAE
Genus: *Helophilus* Meigen, 1822

Helophilus trivittatus (Fabricius, 1805)

The species *Helophilus trivittatus* earlier known from West Palaearctic eastwards through Eurasia to the Pacific, including Iran and Afghanistan, has been reported for the first time from India based on a collection made from Srinagar (34.131°N and 74.835°E, 1750 m), Jammu and Kashmir. It has been published by Aijaz Ahmad Wachkoo, Jeroen Van Steenis, Amir Maqbool, Shahid Ali Akbar, Jeffrey H. Skevington and Ximo Mengual in the journal: *J. Insect Biodiversity,* 029(2): 044-052, 2021.

Helophilus trivittatus (Fabricius, 1805)

Genus: *Lejogaster* Róndani, 1857

Lejogaster tarsata (Megerle in Meigen, 1822)

The species *Lejogaster tarsata* earlier known from West Palaearctic into European parts of Russia; Central Asia (Iran, Afghanistan, Uzbekistan, Tajiskistan, Kirghizia, Turkmenistan and Kazakhstan to Mongolia), south-eastern Siberia and the Pacific coast, has been reported for the first time from India based on a collection made from Shopian (33.710°N and 74.844°E, 2146 m), Jammu and Kashmir. It has been published by Aijaz Ahmad Wachkoo, Jeroen Van Steenis, Amir Maqbool, Shahid Ali Akbar, Jeffrey H. Skevington and Ximo Mengual in the journal: *J. Insect Biodiversity,* 029(2): 044-052, 2021.

Lejogaster tarsata (Megerle in Meigen, 1822)

Family: TEPHRITIDAE
Genus: *Elaphromyia* Bigot, 1859

Elaphromyia siva Frey, 1917

The species *Elaphromyia siva* has been reported for the first time from India based on a collection made from from Karnataka, Chikkamagaluru, Tarikere, Kemmangundi, K. R. hill station. It has been published by K.J. David, D.L. Hancock, K. Sachin, R.S. Ramya and S. Ramani in the journal: *Zootaxa,* 5023(2): 251-262, 2021.

Elaphromyia siva Frey, 1917

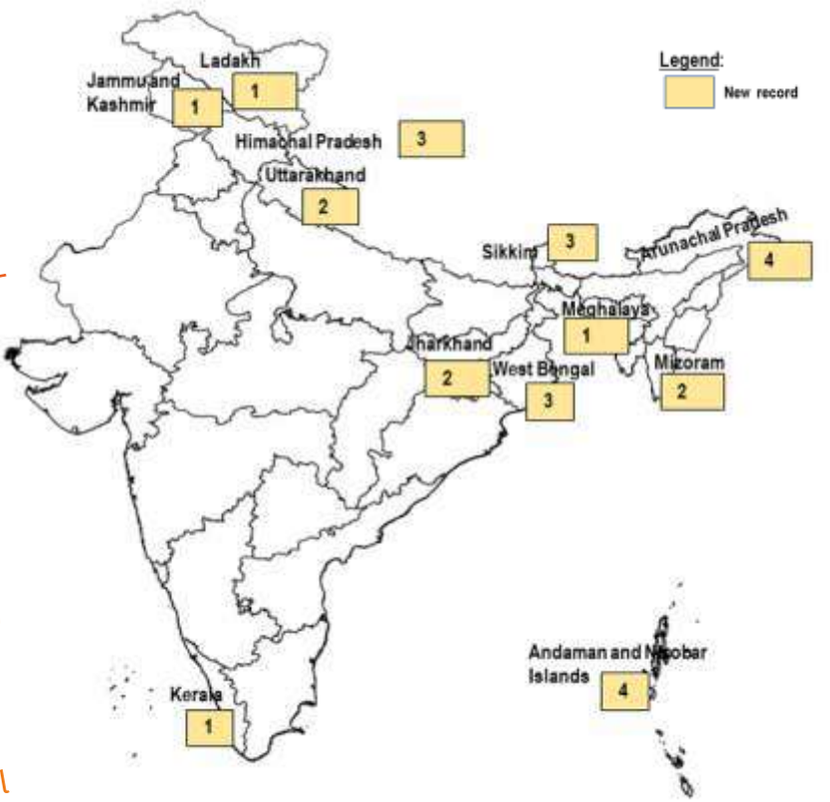
Elaphromyia yunnanensis Wang, 1900

The species *Elaphromyia yunnanensis* has been reported for the first time from India based on a collection made from from Karnataka, Chikkamagaluru, Tarikere, Kemmangundi, K. R. hill station. It has been published by K.J. David, D.L. Hancock, K. Sachin, R.S. Ramya and S. Ramani in the journal: *Zootaxa,* 5023(2): 251-262, 2021.

Elaphromyia yunnanensis Wang, 1900

4.9.2 LEPIDOPTERA

This year a total of 22 Lepidopteran species have been reported for the first time from India: Andaman and Nicobar Islands (4), Arunachal Pradesh (4), Sikkim (3), Himachal Pradesh (3), West Bengal (3), Mizoram (2), Jharkhand (2), Uttarakhand (2), Ladakh (1), Jammu and Kashmir (1), Meghalaya (1), Kerala (1). Some of the species have been reported for the first time from more than one state.



Phylum: ARTHROPODA
Class: INSECTA
Order: DIPTERA
Family: CRAMBIDAE
Genus: *Agrioglypta* Meyrick, 1932

Agrioglypta excelsalis (Walker, 1866)

The species *Agrioglypta excelsalis* earlier known from Australia, Brunei, Indonesia (Borneo, Sulawesi, Sumatra, Java), Malaysia (Sabah) and Philippines, has been reported for the first time from India based on a collection made from different localities of Andaman and Nicobar Islands. The specimens have been deposited in the ZSI-ANRC. It has been published by B.S.K. Rao and C. Sivaperuman in the journal: *Zoosystematica Rossica*, 30(2): 215-221, 2021.

Agrioglypta excelsalis (Walker, 1866)

Family: EREBIDAE
Genus: *Calliteara* Butler, 1881

Calliteara taiwana (Wileman, 1910))

The species *Calliteara taiwana* earlier known from China; Laos; Thailand; Vietnam, has been reported for the first time from India based on a collection made from Chambaghat, Himachal Pradesh (30.923° N; 77.098° E). It has been published by Gagan Preet Kour Bali, Amritpal Singh Kaleka and Devinder Singh in the journal: J. *Bombay Natural History Society,* 118(2), 2021. 10.17087/jbnhs/2021/v118/154304

Calliteara taiwana ((Wileman, 1910))

Calliteara siniaevi Trofimova, 2016

Family: EREBIDAE
Genus: *Calliteara* Butler, 1881

Calliteara siniaevi Trofimova, 2016

The species *Calliteara siniaevi* earlier known from China; Laos; Thailand; Vietnam, has been reported for the first time from India based on a collection made from Nauni, Himachal Pradesh (30.860° N; 77.173°E); Pynursla Meghalaya, (25.310°N; 91.902° E); Rabung Mizoram, (23.685° N; 93.200° E). It has been published by Gagan Preet Kour Bali, Amritpal Singh Kaleka and Devinder Singh in the journal: *J. Bombay Natural History Society,* 118(2), 2021. 10.17087/jbnhs/2021/v118/154304

Family: EUPTEROTIDAE
Genus: *Tibetanja* Naumann, Nässig, & Rougerie, 2020

Tibetanja tagoroides Naumann, Nässig & Rougerie, 2020

The species *Tibetanja tagoroides* earlier known from Tibet, has been reported for the first time from India based on a collection made from lower Dibang valley (28°764'N and 95°961'E) and Tale Valley Wildlife Sanctuary (27°328'N, 93°538'E, Arunachal Pradesh. The specimens have been deposited in Arunachal Pradesh It has been published by Alka Vaidya and H. Sankararaman in the journal: Journal of Threatened Taxa, 13(11): 19657-19659, 2021.

Tibetanja tagoroides Naumann *et al.*, 2021

Family: GEOMETRIDAE
Genus: *Xenortholitha* Inoue, 1944

Xenortholitha falcata Yazaki, 1993

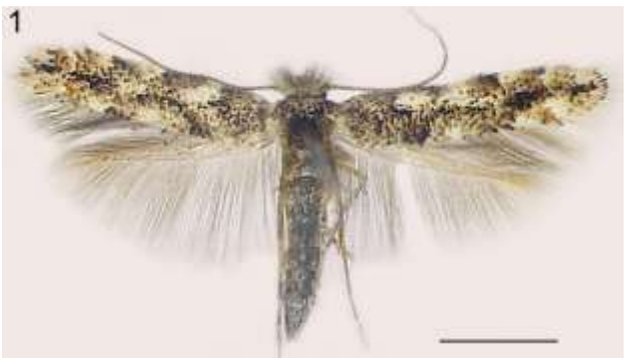
The species *Xenortholitha falcata* earlier known from Nepal, has been reported for the first time from India based on a collection made from different localities of Himachal Pradesh and Uttarakhand. The specimens have been deposited in the Himalayan Lepidoptera collection in Lepidoptera Section, Zoological Survey of India, Kolkata. It has been published by Kaushik Mallick, Uttaran Bandyopadhyay, Arna Mazumder, Rushati Dey, Angshuman Raha, Abesh Kumar Sanyal, Sandeep Kumar Gupta, Virendra Prasad Uniyal and Kailash Chandra in the journal: *Rec. zool. Surv. India,* 121(4): 483-486, 2021.

Xenortholitha falcata Yazaki, 1993

Family: GRACILLARIIDAE
Genus: *Phyllonorycter* Hübner, 1822

Phyllonorycter populifoliella (Treitschke, 1833)

The species *Phyllonorycter populifoliella* earlier known from Europe, Russia, Turkey, Tajikistan, Turkmenistan, Uzbekistan, Iran and China, has been reported for the first time from India based on a collection made from Leh (34°9'9.31'N and 77°34'37.37'E, 3400 m), Ladakh region. The specimens have been deposited in the National Pusa Collection, Division of Entomology, ICAR-Indian Agricultural Research Institute, New Delhi, India. It has been published by Pathour R. Shashank, Narendra Singh, Anand Harshana, Twinkle Sinha and Natalia Kirichenko in the journal: *Zootaxa,* 4915(3): 435-450, 2021.



Phyllonorycter populifoliella (Treitschke, 1833)

Alciphanes clavata Park, 2001

Family: LECITHOCERIDAE
Genus: *Alciphanes* Meyrick, 1925

Alciphanes clavata Park, 2001

The species *Alciphanes clavata* earlier known from Sri Lanka, has been reported for the first time from India based on a collection made from Dalma Wildlife Sanctuary (22°54'15''N and 86°12'59''E, 279 m), Jharkhand. The specimens have been deposited in the Zoological Survey of India, Kolkata and in the National Pusa Collection, Division of Entomology, ICAR-IARI, New Delhi. It has been published by Prakash C. Pathania, Pathour R. Shashank and Kyu-Tek Park in the journal: *Zootaxa,* 4920(4): 595-599, 2021.

Genus: *Torodora* Meyrick, 1894

Torodora macrosigna Gozmány, 1973

The species *Torodora macrosigna* earlier known from Nepal, has been reported for the first time from India based on a collection made from Dalma Wildlife Sanctuary (22°54'15''N and 86°12'59''E, 279 m), Jharkhand. The specimens have been deposited in the Zoological Survey of India, Kolkata and in the National Pusa Collection, Division of Entomology, ICAR-IARI, New Delhi. It has been published by Prakash C. Pathania, Pathour R. Shashank and Kyu-Tek Park in the journal: *Zootaxa,* 4920(4): 595-599, 2021.

Torodora macrosigna Gozmány, 1973

Family: LIMACODIDAE
Genus: *Mambarona* Hering, 1931

Mambarona congrua (Walker, 1862)

The species *Mambarona congrua* earlier known from Thailand, Cambodia, central Vietnam, Malaysia, Sundaland, Sulawesi, has been reported for the first time from India based on a collection made from different localities of Andaman and Nicobar Islands and Kerala. The specimens have been deposited in the NZC-ZSI, India. It has been published by Navneet Singh, Jalil Ahmad, Kailash Chandra and Alexey Solovyev in the journal: *Zootaxa,* 4927(1): 123-132, 2021.

Mambarona congrua (Walker, 1862)

Melinaria pseudorepanda (Orhant, 2000)

Genus: *Melinaria* Solovyev, 2014

Melinaria pseudorepanda kalawensis (Orhant, 2000)

The species *Melinaria pseudorepanda kalawensis* earlier known from Myanmar, China (Yunnan, Guangxi), Laos, northern Thailand and Vietnam, has been reported for the first time from India based on a collection made from lower Subansiri, Pange Wildlife Sanctuary, Arunachal Pradesh. The specimens have been deposited in the NZC-ZSI, India. It has been published by Navneet Singh, Jalil Ahmad, Kailash Chandra and Alexey Solovyev in the journal: *Zootaxa,* 4927(1): 123-132, 2021.

Genus: *Parasa* Moore, [1860]

Parasa julikatis Solovyev & Witt, 2009

The species *Parasa julikatis* earlier known from Vietnam, China and northern Thailand, has been reported for the first time from India based on a collection made from Upper Siang, Arunachal Pradesh. The specimens have been deposited in the NZC-ZSI, India. It has been published by Navneet Singh, Jalil Ahmad, Kailash Chandra and Alexey Solovyev in the journal: *Zootaxa,* 4927(1): 123-132, 2021.

Parasa julikatis Solovyev & Witt, 2009

Genus: *Thosea* Walker, 1855

Thosea lutea Heylaerts, 1890

The species *Thosea lutea* earlier known from Central and southern Vietnam, West Malaysia, Borneo, Indonesia, Sumatra, Bangka and Java, has been reported for the first time from India based on a collection made from Laxmi nagar, Great Nicobar Island, Andaman and Nicobar Islands. The specimens have been deposited in the NZC-ZSI, India. It has been published by Navneet Singh, Jalil Ahmad, Kailash Chandra and Alexey Solovyev in the journal: *Zootaxa,* 4927(1): 123-132, 2021.

Thosea lutea Heylaerts, 1890

Family: NOCTUIDAE

Genus: *Phlogophora* Treitschke, 1825

Phlogophora nobilis Hreblay & Ronkay, 1998

The species *Phlogophora nobilis* earlier known from Nepal, has been reported for the first time from India based on a collection made from West Sikkim, Khangchendzonga Biosphere reserve, Yuksom (27.37864°N and 088.22087°E, 1879 m), Sikkim and different localities of Singalila National Park, Darjeeling district, West Bengal. The specimens have been deposited in the NZC-ZSI, India. It has been published by Uttaran Bandyopadhyay, Rushati Dey, Kamalika Bhattacharyya, Kaushik Mallick, Arna Mazumder, Subrata Gayen, Moumita Das, Angshuman Raha, Abesh Kumar Sanyal, Vikas Kumar, Virendra Prasad Uniyal and Kailash Chandra in the journal: *Zootaxa*, 5004(2): 311-342, 2021.

Phlogophora nobilis Hreblay & Ronkay, 1998

Phlogophora szecsenyii Hreblay & Ronkay, 1998

Phlogophora szecsenyii Hreblay & Ronkay, 1998

The species *Phlogophora szecsenyii* earlier known from Nepal, Thailand and Vietnam, has been reported for the first time from India based on a collection made from West Sikkim, Khangchendzonga Biosphere reserve, Yuksom (27.37864°N and 088.22087°E, 1879 m), Sikkim. The specimens have been deposited in the NZC-ZSI, India. It has been published by Uttaran Bandyopadhyay, Rushati Dey, Kamalika Bhattacharyya, Kaushik Mallick, Arna Mazumder, Subrata Gayen, Moumita Das, Angshuman Raha, Abesh Kumar Sanyal, Vikas Kumar, Virendra Prasad Uniyal and Kailash Chandra in the journal: *Zootaxa,* 5004(2): 311-342, 2021.

Phlogophora meticulodina (Draudt, 1950)

The species *Phlogophora meticulodina* earlier known from Pakistan, Nepal and China, has been reported for the first time from India based on a collection made from Uttar Kashi district, Govind National Park, Har-Ki-Dun (31.13592°N and 078.39939°E, 3400 m) and Chamoli district, Valley of Flowers National Prak, Ghangaria (30.70120°N and 079.59398°E, 3103 m), Uttarakhand. The specimens have been deposited in the NZC-ZSI, India. It has been published by Uttaran Bandyopadhyay, Rushati Dey, Kamalika Bhattacharyya, Kaushik Mallick, Arna Mazumder, Subrata Gayen, Moumita Das, Angshuman Raha, Abesh Kumar Sanyal, Vikas Kumar, Virendra Prasad Uniyal and Kailash Chandra in the journal: *Zootaxa,* 5004(2): 311-342, 2021.

Phlogophora meticulodina (Draudt, 1950)

Family: NOLIDAE

Genus: *Casminola* László, G. Ronkay & Witt, 2010

Casminola seminigra (Hampson, 1896)

The species *Casminola seminigra* earlier known from Nepal, Bhutan and Thailand, has been reported for the first time from India based on a collection made from Kalimpong, Jhandi, (N27°057095' and E88°469297', 1742 m), West Bengal. The specimens have been deposited in the National Zoological Collections, Zoological Survey of India, Gangetic Plains Regional Centre, Patna, Bihar. It has been published by Rahul Joshi, Navneet Singh and Nikhil Kuni in the journal: *Zootaxa,* 5034(1): 001-112, 2021.

Casminola seminigra (Hampson, 1896)

Evonima ronkaygabori Han & Hu, 2019

Genus: *Evonima* Walker, 1865

Evonima ronkaygabori Han & Hu, 2019

The species *Evonima ronkaygabori* earlier known from China, has been reported for the first time from India based on a collection made from Aizawl, Reiek, (23°41.709'N and 92°36.402'E, 1180 m), Mizoram and Darjeeling, Sittong, (26°5616N, 88°2217E, 712.6 m), West Bengal. The specimens have been deposited in the National Zoological Collections, Zoological Survey of India, Gangetic Plains Regional Centre, Patna, Bihar. It has been published by Rahul Joshi, Navneet Singh and Nikhil Kuni in the journal: *Zootaxa,* 5034(1): 001-112, 2021.

Genus: *Meganola* Dyar, 1898

Meganola suffusata (Wileman & West, 1929)

The species *Meganola suffusata* earlier known from Taiwan, Myanmar, Vietnam, Malaysia (Borneo), Indonesia (Sumatra) and Thailand, has been reported for the first time from India based on a collection made from West Kameng, Tenga Valley (27°12.770'N and 092°27.871'E, 1429 m), Arunachal Pradesh. The specimens have been deposited in the National Zoological Collections, Zoological Survey of India, Gangetic Plains Regional Centre, Patna, Bihar. It has been published by Rahul Joshi, Navneet Singh and Nikhil Kuni in the journal: *Zootaxa*, 5034(1): 001-112, 2021.

Meganola suffusata (Wileman & West, 1929)

Appias cardena
(Hewitson, 1861)

Family: PIERIDAE
Genus: *Appias* Hübner, [1819]

Appias cardena (Hewitson, 1861)

The species *Appias cardena* earlier known from Sumatra and Peninsular Malaysia, has been reported for the first time from India based on a collection made from Rhenock (27°10'35.84''N and 88°38'35.52''E, 1040 m), North Darjeeling, Sikkim. The specimens have been deposited in the National Zoological Collection (Lepidoptera) of Zoological Survey of India, Kolkata. It has been published by Jagbir Singh Kirti, Manpreet Kaur, Purnendu Mishra and Suresh Kr. Shah in the journal: *Rec. zool. Surv. India,* 121(1): 195-199, 2021.

Family: SPHINGIDAE
Genus: *Ambulyx* Westwood, 1847

Ambulyx tattina (Jordan, 1919)

The species *Ambulyx tattina* earlier known from Peninsular Malaysia, Sumatra, Borneo and Philippines, has been reported for the first time from India based on a collection made from Andaman and Nicobar Island, Nocobar, East West Road. The specimens have been deposited in the NZC-ZSI. It has been published Navneet Singh, Jalil Ahmad and Kailash Chandra in the journal: *Rec. zool. Surv. India,* 121(3): 375-381, 2021.

Ambulyx tattina
(Jordan, 1919)

Genus: *Nola Leach, 1815*

Nola euryzonata (Hampson, 1900)

The species *Nola euryzonata* earlier known from Malaysia (Borneo), Indonesia (Sumatra), Bali and Thailand, has been reported for the first time from India based on a collection made from Teirei, Dampa TR, (23°41.384'N and 92°27.035'E, 270.2 m), Mizoram. The specimens have been deposited in the National Zoological Collections, Zoological Survey of India, Gangetic Plains Regional Centre, Patna, Bihar. It has been published by Rahul Joshi, Navneet Singh and Nikhil Kuni in the journal: *Zootaxa*, 5034(1): 001-112, 2021.

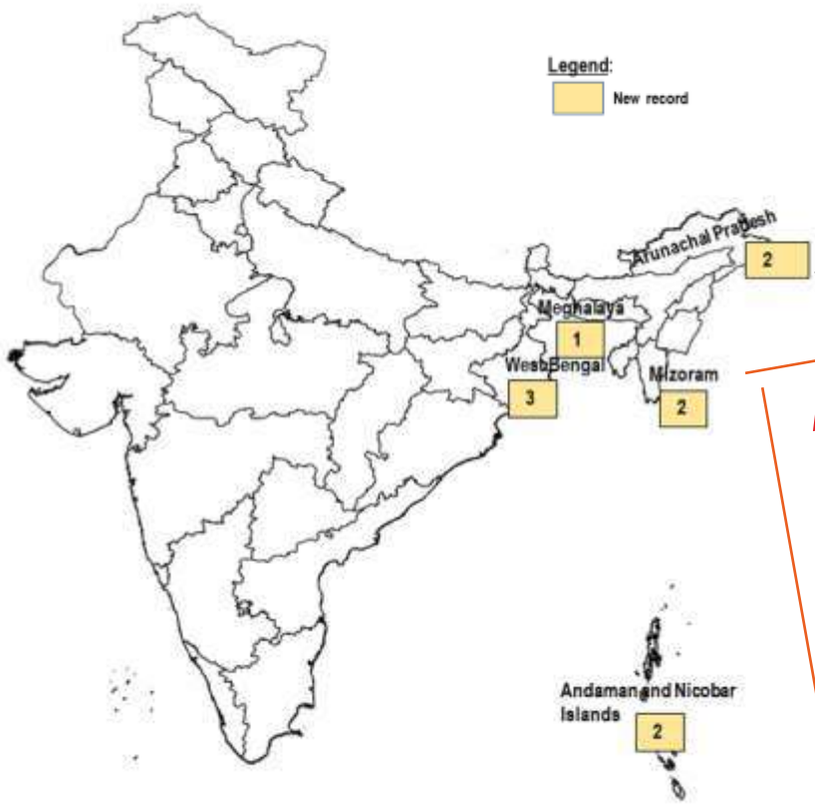
Nola euryzonata (Hampson, 1900)

Laothoe witti Eitschberger,
Danner & Surholt, 1998

Genus: *Laothoe* Fabricius, 1807

Laothoe witti Eitschberger, Danner & Surholt, 1998

The species *Laothoe witti* earlier known from Afghanistan, has been reported for the first time from India based on a collection made from Tehsil Herman, district Shopian of Kashmir Division (33.7050N and 74.9400E, 1596 m), Jammu & Kashmir. The specimens have been deposited in the museum of Division of Taxonomy and Biodiversity at the Entomology Research Insttute, Loyola College, Chennai. It has been published by Muzafar Riyaz, Pratheesh Mathew, Taslima Shiekh, S. Ignacimuthu and K. Sivasankaran in the journal: *Journal of Threatened Taxa,* 13(7): 18943-18946, 2021.



TRICHOPTERA
4.9.3

A total of 10 species ofTricoptera from India for the first time; West Bengal (3), Andaman and Nicobar Islands (2), Arunachal Pradesh (2), Mizoram (2), Meghalaya (1).

Phylum: ARTHROPODA
Class: INSECTA
Order: TRICHOPTERA
Family: HYDROPSYCHIDAE
Genus: *Cheumatopsyche* Wallengren, 1891

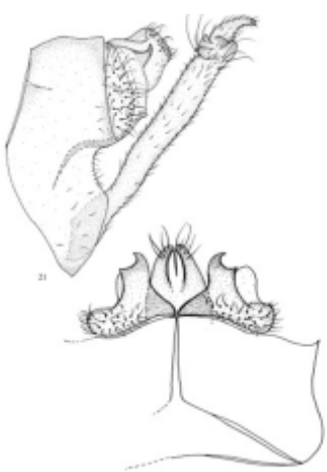
Cheumatopsyche chrysothemis Malicky & Chantaramongkol 1997

The species *Cheumatopsyche chrysothemis* earlier known from Malaysia, Thailand, Vietnam and Cambodia, has been reported for the first time from India based on a collection made from Kalimpong, Neora Valley National Park, Suntlikhola Biodiversity Camp (27°00'47.3" N and 88°47'05.6" E, 740 m), West Bengal. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Manpreet Singh Pandher, Simarjit Kaur and Deepti Garima in the journal: *Zootaxa,* 4915(3): 364-376, 2021.

Genus: *Diplectrona* Westwood, 1840

Diplectrona aurovittata (Ulmer 1906)

The species *Diplectrona aurovittata* earlier known from Indonesia, Thailand, Laos, Vietnam, Malaysia and China has been reported for the first time from India based on a collection made from Champai, Mizoram. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Manpreet Singh Pandher, Simarjit Kaur Deepti Garima and Sajah H. Parey in the journal: *Zootaxa,* 5047 (3): 342–352 2021.

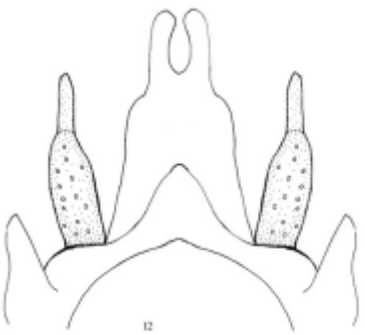


Diplectrona aurovittata (Ulmer 1906)

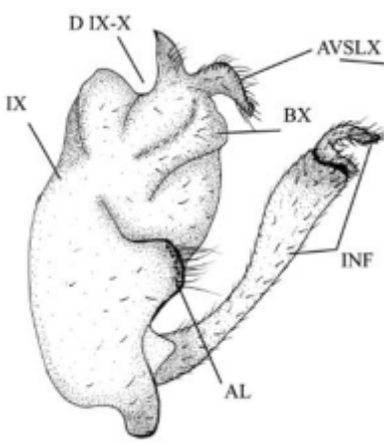
Genus: *Hydromanicus* Brauer, 1865

Hydromanicus inferior Chantaramongkol & Malicky, 1995

The species *Hydromanicus inferior* earlier known from Thailand, Nepal and Myanmar, has been reported for the first time from India based on a collection made from Kalimpong, Neora Valley National Park, Suntalikhola (27°00'47.3" N and 88°47'05.6" E, 740 m), West Bengal. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Manpreet Singh Pandher, Simarjit Kaur and Deepti Garima in the journal: *Zootaxa,* 4915(3): 364-376, 2021.



Hydromanicus inferior Chantaramongkol & Malicky, 1995



Genus: *Hydropsyche* Pictet, 1834

Hydropsyche atlas Malicky & Chantaramongkol, 2000

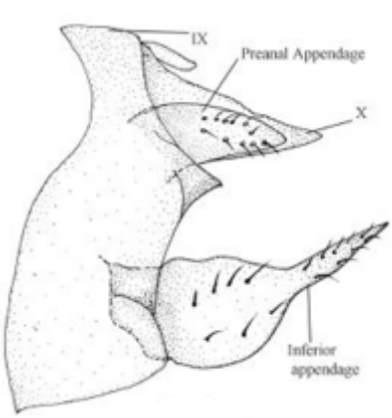
The species *Hydropsyche atlas* earlier known from Pakistan, Nepal and Bhutan, has been reported for the first time from India based on a collection made from Ramsing (28°10'22.8''N and 94°9'27''E), Arunachal Pradesh. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Rec. zool. Surv. India,* 120(4): 497-500, 2021.

Hydropsyche atlas Malicky & Chantaramongkol, 2000

Hydropsyche orectis Mey, 1999

The species *Hydropsyche orectis* earlier known from China, Myanmar and Nepal, has been reported for the first time from India based on a collection made from Ramsing (28°10'22.8''N and 94°9'27''E), Arunachal Pradesh. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Rec. zool. Surv. India,* 120(4): 497-500, 2021.

Hydropsyche orectis Mey, 1999



Oecetis jacobsoni Ulmer 1930

Family: LEPTOCERIDAE
Genus: *Oecetis* McLachlan, 1877

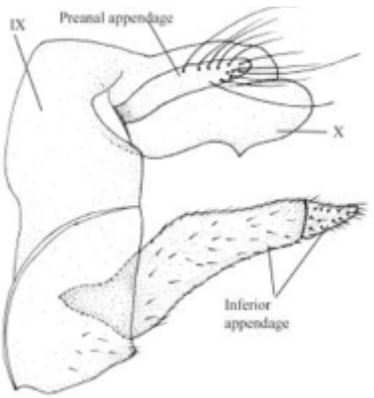
Oecetis jacobsoni Ulmer 1930

The species *Oecetis jacobsoni* earlier known from Indonesia (Sumatra), Nepal, Thailand, Vietnam and Sri Lanka, has been reported for the first time from India based on a collection made from Diglipur, North Andaman Island (13°15'54.72''N and 92°58'5.00''E), Andaman and Nicobar Islands. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Zootaxa,* 5072(5): 463-477, 2021.

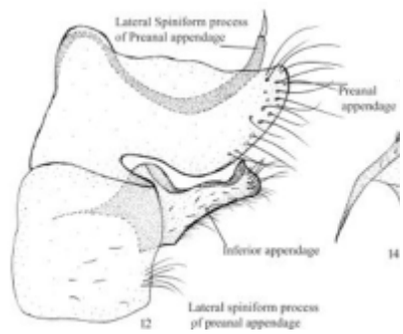
Family: ODONTOCERIDAE
Genus: *Marilia* Mueller, 1880

Marilia ceylanica Martynov 1936

The species *Marilia ceylanica* earlier known from Indonesia (Sumatra), Sri Lanka, Thailand and Vietnam, has been reported for the first time from India based on a collection made from Gandhinagar, Great Nicobar Island (6°59'6.54''N and 93°50'46.32''E), Andaman and Nicobar Islands. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Zootaxa,* 5072(5): 463-477, 2021.



Marilia ceylanica Martynov 1936



Polyplectropus amphion Malicky 1997

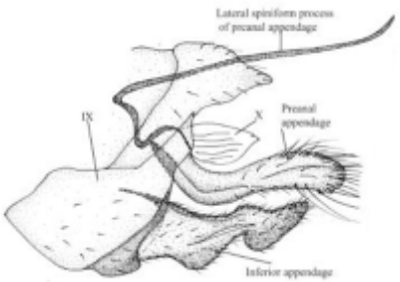
Family: POLYCENTROPODIDAE
Genus: *Polyplectropus* Ulmer, 1905

Polyplectropus amphion Malicky 1997

The species *Polyplectropus amphion* earlier known from Nepal, has been reported for the first time from India based on a collection made from Suntalikhola (27°00'48.20''N and 88°47'16.00''E), West Bengal. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Zootaxa,* 5072(5): 463-477, 2021.

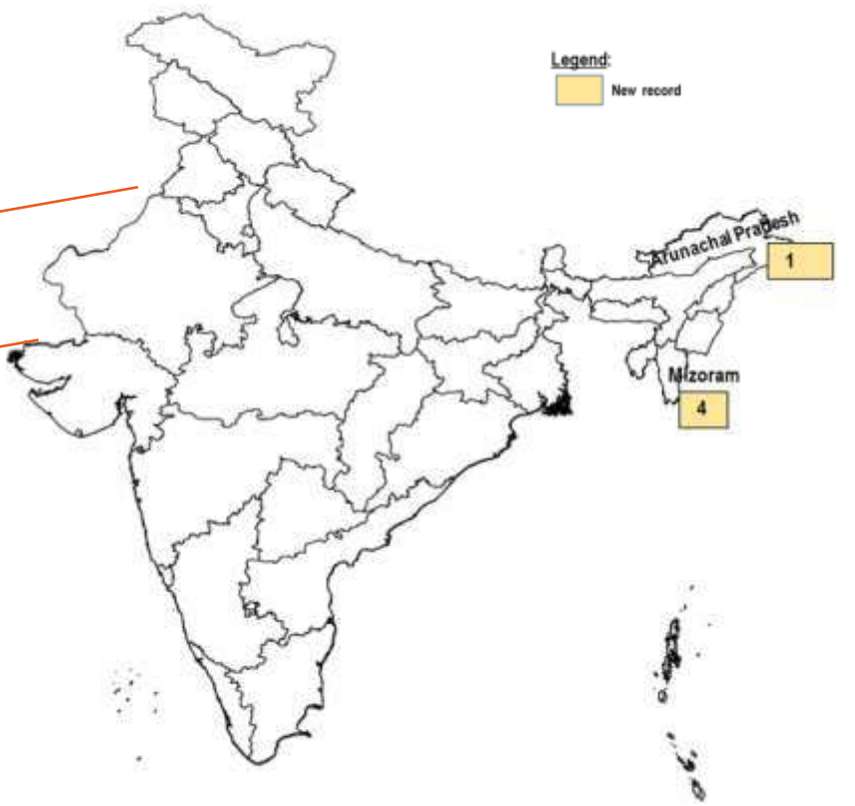
Polyplectropus phrixos Malicky & Changthong 2006

The species *Polyplectropus phrixos* earlier known from Myanmar and Thailand, has been reported for the first time from India based on a collection made from Kolasib (24°12'43.80''N and 92°40'34.60''E), Mizoram. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Deepti Garima, Simarjit Kaur and Manpreet Singh Pandher in the journal: *Zootaxa,* 5072(5): 463-477, 2021.



Polyplectropus phrixos Malicky & Changthong 2006

4.9.4 COLEOPTERA



A total of five species of Coleoptera has been recorded for the first time from India; Mizoram (4), Arunachal Pradesh (1).

Phylum: ARTHROPODA
Class: INSECTA
Order: COLEOPTERA
Family: CERAMBYCIDAE
Genus: *Anomophysis* Quentin & Villiers, 1981

Anomophysis hainana (Gressitt, 1940)

The species *Anomophysis hainana* earlier known from China, Laos, Myanmar, Thailand and Vietnam, has been reported for the first time from India based on a collection made from Lawnglai District, Ngengpuikai village, Ngeng Pui Natural Reserve, Mizoram. The specimens have been deposited in the UOMI. It has been published by Amitava Majumder, Alain Drumont, Stanislav Jákl, Gérard Tavakilian, Hasaholalu Boregowda Manjunatha and Kailash Chandra in the journal: *Zootaxa,* 4963(2): 375-383, 2021.

Anomophysis hainana (Gressitt, 1940)

Genus: *Eurypoda* (Eurypoda) Saunders, 1853

Eurypoda (Eurypoda) nigrita Thomson, 1865

The species *Eurypoda (Eurypoda) nigrita* earlier known from Borneo Island, China, Indonesia (Sumatra), Laos and Malaysia, has been reported for the first time from India based on a collection made from Lawnglai District, Ngengpuikai village, Ngeng Pui Natural Reserve, Mizoram. The specimens have been deposited in the UOMI. It has been published by Amitava Majumder, Alain Drumont, Stanislav Jákl, Gérard Tavakilian, Hasaholalu Boregowda Manjunatha and Kailash Chandra in the journal: *Zootaxa,* 4963(2): 375-383, 2021.

Eurypoda (Eurypoda) nigrita Thomson, 1865

Eurypoda (Neoprion) batesi Gahan, 1894

Eurypoda (Neoprion) batesi Gahan, 1894

The species *Eurypoda (Neoprion) batesi* earlier known from China, Japan, Laos, Korean Peninsula, Thailand and Vietnam, has been reported for the first time from India based on a collection made from Lawnglai District, Ngengpuikai village, Ngeng Pui Natural Reserve, Mizoram. The specimens have been deposited in the UOMI. It has been published by Amitava Majumder, Alain Drumont, Stanislav Jákl, Gérard Tavakilian, Hasaholalu Boregowda Manjunatha and Kailash Chandra in the journal: *Zootaxa*, 4963(2): 375-383, 2021.

Megobaralipton kalimantanum (Komiya & Makihara, 2001)

Genus: *Megobaralipton* Lepesme & Breuning, 1952

Megobaralipton kalimantanum (Komiya & Makihara, 2001)

The species *Megobaralipton kalimantanum* earlier known from Indonesia (East Kalimantan), Laos, Malaysia, Thailand and Vietnam, has been reported for the first time from India based on a collection made from Lawnglai District, Ngengpuikai village, Ngeng Pui Natural Reserve, Mizoram. The specimens have been deposited in the UOMI. It has been published by Amitava Majumder, Alain Drumont, Stanislav Jákl, Gérard Tavakilian, Hasaholalu Boregowda Manjunatha and Kailash Chandra in the journal: *Zootaxa,* 4963(2): 375-383, 2021.

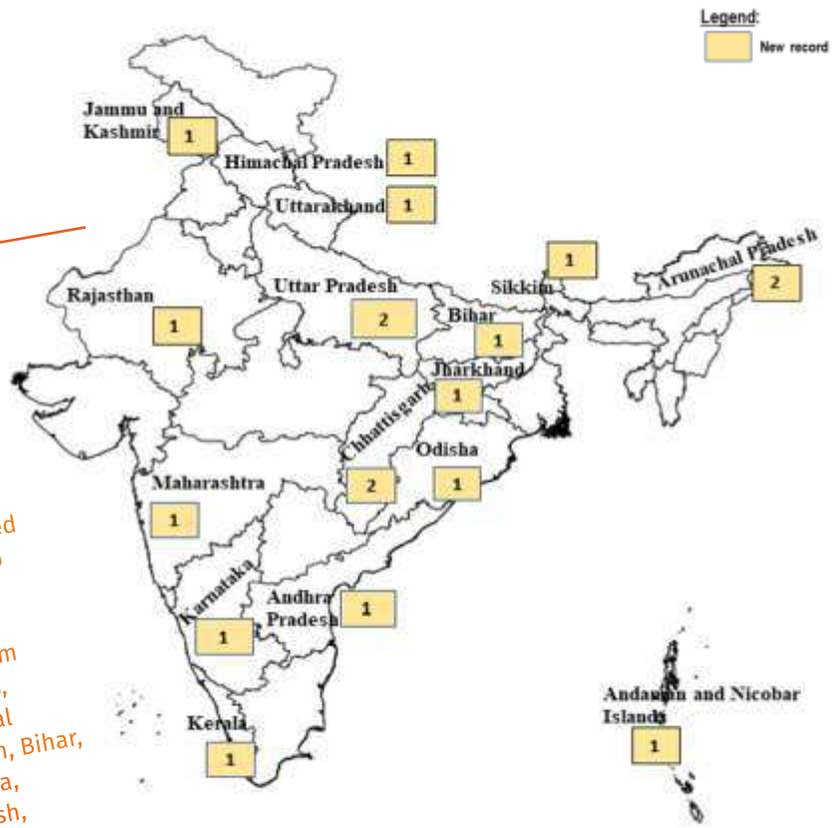
Family: TENEBRIONIDAE
Genus: *Catapiestus* Perty, 1831

Catapiestus rugipennis Chûjô, 1984

The species *Catapiestus rugipennis* earlier known from Japan (Amami-Oshima Island and Okinawa Honto Island), has been reported for the first time from India based on a collection made from Derok forest, Tirap district, Arunachal Pradesh. The specimens have been deposited in the National Zoological Collections of ZSI-NERC. It has been published by V.D. Hedge and Sarita Yadav in the journal: *Journal of Threatened Taxa*, 13(12): 19867-19869, 2021.

Catapiestus rugipennis Chûjô, 1984

4.9.5 HYMENOPTERA



This year a total of 13 species of Hymenoptera have been recorded for the first time from India, two species each from Arunachal Pradesh, Chhattisgarh, Uttar Pradesh. One species each from Andaman and Nicobar Islands, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Bihar, Jharkhand, Rajasthan, Odisha, Maharashtra, Andhra Pradesh, Karnataka, Kerala have been reported. One species have been reported from Bihar, Chhattisgarh, Jharkhand, Kerala, Maharashtra, Odisha and Uttar Pradesh.

Phylum: ARTHROPODA
Class: INSECTA
Order: HYMENOPTERA
Family: CRABRONIDAE
Genus: *Argogorytes* Ashmead , 1899

Argogorytes tonkinensis (Yasumatsu, 1943)

The species *Argogorytes tonkinensis* earlier known from China and Vietnam has been reported for the first time from India based on a collection made Kozhikode district, Peruvannamuzhi dam site of Malabar Wildlife Sanctuary (11° 35' 50'' N & 75° 49' 26'' E, altitude 66 m), Chhattisgarh, Raipur district, Kandul (21° 12' 32'' N & 81° 36' 59'' E, altitude 282 m), The specimens have been deposited in the National Zoological Collections of ZSIK. It has been published by P. Girish Kumar and Anil Kumar Dubey in the journal: *Zootaxa,* 4927 (2): 282–288, 2021.

Argogorytes tonkinensis (Yasumatsu, 1943)

Genus: *Lyroda* Say, 1837

Lyroda binghami Tsuneki, 1983

The species *Lyroda binghami* earlier known from Myanmar, has been reported for the first time from India based on a collection made from different localities of Dehradun district, Uttarakhand. The specimens have been deposited in the National Zoological Collections of ZSIK. It has been published by N.V. Ayisha Mawadda, P. Girish Kumar and P.M. Sureshan in the journal: *Zootaxa,* 5005(2): 201-217, 2021.

Lyroda binghami
Tsuneki, 1983

Philanthus nepalensis
Bingham, 1908

Genus: *Philanthus* Fabricius, 1790

Philanthus nepalensis Bingham, 1908

The species *Philanthus nepalensis* earlier known from Nepal, has been reported for the first time from India based on a collection made from Chongkham, Namsai district, Tezu, Lohit district and Lumla, Tawang district, Arunachal Pradesh. The specimens have been deposited in the Western Ghat Regional Centre, Zoological Survey of India, Kozhikode (ZSIK). It has been published by P. Girish Kumar, Joseph Monks and Altaf Hussain Sheikh in the journal: *Zootaxa,* 4999(1): 001-021, 2021.

Philanthus triangulum (Fabricius, 1775)

The species *Philanthus triangulum* earlier known from central Europe, South Africa, Atlantic coast of Europe into Western Asia, has been reported for the first time from India based on a collection made from different localities of Jammu and Kashmir. The specimens have been deposited in the Western Ghat Regional Centre, Zoological Survey of India, Kozhikode (ZSIK). It has been published by P. Girish Kumar, Joseph Monks and Altaf Hussain Sheikh in the journal: *Zootaxa,* 4999(1): 001-021, 2021.

Philanthus triangulum
(Fabricius, 1775)

Asecodes delucchii
(Bouček)
1971

Family: EULOPHIDAE
Genus: *Asecodes* Förster, 1856

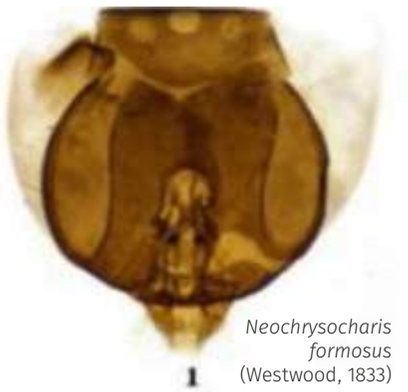
Asecodes delucchii (Bouček 1971)

The species *Asecodes delucchii* earlier known from Poland, Moldavian SSR, Yugoslavia and Italy has been reported for the first time from India based on a collection made from Guntur, Rajmandi, Andhra Pradesh. The specimens have been deposited in the National Zoological Collections of Zoological Department, Aligarh Muslim University, Aligarh. It has been published by Mohd Majid Jamali, Shahid Bin Zeya and Mohsin Ikram in the *Journal of Asia-Pacific Entomology,* 24(2021): 35-45, 2021.

Genus: *Neochrysocharis* Kurdjumov, 1912

Neochrysocharis formosus (Westwood, 1833)

The species *Neochrysocharis formosus* earlier known from England, Germany, Switzerland, Hawaii and U.S.A., has been reported for the first time from India based on a collection made from Hathras, Uttar Pradesh. The specimens have been deposited in the National Zoological Collections of Zoological Department, Aligarh Muslim University, Aligarh. It has been published by Mohd Majid Jamali, Shahid Bin Zeya and Prince Tarique Anwar in the Journal *Munis Entomology & Zoology,* 16(2): 663-679, 2021



Neochrysocharis formosus (Westwood, 1833)

Lipotriches (Rhopalomelissa) parca (Kohl, 1906)

Family: HALICTIDAE
Genus: *Lipotriches* Gerstaecker, 1858

Lipotriches (Rhopalomelissa) parca (Kohl, 1906)

The species *Lipotriches (Rhopalomelissa) parca* earlier known from Arabian Peninsula, Egypt, Libya, sahara desert, Sudan, Pakistan and Yemen, has been reported for the first time from India based on a collection made from Ganganagar, Manjuvas (29.532N and 73.435E), Rajasthan. The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata, West Bengal. It has been published by Bhaswati majumder, Anandhan Rameshkumar and Sarfrazul Islam Kazmi in the journal: *Journal of Threatened Taxa,* 13(2): 17841-17842, 2021.

Family: LIOPTERIDAE
Genus: *Paramblynotus* Cameron, 1908

Paramblynotus annulicornis Cameron, 1908

The species *Paramblynotus annulicornis* earlier known from Indonesia (Sumatra) and Malaysia (Borneo and Malay Peninsula), has been reported for the first time from India based on a collection made from Great Nicobar Island, Campbell Bay National Park (6.99933°N and 93.87975°E), Andaman Nicobar Islands. The specimens have been deposited in the National Zoological Collections at Zoological Survey of India, Kolkata. It has been published by K. Rajmohana, C. Bijoy and S. Patra in the journal: *Far Eastern Entomologist,* 433: 13-17, 2021.

Paramblynotus annulicornis Cameron, 1908

Megachile (Callomegachile) sculpturalis (Smith, 1853)

Family: MEGACHILIDAE
Genus: *Megachile* Latreille, 1802

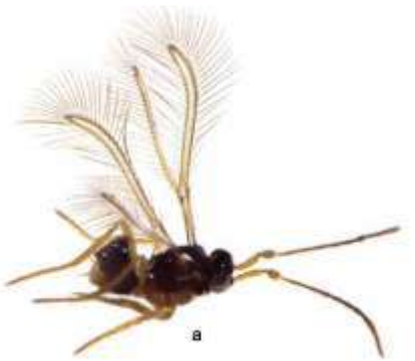
Megachile (Callomegachile) sculpturalis (Smith, 1853)

The species *Megachile (Callomegachile) sculpturalis* earlier known from Austria, Canada, China, Crimea, France, Germany, hungary, Italy, japan, Leichtenstein, North Korea, Slovenia, South Korea, Spain, Switzerland, Taiwan and USA, has been reported for the first time from India based on a collection made from Bank of mathun river, Maronli village (28.895039°N and 95.8276363°E). The specimens have been deposited in the National Zoological Collections of Zoological Survey of India, Kolkata. It has been published by Sayan Sardar, Anandhan Rameshkumar and Sarfrazul Islam Kazmi in the journal: *J. Insect Biodiversity,* 023(2): 043-049, 2021.

Family: MYMARIDAE
Genus: *Camptoptera* Foerster, 1856

Camptoptera concava Taguchi, 1972

The species *Camptoptera concava* earlier known from Philippines, has been reported for the first time from India based on a collection made from Jarakabande Kaval, Bengaluru, Karanataka. The specimens have been deposited in the Insect Collections Department of Zoology, Aligarh Muslim University, Aligarh, Uttar Pradesh. It has been published by Prince Tarique Anwar, Shahid Bin Zeya, Syeda Uzma Usman and Farmanur Rahman Khan in the journal: *Graellsia,* 77(2), 2021. e153, https://doi.org/10.3989/graellsia.2021.v77.328, 2021.



Camptoptera jthuberi Triapitsyn, 2018

Camptoptera jthuberi Triapitsyn, 2018

The species *Camptoptera jthuberi* earlier known from Philippines, has been reported for the first time from India based on a collection made from Jarakabande Kaval, Bengaluru, Karanataka. The specimens have been deposited in the Insect Collections Department of Zoology, Aligarh Muslim University, Aligarh, Uttar Pradesh. It has been published by Prince Tarique Anwar, Shahid Bin Zeya, Syeda Uzma Usman and Farmanur Rahman Khan in the journal: *Graellsia,* 77(2), 2021. e153, https://doi.org/10.3989/graellsia.2021.v77.328, 2021.

Camptoptera jthuberi Triapitsyn, 2018

Family: SPHECIDAE
Genus: *Sceliphron* Klug 1801

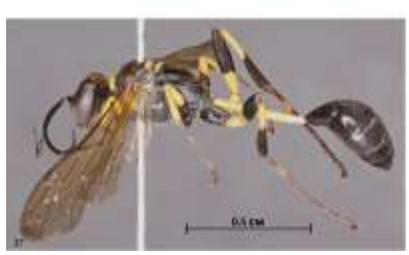
Sceliphron destillatorium (Illiger, 1807)

The species *Sceliphron destillatorium* earlier known from Afghanistan, Albania, Algeria, Austria, Bulgaria, China, Croatia, Czech Republic, France, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Jordan, Kazakhstan, Kyrgyzstan, Macedonia, Montenegro, Morrocco, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Switzerland, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine and Uzbekistan, has been reported for the first time from India based on a collection made from Shimla district, Himachal Pradesh. The specimens have been deposited in the Hymenoptera Section of the Zoological Survey of India, Kolkata (NZC), and Western Ghat Regional Centre, Zoological Survey of India, Kozhikode (ZSIK). It has been published by S. Anagha, P. girish Kumar, C. Binoy, P.C. Mazumdar and P.M. Sureshan in the journal: *Zootaxa,* 4969(1): 061-085, 2021.

Sceliphron destillatorium (Illiger, 1807)

Sceliphron madraspatanum formosanum van der Vecht, 1968

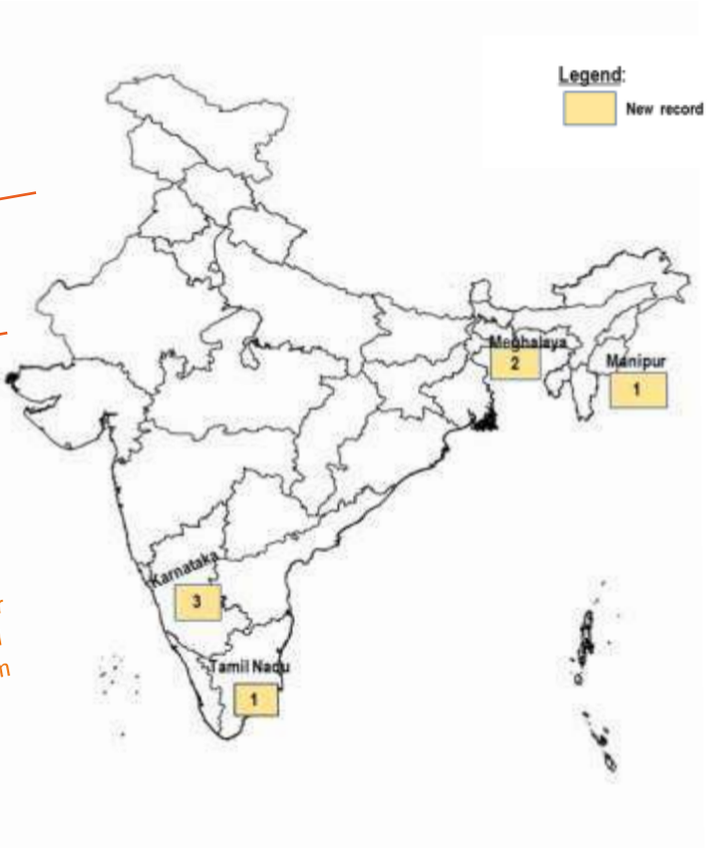
The species *Sceliphron madraspatanum formosanum* earlier known from China, Japan and Taiwan, has been reported for the first time from India based on a collection made from different localities of Bihar, Chhattishgarh, Jharkhand, Kerala, Maharashtra, Odisha and Uttar Pradesh state. The specimens have been deposited in the Hymenoptera Section of the Zoological Survey of India, Kolkata (NZC), and Western Ghat Regional Centre, Zoological Survey of India, Kozhikode (ZSIK). It has been published by S. Anagha, P. Girish Kumar, C. Binoy, P.C. Mazumdar and P.M. Sureshan in the journal: *Zootaxa,* 4969(1): 061-085, 2021.



Sceliphron madraspatanum formosanum van der Vecht, 1968

4.9.6 HEMIPTERA

A total of six species of Hemiptera are recorded for the first time from India 3 species from Karnataka, 2 species from Meghalaya, 1 each from Manipur and Tamil Nadu. Among which 1 species has been reported from both Karnataka and Manipur.



Phylum: ARTHROPODA
Class: INSECTA
Order: HEMIPTERA
Family: MIRIDAE
Genus: *Alcecoris* McAtee & Malloch, 1924

Alcecoris periscopus McAtee & Malloch 1924

The species *Alcecoris periscopus* earlier known from Singapore, has been reported for the first time from India based on a collection made from Ri-Bhoi, ICAR, RCNEH Barapani (25°41'N and 91°55'E, 1031 m), Meghalaya. The specimens have been deposited in the UASB. It has been published by S H.M. Yeshwanth, F. Chérot and T.J. Henry in the journal: *Zootaxa,* 4903(2): 151-193, 2021.

Alcecoris periscopus McAtee & Malloch 1924

Isometopus yoshizawai Yasunaga & Duwal, 2006

Genus: *Isometopus* Fieber, 1860

Isometopus yoshizawai Yasunaga & Duwal, 2006

The species *Isometopus yoshizawai* earlier known from Japan, has been reported for the first time from India based on a collection made from Barapani and Saiden, Ri-Bhoi, Meghalaya, and GKVK and Hesaraghatta, Bengaluru. The specimens have been deposited in the UASB. It has been published by S H.M. Yeshwanth, F. Chérot and T.J. Henry in the journal: *Zootaxa,* 4903(2): 151-193, 2021.

Genus: *Paloniella* Poppius, 1915

Paloniella parallela Yasunaga & Hayashi, 2002

The species *Paloniella parallela* earlier known from Japan, has been reported for the first time from India based on a collection made from Chikkaballapura, Nandi Hills (13°22.320'N and 77°741.108' E, 1443 m; 13°38'N and 77°70E, 1478 m), Karnataka. The specimens have been deposited in the UASB. It has been published by S H.M. Yeshwanth, F. Chérot and T.J. Henry in the journal: *Zootaxa,* 4903(2): 151-193, 2021.

Paloniella parallela
Yasunaga & Hayashi, 2002

Dioclerus lutheri
(Poppius, 1912)

Genus: *Dioclerus* Distant, 1910

Dioclerus lutheri (Poppius, 1912)

The species *Dioclerus lutheri* earlier known from Sri Lanka, has been reported for the first time from India based on a collection made from Thandigudi (10°18 N and 77°38 E, 1131 m), Tamil Nadu. The specimens have been deposited in the UASB. It has been published by H.M. Yeshwanth and Fedor V. Konstantinov in the journal: *European Journal of Taxonomy,* 745: 1-69, 2021.

Genus: *Ernestinus* Distant, 1911

Ernestinus mimicus Distant, 1911

The species *Ernestinus mimicus* earlier known from Sri Lanka, has been reported for the first time from India based on a collection made from Mudigere, Kottigehara (13°12'N and 75°50'E; 1006 m), Karnataka. The specimens have been deposited in the UASB. It has been published by H.M. Yeshwanth and Fedor V. Konstantinov in the journal: *European Journal of Taxonomy,* 745: 1-69, 2021.

Ernestinus mimicus
Distant, 1911

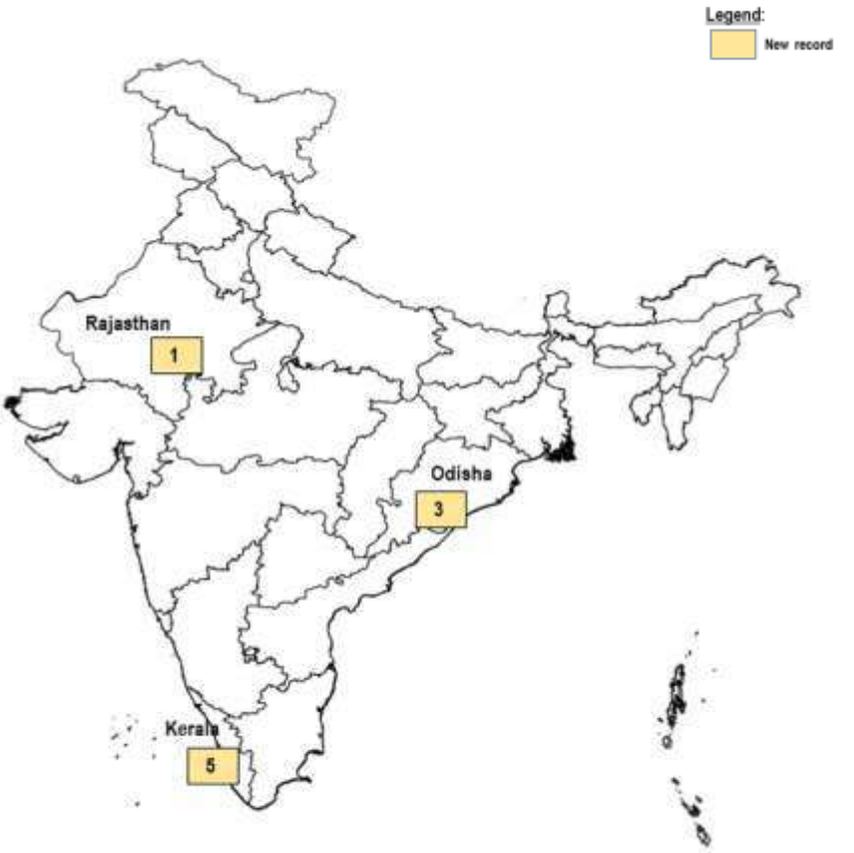
Ernestinus ramkeshariae
Yasunaga &
Ishikawa, 2016

Ernestinus ramkeshariae Yasunaga & Ishikawa, 2016

The species *Ernestinus ramkeshariae* earlier known from Nepal, has been reported for the first time from India based on a collection made from Imphal, Lamphelpat (4.83°N and 93.93°E, 779 m), Manipur; Madikere, Galibeedu (12°28.57'N, 75°42.58'E; 1047 m) and Mudigere (13°7.190'N and 75°37.670'E, 913 m), Karnataka. The specimens have been deposited in the UASB. It has been published by H.M. Yeshwanth and Fedor V. Konstantinov in the journal: *European Journal of Taxonomy,* 745: 1-69, 2021.

4.9.7 THYSANOPTERA

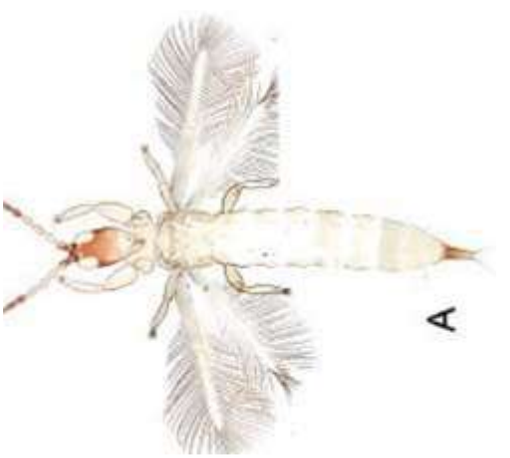
A total of 9 species of Thysanoptera are recorded this year from India for the first time of which 5 are from Kerala, 3 from Odisha and 1 from West Bengal.



Phylum: ARTHROPODA
Class: INSECTA
Order: THYSANOPTERA
Family: PHLAEOTHRIPIDAE
Genus: *Bamboosiella* Ananthakrishnan, 1957

Bamboosiella semiflava Okajima, 1995

The species *Bamboosiella semiflava* earlier known from Tapah, West Malaysia, has been reported for the first time from India based on a collection made from Bhaubasa, Dhauli, Odisha. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects*, 080/00305316.2021.1906344, 2021.



Bamboosiella semiflava Okajima, 1995

Genus: *Podothrips* Hood, 1913

Podothrips ferrugineus Okajima, 1978

The species *Podothrips ferrugineus* earlier known from Tapah, West Malaysia and Phuket, Thailand, has been reported for the first time from India based on a collection made from Bhaubasa, Dhauli, Odisha. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects,* 10.1080/00305316.2021.1906344, 2021.

Podothrips ferrugineus Okajima, 1978

Praepodothrips causiapeltus Reyes, 1994

Genus: *Praepodothrips* Priesner & Seshadri, 1952

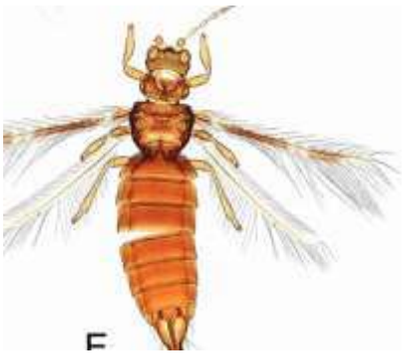
Praepodothrips causiapeltus Reyes, 1994

The species *Praepodothrips causiapeltus* earlier known from Philippine Islands, has been reported for the first time from India based on a collection made from Bhaubasa, Dhauli, Odisha. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects,* 10.1080/00305316.2021.1906344, 2021.

Family: THRIPIDAE
Genus: *Copidothrips* Hood, 1954

Copidothrips octarticulatus (Schmutz, 1913)

The species *Copidothrips octarticulatus* earlier known from Sri Lanka, Seychelles, Thailand and Northern Australia, has been reported for the first time from India based on a collection made from Thrissur, Peechi Dam, Kerala. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects,* 10.1080/00305316.2021.1906344, 2021.



Copidothrips octarticulatus (Schmutz, 1913)

Neohydatothrips masrensis Priesner, 1965

Genus: *Neohydatothrips* John, 1929

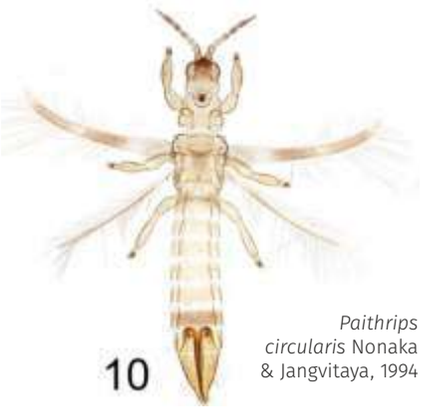
Neohydatothrips masrensis Priesner, 1965

The species *Neohydatothrips masrensis* earlier known from Egypt, has been reported for the first time from India based on a collection made from Bikaner, outside Gajner Wildlife Sanctuary, Rajasthan. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects,* 10.1080/00305316.2021.1906344, 2021.

Genus: *Paithrips* Nonaka & Jangvitaya, 1994

Paithrips circularis Nonaka & Jangvitaya, 1994

The species *Paithrips circularis* earlier known from Malaysia, has been reported for the first time from India based on a collection made from Wayanad, Kerala. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Abhishek Patidar, Vikas Kumar and Kaomud Tyagi in the journal: *Zootaxa,* 5048(1): 135-140, 2021.



Paithrips circularis Nonaka & Jangvitaya, 1994

Scirtothrips hitam Ng, Mound & Azidah, 2014

Genus: *Scirtothrips* Shull, 1909

Scirtothrips hitam Ng, Mound & Azidah, 2014

The species *Scirtothrips hitam* has been reported for the first time from India based on a collection made from Navsari, Gujarat and Peechi, Kerala. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Rajasree Chakraborty, Vikas Kumar and Kaomud Tyagi in the journal: *Oriental Insects,* 10.1080/00305316.2021.1906344, 2021.

Genus: *Trachynotothrips* Masumoto & Okajima, 2005

Trachynotothrips brevispinis Masumoto & Okajima, 2005

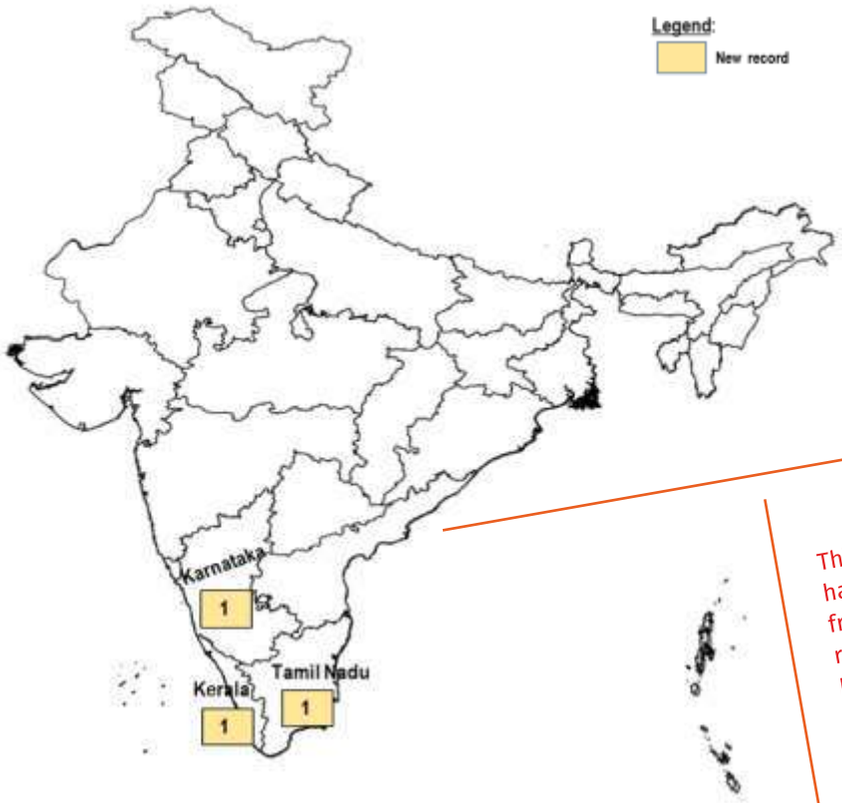
The species *Trachynotothrips brevispinis* earlier known from Phuket Island, Thailand, has been reported for the first time from India based on a collection made from Thrissur, Kerala. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Abhishek Patidar, Kaomud Tyagi and Vikas Kumar in the journal: *Zootaxa,* 4941(2): 186-192, 2021.

Trachynotothrips brevispinis Masumoto & Okajima, 2005

Trachynotothrips striatus Masumoto & Okajima, 2005

Trachynotothrips striatus Masumoto & Okajima, 2005

The species *Trachynotothrips striatus* earlier known from Vietnam, has been reported for the first time from India based on a collection made from Thrissur, Kerala. The specimens have been deposited in the National Zoological Collections (NZC), Zoological Survey of India, Kolkata, India. It has been published by Devkant Singha, Abhishek Patidar, Kaomud Tyagi and Vikas Kumar in the journal: *Zootaxa,* 4941(2): 186-192, 2021.



PSOCOPTERA
4.9.8

This year 1 species of Psocoptera has been recorded for the first time from India. The species has been reported from three states, Tamil Nadu, Kerala and Karnataka.

Phylum: ARTHROPODA
Class: INSECTA
Order: PSOCOPTERA
Family: LACHESILLIDAE
Genus: *Lachesilla* Westwood, 1840

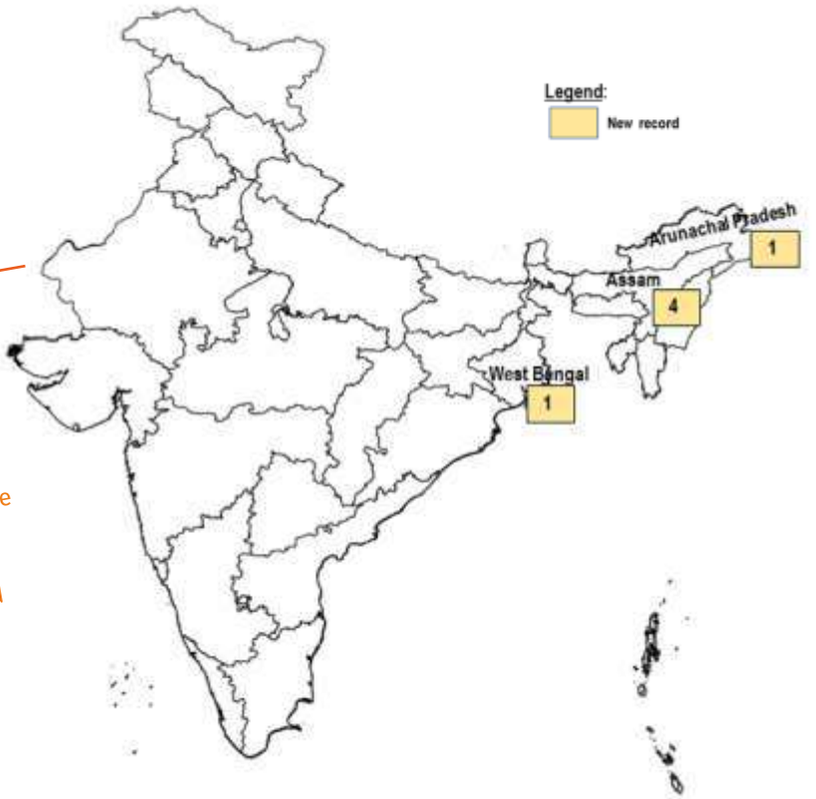
Lachesilla aethiopica (Enderlein, 1902)

The species *Lachesilla aethiopica* earlier known from Tanganyika, Africa, Angola, Argentina, Belize, Brazil, Congo, Costa Rica, Cuba, Dominican Republic, Galapagos Islands, Guatemala, Jamaica, Mexico, Peru, Puerto Rico, Sta. Lucía, Tanzania, Trinidad, Uganda and USA has been reported for the first time from India based on a collection made from different localities of Tamil Nadu, Karnataka and Kerala state. The specimens have been deposited in the ZSI-SRC. It has been published by Gurusamy Ramesh, Rajappa Babu, Kumarapuram A. Subramanian and García Aldrete Alfonso Neri in the journal: *Zootaxa,* 5027(2): 282-289, 2021.

Lachesilla aethiopica (Enderlein, 1902)

4.9.9 ODONATA

A total of 5 species of Odonata have been recorded for the first time, 4 species from Assam and 1 species from both Arunachal Pradesh and West Bengal.



Phylum: ARTHROPODA
Class: INSECTA
Order: ODONATA
Family: COENAGRIONIDAE
Genus: *Ceriagrion* Selys, 1876

Ceriagrion calamineum Lieftinck, 1951

The species *Ceriagrion calamineum* earlier known from Thailand, Indonesia, Peninsular Malaysia and Philippines, has been reported for the first time from India based on a collection made from Dosdewa Pond, Kotamoni, Karimganj district, Assam. The specimens have been deposited in the National Centre for Biological Sciences, Bengaluru. It has been published by Shantanu Joshi, Rejoice Gassah and Vijay Anand Ismavel in the journal: *Oriental Insects*, 10.1080/00305316.2021.1982787, 2021.

Ceriagrion calamineum Lieftinck, 1951

Family: LIBELLULIDAE
Genus: *Nannophyopsis* Lieftinck, 1935

Nannophyopsis clara (Needham, 1930)

The species *Nannophyopsis clara* earlier known from China, Hong Kong, Thailand and Vietnam, has been reported for the first time from India based on a collection made from Makunda Christian Hospital, Karimganj district, Assam. The specimens have been deposited in the National Centre for Biological Sciences, Bengaluru. It has been published by Shantanu Joshi, Rejoice Gassah and Vijay Anand Ismavel in the journal: *Oriental Insects,* 10.1080/00305316.2021.1982787, 2021.

Nannophyopsis clara (Needham, 1930)

Phyllothemis eltoni Fraser, 1935

Genus: *Phyllothemis* Fraser 1935

Phyllothemis eltoni Fraser, 1935

The species *Phyllothemis eltoni* earlier known from Southern Myanmar and Thailand, has been reported for the first time from India based on a collection made from Dosdewa Forest Trail, Katamoni, Karimganj district, Assam. The specimens have been deposited in the National Centre for Biological Sciences, Bengaluru. It has been published by Shantanu Joshi, Rejoice Gassah and Vijay Anand Ismavel in the journal: *Oriental Insects,* 10.1080/00305316.2021.1982787, 2021.

Genus: *Zyxomma* Rambur, 1842

Zyxomma breviventre (Burmeister, 1839)

The species *Zyxomma breviventre* earlier known from Cambodia, Lao PDR and Thailand, has been reported for the first time from India based on a collection made from Makunda Christian Hospital, Karimganj district, Assam. The specimens have been deposited in the National Centre for Biological Sciences, Bengaluru. It has been published by Shantanu Joshi, Rejoice Gassah and Vijay Anand Ismavel in the journal: *Oriental Insects,* 10.1080/00305316.2021.1982787, 2021.

Zyxomma breviventre (Burmeister, 1839)

Megalestes gyalsey Gyeltshen, Kalkman & Orr, 2017

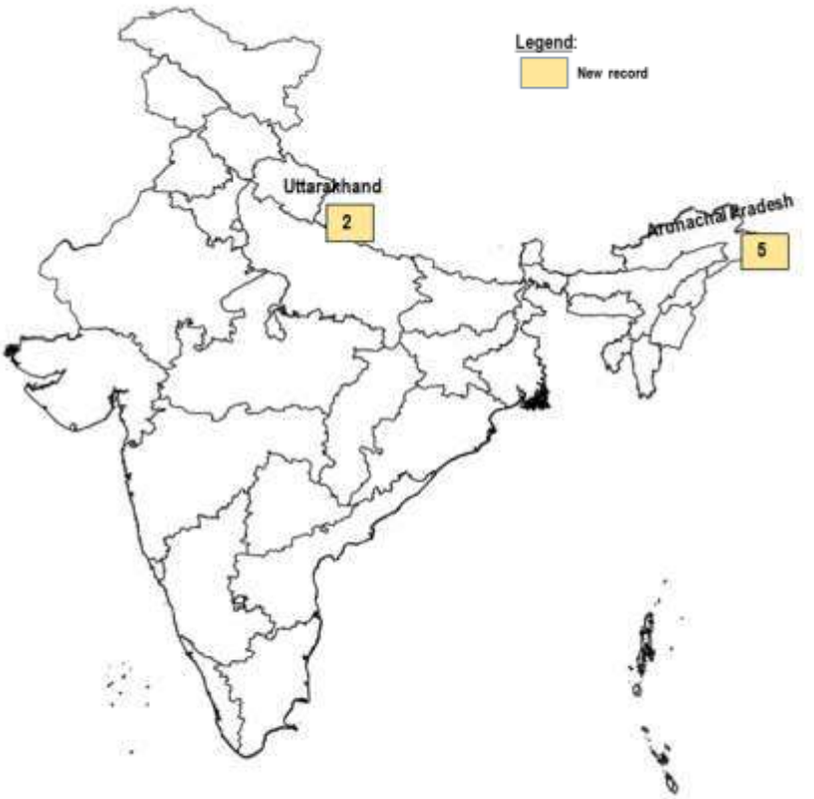
Family: SYNLESTIDAE
Genus: *Megalestes* Selys, 1862

Megalestes gyalsey Gyeltshen, Kalkman & Orr, 2017

The species *Megalestes gyalsey* has been reported for the first time from India based on a collection made from Jang Waterfall (27.5888°N and 91.9805°E, 2090 m), Tawang district, Arunachal Padesh and different localities of Neora Valley National Park, Kalimpong, West Bengal. The specimens have been deposited in the National Zoological Collection of the Zoological Survey of India, Kolkata and specimens from Neora Valley NP will be deposited in National Centre for Biological Sciences, Bengaluru. It has been published by Arajush Payra, Prosenjit Dawn, K. A. Subramanian, C. K. Deepak, Kailash Chandra and Basudev Tripathy in the journal: *Zootaxa,* 4938(2): 233-242, 2021.

4.9.10 EPHEMEROPTERA

This year, five species of Ephemeroptera from Arunachal Pradesh and 2 species from Uttarakhand have been recorded for the first time from India, that accounts to a total of 7 new records of Ephemeroptera.



Phylum: ARTHROPODA
Class: INSECTA
Order: EPHEMEROPTERA
Family: EPHEMERELLIDAE
Genus: *Cincticostella* Allen, 1971

Cincticostella gosei (Allen, 1975)

The species *Cincticostella gosei* earlier known from Thailand, has been reported for the first time from India based on a collection made from Lower Subansiri district, Ranga River (27.396404°N and 93.757378°E, 625 m), Arunachal Pradesh. The specimens have been deposited in the ZSI, Kolkata. It has been published by Alexander V Martynov, C Selvakumar, Dmitry M. Palatov, K A Subramanian, K G Sivaramakrishnan, M Vasanth and Luke M Jacobus in the journal: *Zookeys,* 1040: 123-166, 2021.

Cincticostella gosei (Allen, 1975)

Genus: *Hyrtanella* Allen & Edmunds, 1976

Hyrtanella grandipennis (Zhou, Su & Gui, 2000)

The species *Hyrtanella grandipennis* earlier known from China, Vietnam and Thailand, has been reported for the first time from India based on a collection made from Chamoli district, Alaknanda River (30.267728N and 79.220931E, 800 m), Uttarakhand. The specimens have been deposited in the National Museum of Natural History of the national Academy of Sciences of Ukraine, Kyiv, Ukraine (NMNH-NASU). It has been published by Alexander V Martynov, C Selvakumar, K A Subramanian, K G Sivaramakrishnan, M Vasanth, Bikramjit Sinha and Luke M Jacobus in the journal: *Zootaxa,* 4975(3): 451-482, 2021.

Hyrtanella grandipennis (Zhou, Su & Gui, 2000)

Teloganopsis jinghongensis (Xu, You & Hsu, 1984)

Genus: *Teloganopsis* Ulmer, 1939

Teloganopsis jinghongensis (Xu, You & Hsu, 1984)

The species *Teloganopsis jinghongensis* earlier known from China and Thailand, has been reported for the first time from India based on a collection made from Chamoli district, Alaknanda river (30.267728N and 79.220931E, 800 m), Uttarakhand. The specimens have been deposited in the National Museum of Natural History of the national Academy of Sciences of Ukraine, Kyiv, Ukraine (NMNH-NASU). It has been published by Alexander V Martynov, C Selvakumar, K A Subramanian, K G Sivaramakrishnan, M Vasanth, Bikramjit Sinha and Luke M Jacobus in the journal: *Zootaxa,* 4975(3): 451-482, 2021.

Family: HEPTAGENIIDAE
Genus: *Epeorus* Eaton, 1881

Epeorus (Epeorus) aculeatus Braasch, 1990

The species *Epeorus (Epeorus) aculeatus* earlier known from Thailand, has been reported for the first time from India based on a collection made from lower Subansiri district, Duskilo stream (27.62776N & 93.8437E, 1662 m) and West Kameng district, Driang, Dirang river (27.32675N and 92.23180E), Arunachal Pradesh. The specimens have been deposited in the ZSI-SRC. It has been published by M. Vasanth, C. Selvakumar, K. A. Subramanian, K. G. Sivaramakrishnan and Bikramjit Sinha in the journal: *Zootaxa,* 4991(3): 499-522, 2021.

Epeorus (Epeorus) aculeatus Braasch, 1990

Epeorus (Epeorus) bifurcatus Braasch & Soldán, 1979

The species *Epeorus (Epeorus) bifurcatus* earlier known from Vietnam and Thailand, has been reported for the first time from India based on a collection made from West Kameng, Dirang, Showda village, Dirang river (27.3267528N and 92.2318027E, 1877 m), Upper Dibang valley, Mipi, Mipi river (28.96643N and 95.8061E) and West Kameng district, Sangti valley, Khechalu, Khendo Rong (27.420841N and 92.269538E), Arunachal Pradesh. The specimens have been deposited in the ZSI-SRC. It has been published by M. Vasanth, C. Selvakumar, K. A. Subramanian, K. G. Sivaramakrishnan and Bikramjit Sinha in the journal: *Zootaxa,* 4991(3): 499-522, 2021.

Epeorus (Epeorus) bifurcatus Braasch & Soldán, 1979

Epeorus (Epeorus) unicornutus Braasch, 2006

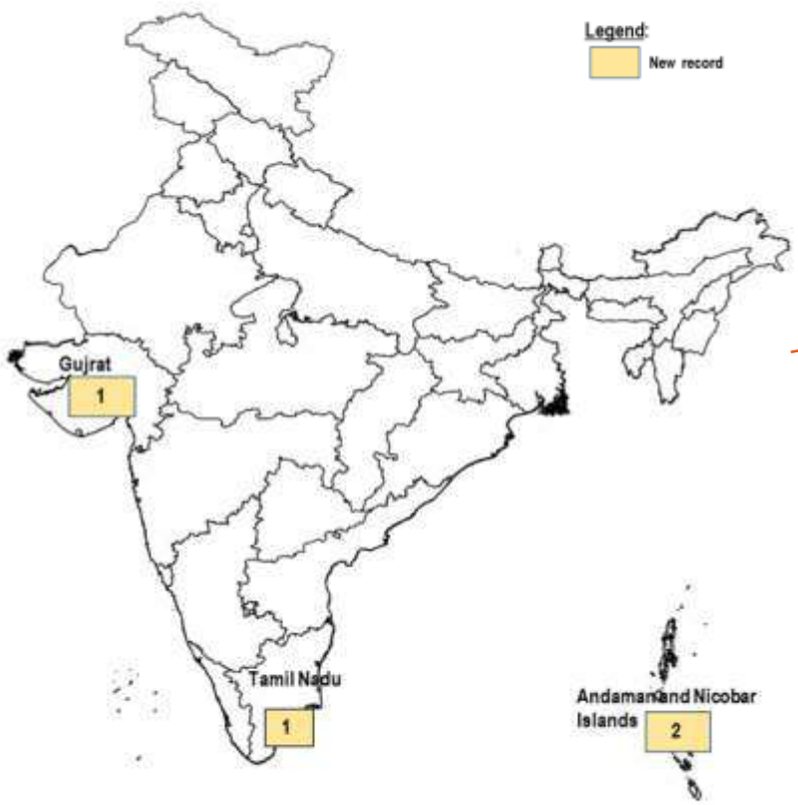
Epeorus (Epeorus) unicornutus Braasch, 2006

The species *Epeorus (Epeorus) unicornutus* earlier known from Nepal and Thailand, has been reported for the first time from India based on a collection made from Lower Subansiri district, Pa stream (27.74791N and 94.0346E, 284.2 m), West Kameng district, Dirang, Showda village, Dirang river (27.3267528N and 92.231802E, 1877 m) and Lower Dibang valley district, Roing, Iphipani river (28.18728N and 95.84094E, 488 m), Arunachal Pradesh. The specimens have been deposited in the ZSI-SRC. It has been published by M. Vasanth, C. Selvakumar, K. A. Subramanian, K. G. Sivaramakrishnan and Bikramjit Sinha in the journal: *Zootaxa,* 4991(3): 499-522, 2021.

Epeorus (Epeorus) unispinosus Braasch, 1980

The species *Epeorus (Epeorus) unispinosus* earlier known from Nepal, has been reported for the first time from India based on a collection made from Tawang district, Jang, Tawang Chu River, Nuranang Falls (27.59133N and 91.9839E, 2087 m), Arunachal Pradesh. The specimens have been deposited in the ZSI-SRC. It has been published by M. Vasanth, C. Selvakumar, K. A. Subramanian, K. G. Sivaramakrishnan and Bikramjit Sinha in the journal: *Zootaxa,* 4991(3): 499-522, 2021.

Epeorus (Epeorus) unispinosus Braasch, 1980



CRUSTACEA
4.10

A total of four species of Crustacea for the first time from India; Andaman and Nicobar Islands (2), Gujrat (1), Tamil Nadu (1).

Phylum: ARTHROPODA
Class: HEXANAUPLIA
Order: SIPHONOSTOMATOIDA
Family: CALIGIDAE
Genus: *Anchicaligus* Boxshall & Justine, 2005

Anchicaligus nautili (Willey, 1896)

The species *Anchicaligus nautili* earlier known from New Britain (South Pacific), the Philippines, Ngemoulis Reef, Palau, has been reported for the first time from India from the museum specimen of N. pompilius collected from the Andaman region of the Indian Ocean. The specimens have been deposited deposited at ZSI-WGRC. It has been published by Panakkool Thamban Aneesh, Ameri Kottarathil Helna, Meethal Parambath Prabhakaran, Raveendhiran Ravinesh, Appukuttannair Biju Kumar in the journal: *Thalassas: An International Journal of Marine Sciences, 2021.* https://doi.org/10.1007/s41208-021-00331-2

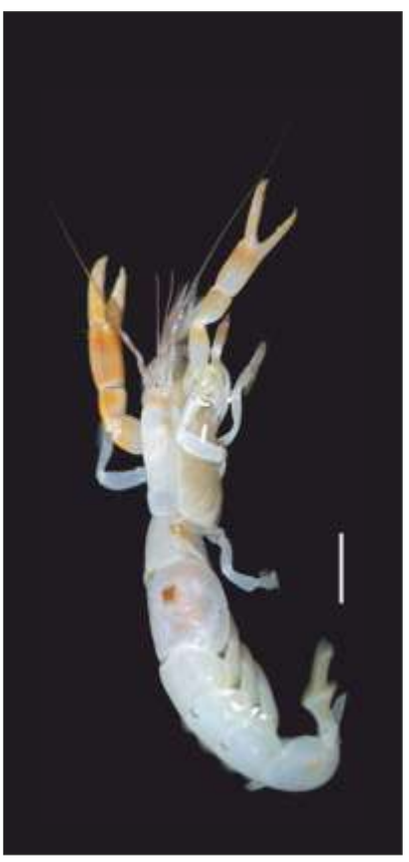
Anchicaligus nautili
(Willey, 1896)

Class: MALACOSTRACA
Order: DECAPODA
Family: CALLICHIRIDAE
Genus: *Corallianassa* (Wilson 1935)

Corallianassa coutierei (Nobili, 1904)

The species *Corallianassa coutierei* earlier known from Arabian Gulf, Djibout, Fiji, French Polynesia, Gilbert Islands, Hawaii, Indonesia, Iran, Madagascar, Maldives, Papua New Guinea, Philippines, Tahiti, has been reported for the first time from India based on a collection made from Goose reef (22.494N & 69.802E), Gulf of Kachchh, Gujarat. The specimens have been deposited in the laboratory of Fisheries Research Staton, Junagadh Agricultural University, Sikka. It has been published by Piyush Vadher, Hitesh Kardani, Prakash bambhaniya and Imtiyaz beleem in the journal: *Journal of Threatened Taxa,* 13(8): 19118-19124, 2021.

Corallianassa coutierei (Nobili, 1904)



Order: STOMATOPODA
Family: GONODACTYLIDAE
Genus: Gonodactylopsis Manning, 1969

Gonodactylopsis drepanophora (de Man, 1902)

The species *Gonodactylopsis drepanophora* earlier known from Indonesia, has been reported for the first time from India based on a collection made from Andaman Sea, east of Little Andaman Island (10.72°N and 92.71°E, 53 m). The specimens have been deposited deposited as reference vouchers at the Referral Centre of the Centre for Marine Living Resources and Ecology, Kochi (India). It has been published by Vinay P. Padate, Shane T. Ahyong, Aleesha K. Shaji, Sherine Sonia Cubelio and Narayanane Saravanane in the journal: *Zootaxa,* 5047(5): 557-566, 2021.

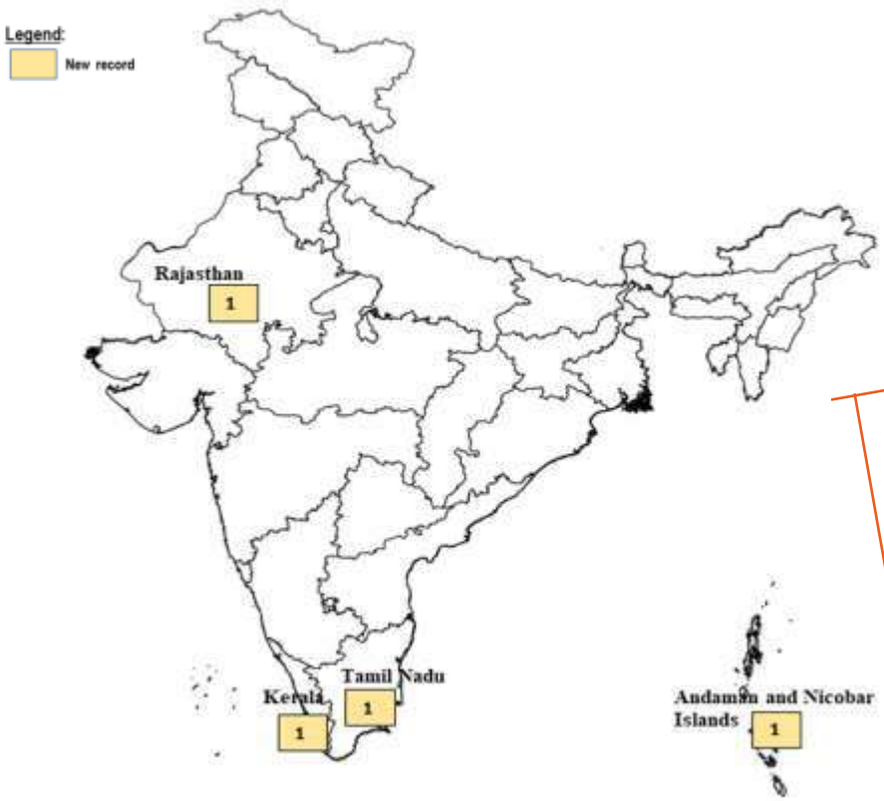
Gonodactylopsis drepanophora (de Man, 1902)

Family: SQUILLIDAE
Genus: *Cloridina* Manning, 1995

Cloridina malaccensis (Manning, 1968)

The species *Cloridina malaccensis* earlier known from Indonesia, Madagascar, Thailand, Philippines and New Caledonia, has been reported for the first time from India based on a collection made from Bay of Bengal, off Nagapattinam (10.79°N and 80.11°E, 56 m), Tamil Nadu. The specimens have been deposited deposited as reference vouchers at the Referral Centre of the Centre for Marine Living Resources and Ecology, Kochi (India). It has been published by Vinay P. Padate, Shane T. Ahyong, Aleesha K. Shaji, Sherine Sonia Cubelio and Narayanane Saravanane in the journal: *Zootaxa,* 5047(5): 557-566, 2021.

Cloridina malaccensis (Manning, 1968)



ARACHNIDA
4.11

This year 4 species of Arachnida have been recorded from India, one species each from Andaman and Nicobar Islands, Rajasthan, Kerala and Karnataka.

Phylum: ARTHROPODA
Class: ARACHNIDA
Order: ARANEAE
Family: ARANEIDAE
Genus: *Araneus* Clerck, 1757

Araneus tubabdominus Zhu & Zhang, 1993

The species *Araneus tubabdominus* earlier known from China, has been reported for the first time from India based on a collection made from Kannapuram (11.972297° N and 75.321517° E, 10 m), Kannur, Kerala. The specimens have been deposited in the NZC-ZSI. It has been published by Souvik Sen, John T.D. Caleb and Shelley Acharya in the journal: *Journal of Threatened Taxa,* 13(12): 19864-19866, 2021.

Araneus tubabdominus Zhu & Zhang, 1993

Family: PSECHRIDAE
Genus: *Psechrus* Thorell, 1878

Psechrus hartmanni Bayer, 2012

The species *Psechrus hartmanni* earlier known from Sri Lanka, has been reported for the first time from India based on a collection made from Kanyakumari Wildlife Sanctuary (8°29'33.72''N and 77°22'52.68''E, 1329 m), Tamil Nadu. The specimen has been deposited in the National Zoological Collections at ZSI-WGRC. It has been published by I.V. Ashigha, S. Sen and P.M. Sureshan in the journal: *Far Eastern Entomologist,* 441: 13-16, 2021.

Psechrus hartmanni
Bayer, 2012

Menemerus marginatus
(Kroneberg, 1875)

Family: SALTICIDAE
Genus: *Menemerus* Simon, 1868

Menemerus marginatus (Kroneberg, 1875)

The species *Menemerus marginatus* earlier known from Afghanistan, Azerbaijan, Central Asia (southwestern European part of the former USSR to Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), Iran, Pakistanand the United Arab Emirates, has been reported for the first time from India based on a collection made from Desert National Park Wildlife Sanctuary: Sudasari area (26°40'46.84"N, 70°36'10.06"E, 225 m), Jaisalmer district, Rajasthan. The specimens have been deposited in the e National Centre for Biological Studies (NCBS), Bangalore, Karnataka, India. It has been published by Rishikesh Tripathi, Ashish Kumar Jangid, Manju Siliwal, Sutirtha Dutta and Ambalaparambil Vasu Sudhikumar in the journal: *Peckhamia,* 231.1: 1-7, 2021.

Family: THOMISIDAE
Genus: *Borboropactus* Simon, 1884

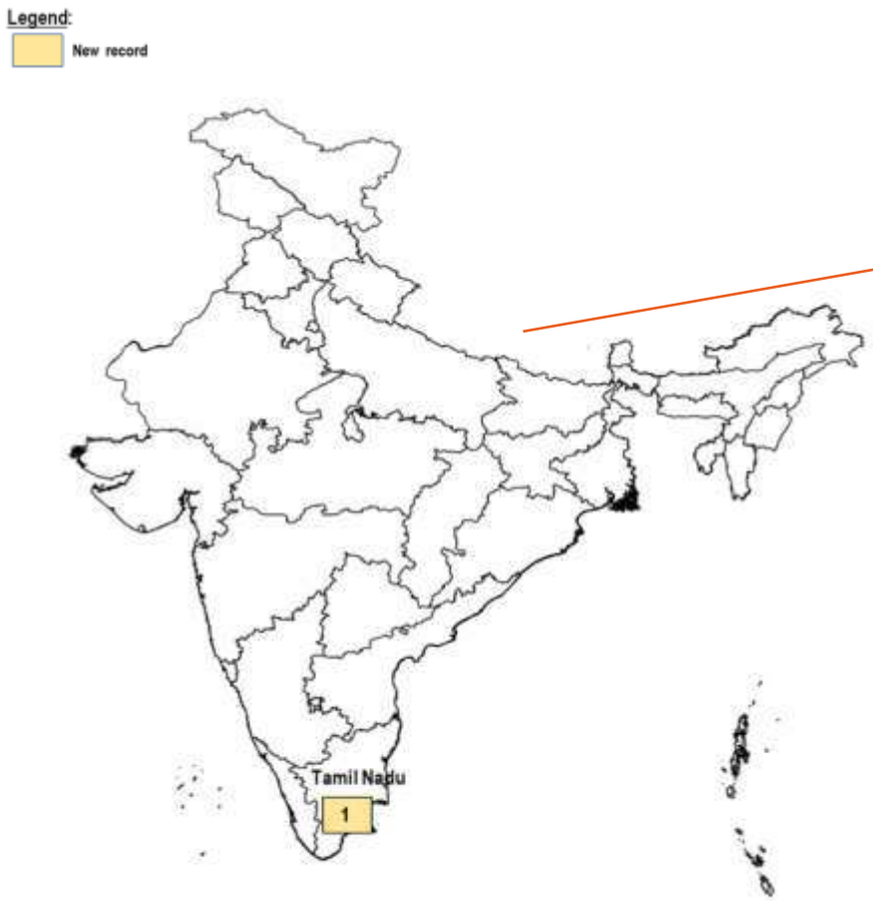
Borboropactus bituberculatus Simon, 1884

The species *Borboropactus bituberculatus* earlier known from Moluccas Island, Indonesia, China and New Guinea, has been reported for the first time from India based on a collection made from Makachua, Little Nicobar (07°24.480'N and 93°42.471'E, 302 m). The specimen has been deposited in the Andaman and Nicobar Regional Centre, Zoological Survey of India, Port Blair. It has been published by Minakshi Dash and C. Sivaperuman in the journal: *World News of Natural Sciences,* 36: (2021): 1-8, 2021.

Borboropactus bituberculatus
Simon, 1884

NEMATODA
4.12

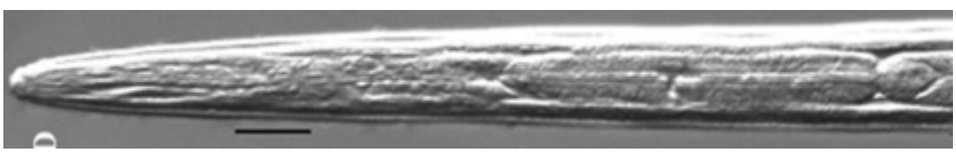
This year one species belonging to phylum Nematoda has been recorded for the first time from Nilgiris district of Tamil Nadu.



Phylum: NEMATODA
Class: ENOPLEA
Order: DORYLAIMIDA
Family: TYLENCHOLAIMIDAE
Genus: *Tylencholaimus* de Man, 1876

Tylencholaimus mirabilis (Butschli, 1873)

The species *Tylencholaimus mirabilis* earlier known Germany, has been reported for the first time from India based on a collection made from Nilgiris district, Ooty, Dodabetta Peak Road (11º40.1'99.9'N and 76º73.5'36.9'E, 10–15 cm). The specimen has been deposited in the AMU-ZD-NC and nematode collection of the Zoological Survey of India, Kolkata, India. It has been published by Md Niraul Islam and Wasim Ahmad in the journal: *European Journal of Taxonomy,* 774: 58–105, 2021.



Tylencholaimus mirabilis (Butschli, 1873)

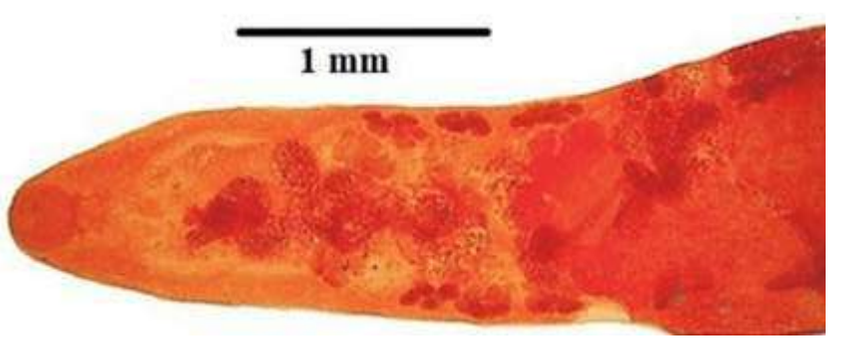
4.9.13 PLATYHELMINTHES

This year only one species of Platyhelminthes has been reported for the first time from the state of Uttarakhand.

Phylum: PLATYHELMINTHES
Class: TREMATODA
Order: PLAGIORCHIIDAE
Family: PLAGIORCHIIDAE
Genus: *Haematoloechus* Looss, 1899

Haematoloechus singaporensis Yuen, 1962

The species *Haematoloechus singaporensis* earlier known from Singapore, has been reported for the first time from India based on a collection made from Tilwadi village, Dehradun (30°25.178'N and 77°54'.439'E, 669 m). The specimen has been deposited in the Zoological Survey of India, Kolkata. It has been published by Pallab Maity, Anjum N. Rizvi and Charles R. Bursey in the journal: *Acta Parasitologica,* 10.1007/s11686-021-00469-2, 2021.



Haematoloechus singaporensis Yuen, 1962

CNIDARIA 4.14

One species of Cnidaria from Karnataka, has been recorded for the first time from India this year.

Phylum: CNIDARIA
Class: ANTHOZOA
Order: SCLERACTINIA
Family: CARYOPHYLLIIDAE
Genus: *Caryophyllia* Lamarck, 1801

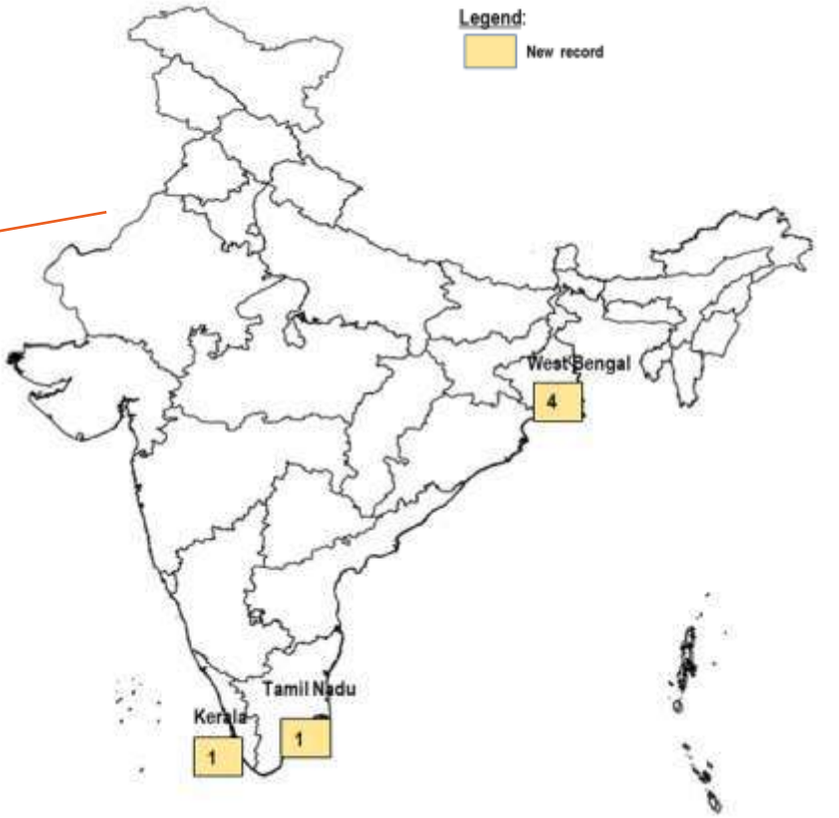
Caryophyllia (Caryophyllia) grandis Gardiner & Waugh, 1938

The species *Caryophyllia (Caryophyllia) grandis* earlier known from Maldive, western Australia, Indonesia, South Africa to western Sumatra, has been reported for the first time from India based on a collection made from Karwar coast (14.3760N and 73.0270E) Karnataka, west coast of India. The specimen has been deposited in the National Zoological Collection, ZSI-MARC, Digha. It has been published by J.S. Yogesh Kumar and C. Raghunathan in the journal: *Rec. zool. Surv. India,* 121(3): 333-336, 2021.

Caryophyllia (Caryophyllia) grandis Gardiner & Waugh, 1938

4.9.15 PROTOZOA

This year, five species of Protozoa have been recorded for the first time from India, 4 species from West Bengal and 1 species from both Kerala and Karnataka.



Phylum: AMOEBOZOA
Class: TUBULINEA
Order: ARCELLINIDA
Family: DIFFLUGIIDAE
Genus: *Difflugia* Leclerc, 1815

Difflugia ampla Rampi, 1950

The species *Difflugia ampla* has been reported for the first time from India based on a collection made from Agastyamala Biosphere Reserve (N 8.7599° and E 77.1169°), Tamil Nadu and Kerala. The specimen has been deposited in the National Zoological Collection, ZSI-MBRC, Chennai. It has been published Bindu, L. in the journal: *International Journal of Global Science Research*, 8(1): 1441-1448, 2021.

Difflugia ampla Rampi, 1950

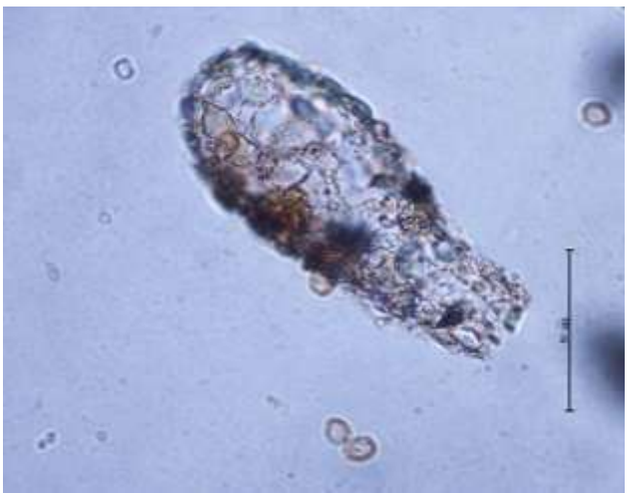
Difflugia ampullula Playfair, 1918

The species *Difflugia ampullula* has been reported for the first time from India based on a collection made from Singalila NP, Darjeeling, West Bengal (N 27. 0600° and E 88.0200°). The specimen has been deposited in the National Zoological Collection, ZSI-MBRC, Chennai. It has been published Bindu, L. in the journal: *International Journal of Global Science Research*, 8(1): 1441-1448, 2021.

Difflugia ampullula Playfair, 1918

Difflugia lacustris (Penard, 1899) Ogden, 1983

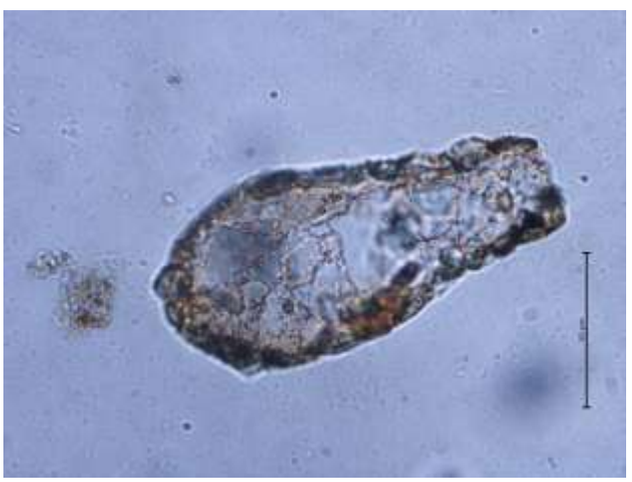
The species *Difflugia lacustris* has been reported for the first time from India based on a collection made from Singalila NP, Darjeeling, West Bengal (N 27. 0600° and E 88.0200°). The specimen has been deposited in the National Zoological Collection, ZSI-MBRC, Chennai. It has been published Bindu, L. in the journal: *International Journal of Global Science Research*, 8(1): 1441-1448, 2021.



Difflugia lacustris (Penard, 1899) Ogden, 1983

Difflugia bryophila (Penard, 1902) Jung, 1942

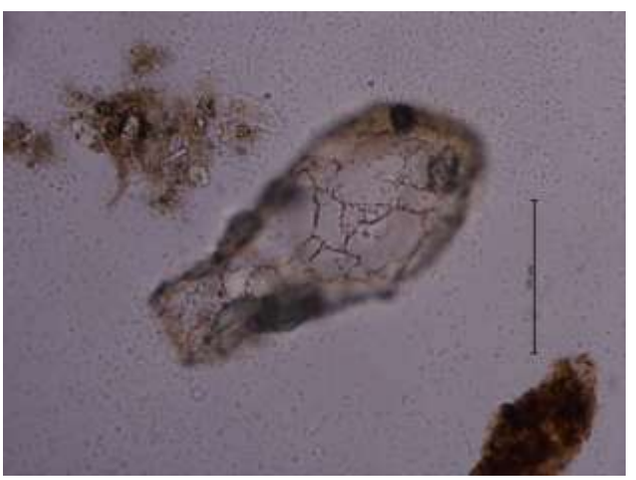
The species *Difflugia bryophila* has been reported for the first time from India based on a collection made from Singalila NP, Darjeeling, West Bengal (N 27. 0600° and E 88.0200°). The specimen has been deposited in the National Zoological Collection, ZSI-MBRC, Chennai. It has been published Bindu, L. in the journal: *International Journal of Global Science Research,* 8(1): 1441-1448, 2021.



Difflugia bryophila (Penard, 1902) Jung, 1942

Difflugia ventricosa Deflandre, 1926

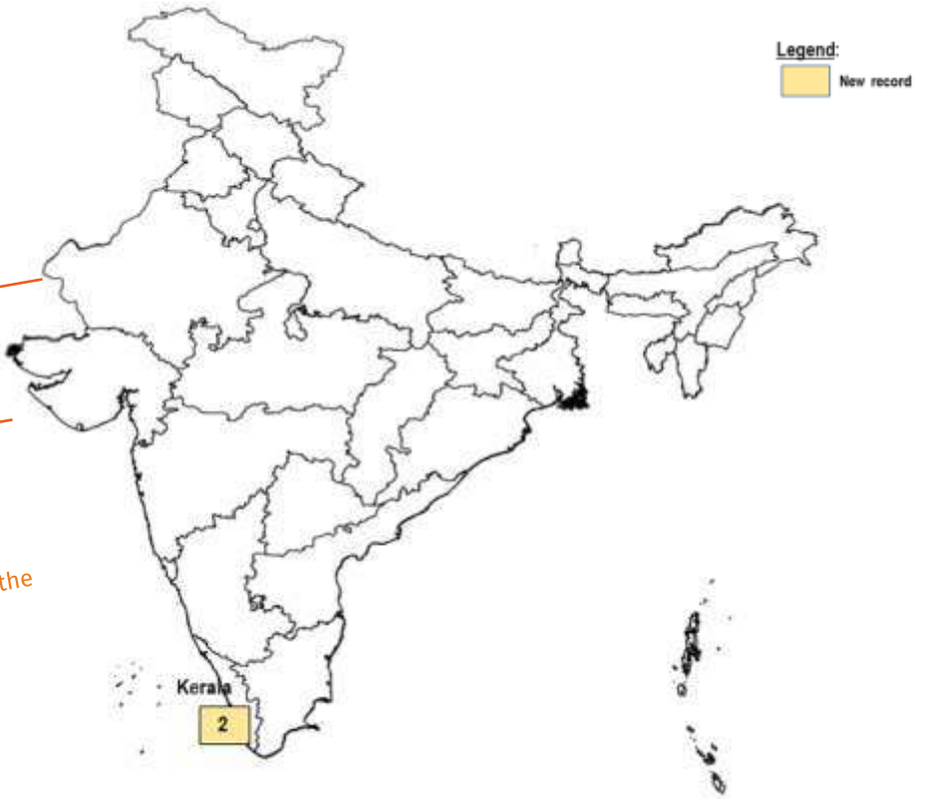
The species *Difflugia ventricosa* has been reported for the first time from India based on a collection made from Singalila NP, Darjeeling, West Bengal (N 27. 0600° and E 88.0200°). The specimen has been deposited in the National Zoological Collection, ZSI-MBRC, Chennai. It has been published Bindu, L. in the journal: *International Journal of Global Science Research,* 8(1): 1441-1448, 2021.



Difflugia ventricosa Deflandre, 1926

4.16 CHROMISTA

This year 2 species of Chromista have been recorded for the first time from India from the state of Kerala.



Phylum: CILIOPHORA
Class: OLIGOHYMENOPHOREA
Order: PENICULIDA
Family: LEMBADIONIDAE
Genus: *Lembadion* Perty, 1849

Lembadion lucens (Maskell, 1887) Kahl, 1931

The species *Lembadion lucens* has been reported for the first time from India based on a collection made from Western Ghats (11°08'N and 76°28'E). The specimen has been deposited in the National Zoological Collections of the Zoological Survey of India, Kolkata, India. It has been published by Daizy Bharti and Santosh Kumar in the journal: *Rec. zool. Surv. India,* 121(3): 333-336, 2021.

Lembadion lucens (Maskell, 1887) Kahl, 1931

Class: SPIROTRICHEA
Family: HOLOSTICHIDAE
Genus: *Anteholosticha* Berger, 2003

Anteholosticha monilata (Kahl, 1928), Berger, 2003

The species *Anteholosticha monilata* earlier known from Austria, Czechoslovakia, France, Germany, Moldavia, Norway, Spain, Belgium, Cameroon and USA, has been reported for the first time from India based on a collection made from Parambikulam Wildlife Sanctuary, Sangam Range, Palakkad district, Western Ghats (10°26'29.2''N and 76°46'29.3''E). The specimen has been deposited in the National Zoological Collections of the Zoological Survey of India, Kolkata, India. It has been published by Daizy Bharti and Santosh Kumar in the journal: *Rec. zool. Surv. India,* 121(3): 333-336, 2021.

Anteholosticha monilata (Kahl, 1928), Berger, 2003

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Lithosaphonecrus nagalandi Melika *et al.*
Lobothorax nicosmiti Aneesh *et al.*
Lodosocoris santhae Salini *et al.*
Longidorus goldeni Handoo *et al.*
Lopidolon dandeliensis Yashwanth *et al.*
Lyroda aurea Mawadda & Girish Kumar
Lyroda binghami Tsuneki, 1983
Lyroda nuda Mawadda & Girish Kumar.
Macrobrachium ramae Das *et al.*
Macropsis dalhousiensis Viraktamath & Yeshwanth
Macropsis krishna Viraktamath & Yeshwanth
Macropsis puttarudriahi Viraktamath & Yeshwanth
Mactra aequisulcata G.B. Sowerby III (1894)
Maladera kaimurensis Chandra *et al.*
Maladera kottagudiensis Chandra *et al.*
Maladera reyaensis Bhunia *et al.*
Maladera silviafabriziae Chandra *et al.*
Maladera tripuraensis Chandra *et al.*
Mambarona congrua (Walker, 1862)
Marilia ceylanica Martynov 1936
Maripanthus gloria Caleb
Mata lenonia Sarkar *et al.*
Mata meghalayana Sarkar *et al.*
Mata ruffordii Sarkar *et al.*
Megachile (Callomegachile) sculpturalis (Smith, 1853)
Megaglena agasthiya Vasanth *et al.*
Megalestes gyalsey Gyeltshen *et al.*, 2017
Meganola suffusata (Wileman & West, 1929)
Megobaralipton kalimantanum (Komiya & Makihara, 2001)
Melinaria pseudorepanda kalawensis (Orhant, 2000)
Menemerus marginatus (Kroneberg, 1875)
Meretrix lusoria (Röding, 1798)
Merothrips mizoramensis Johnson *et al.*
Mertila rubrocephala Yashwanth & Konstantinov
Metatarsonemus badurkani Karmakar & Mondal
Metatarsonemus connexus Karmakar & Mondal
Metatarsonemus diplojuga Karmakar *et al.*
Metatarsonemus infundibulum Karmakar & Mondal.
Metatarsonemus shirishi Karmakar & Mondal.
Meteorus rubrum Ahmed & Shamim.
Methocha krombeini Hanima *et al.*
Methocha paraceylonica Hanima *et al.*
Methocha shyamagatra Hanima *et al.*
Metrocoris issaci Jehamalar & Dash.
Metrocoris josephi Jehamalar & Dash.
Metrocoris latus Jehamalar & Dash.
Miltochrista berdepsebunda Volynkin *et al.*
Minerva pentali Garg & Biju
Mohunia manohari Meshram
Moniligaster bahli Narayanan & Julka
Moniligaster blakemorei Narayanan & Julka
Moniligaster keralensis Narayanan & Julka
Monoceromyia flavoscutata Sankararaman *et al.*
Monoceromyia nigra Sankararaman *et al.*
Monocystis asmati Bhowmik *et al.*
Monocystis dolium Bhowmik *et al.*
Monocystis lomentum Bhowmik *et al.*
Monocystis pontoscolexae Bhowmik *et al.*
Monocystis elliptoidum Bhowmik *et al.*
Mustura subhashi Choudhury *et al.*
Mustura taretensis Chinglemba *et al.*
Mycterothrips nainiae Singha *et al.*
Myiomma belavadii Yeshwanth *et al.*
Myiomma ramamurthyi Yeshwanth *et al.*
Myittana (Myittana) bidentata Ramaiah & Meshram
Mylonchulus shamimi Handoo *et al.*
Myrmecina bawai Aswaj *et al.*
Myrmecina reticulata Aswaj *et al.*
Myxobolus cochinensis Correya *et al.*

Nacaduba sinhala ramaswamii Sadasivan
Namyatovia castlerockensis Yashwanth & Konstantinov
Namyatovia sirsiensis Yashwanth & Konstantinov
Nannophyopsis clara (Needham, 1930)
Naso tonganus (Valenciennes, 1835)
Nassarius deepakaptei Nerulkar
Nedinoschiza indica Ranjith
Neochrysocharis formosus (Westwood)
Neochrysocharis raily Jamali & Zeya
Neochrysocharis robustus Jamali & Zeya
Neochrysocharis sudhiri Jamali & Zeya
Neohydatothrips biconcavus Rachana
Neohydatothrips masrensis Priesner, 1965
Neorhynchoplax devroyi Mitra & Ng
Nepaloserica cheemaensis Bhunia *et al.*
Nola euryzonata (Hampson, 1900)
Norileca hathai Aneesh *et al.*
Ochlerotatus alternans (Westwood)
Oecetis jacobsoni Ulmer 1930
Oigolaimella trilineata Mahboob *et al.*
Okiseius jainticus Kar & Karmakar
Okiseius ramdhuracus Molla & Karmakar
Okiseius roseus Molla & Karmakar
Okiseius unisetatus Kar & Karmakar
Oligodon churahensis Mirza *et al.*
Omphra balli Akhil & Sabu
Omphra erwini Akhil & Sabu
Omyomymar sudhiri Anwar & Zeya
Omyomymar supremus Anwar & Zeya
Oneilliella shivii Singha *et al.*
Onychocella angulosa (Reuss, 1848)
Ooceraea decamera Bharti et *al.*
Ooceraea joshii Bharti *et al.*
Oryctopterus varuna Hiremath & Prathapan
Oryctopterus yeshwanthi Hiremath & Prathapan
Oryzias andrewi Roberts *et al.*
Oxyina kashmira Baba & Usmani
Oxyopes dinendrai Sen & Sureshan
Oxyopes scapeus Sen & Sureshan
Paithrips circularis Nonaka & Jangvitaya, 1994
Pallisentis heingangyensis Devi & Gambhir
Paloniella parallela Yasunaga & Hayashi, 2002
Parahormius similis Gupta
Paramblynotus annulicornis Cameron, 1908
Paraoxydirus indicus Kumar & Ahmad
Paraoxydirus vulvalpapillatus Kumar & Ahmad
Parapsilorhynchus alluriensis Jadav *et al.*
Parasa julikatis Solovyev & Witt, 2009
Parasicagutter chitwoodi Handoo *et al.*
Parasmittina collifera (Robertson, 1908)
Parasyscia ganeshaiahi Aswaj *et al.*
Pealius gallae Dubey
Pealius kufriensis Dubey
Pediobius coconymphagus Binoy & Sureshan
Pelossus indicus Majumder *et al.*
Perrottetia rajeshgopali Bhosale *et al.*
Philanthus nepalensis Bingham, 1908
Philanthus triangulum (Fabricius, 1775)
Phlogophora meticulodina (Draudt, 1950)
Phlogophora nobilis Hreblay & Ronkay, 1998
Phlogophora similis Bandyopadhyay *et al.*
Phlogophora szecsenyii Hreblay & Ronkay, 1998
Phrynocaria perfida Poorani.
Phyllonorycter populifoliella (Treitschke, 1833)
Phyllothemis eltoni Fraser, 1935
Phytoseius aonlae Kar & Karmakar
Phytoseius clavus Kar & Karmakar
Phytoseius mauritiana Bhowmik & Karmakar
Pieris tadokoroi Das *et al.*
Pila mizoramensis Sil *et al.*
Piyuma chapraensis Saini & Dey
Platybaetis selvai Kubendran *et al.*
Platyceps josephi Deepak *et al.*
Platylomia kohimaensis Hajong & Limatemjen
Plesiocleidochasma porcellanum (Busk, 1860)
Podothrips ferrugineus Okajima, 1978
Polyplectropus amphion Malicky 1997
Polyplectropus phrixos Malicky & Changthong, 2006
Pomponia pseudolinearis Sadasivan.
Poricella robusta (Hinck 1884)
Potamiscus chizami Pati
Potamiscus mima Pati
Potamyia phaidra Malicky & Chantaramongkol, 1997
Prabadra occidentalis Dubatolov *et al.*
Praepodothrips causiapeltus Reyes, 1994
Pristionchus glomerata Gupta *et al.*
Procladius (Holotanypus) culiciformis (Linnaeus, 1767)
Procladius (Procladius) kalimpongensis Mondal *et al.*
Prometopidia joshimathensis joshimathensis Dey *et al.*
Proprioseiopsis amari Bhowmik & Karmakar
Prosevania austrina Rameshkumar & Kazmi
Protoplotina ambigua Poorani
Psechrus hartmanni Bayer.
Pseudoceros bipurpurea Dixit *et al.*
Pseudoceros galaxea Dixit *et al.*
Pseudolaguvia vespa Praveenraj *et al.*
Pteroceraphron apoorva Bijoy & Rajmohana
Ptyas mucosa (Linnaeus, 1758)
Pulvinaria kalyaniensis Talukder & Das
Rajathelphusa ala Raj *et al.*
Rajathelphusa muni Raj *et al.*
Rakthamichthys mumba Praveenraj *et al.*
Raorchestes cangyuanensis Wu *et al.,* 2019
Raorchestes drutaahu Garg *et al.*
Raorchestes kakkayamensis Garg *et al.*
Raorchestes keirasabinae Garg *et al.*
Raorchestes sanjappai Garg *et al.*
Raorchestes vellikkannan Garg *et al.*
Raphidascaris mundeswariensis Patra *et al.*
Renocila trillesi Aneesh *et al.*

Rhabdophis bindi Das *et al.*
Robertsonidra argentea (Hincks, 1881)
Rudisculptus caudalis Dubey.
Ruspolia kashmira Shah *et al.*
Sahyadriana inopinata Pati & Thackeray.
Sahyadriana keshari Pati & Thackeray.
Sahyadriana tamhini Pati & Thackeray.
Sandracottus vijayakumari Anand *et al.*
Sarju brevirostrata Salini *et al.*
Sasajiella boothi Poorani & Thanigairaj.
Sceliphron destillatorium (Illiger, 1807)
Sceliphron madraspatanum formosanum van der Vecht, 1968
Schizoporella errata (Waters, 1878)
Scirtothrips hitam Ng, Mound & Azidah, 2014
Sebastapistes cyanostigma (Bleeker, 1856)
Serratella palatovi Martynov *et al.*
Sinustrombus sinuatus (Lightfoot, 1786)
Sitana sushili Deepak *et al.*
Smicromorpha attenboroughi Binoy *et al.*
Smittipora harmeriana (Canu & Bassler, 1929)
Smittipora philippinensis (Canu & Bassler, 1929)
Sparsorythus nanjangudensis Muthukatturaja & Balasubramanian
Sparsorythus srokai Srinivasan *et al.*
Sparsorythus sivaramakrishnani Sivaruban *et al.*
Spilomena attenboroughi Tessy *et al.*
Spilomena fulvopleuris Tessy *et al.*
Spilomena reticularis Tessy *et al.*
Spilomena sahyadriensis Tessy *et al.*
Spilomena tsunekii Tessy *et al.*
Spilomena tuberculata Tessy *et al.*
Stantonia hayati Ghramh, Ahmed & Khan
Steneotarsonemus (Steneotarsonemoides) indianensis Karmakar & Mondal
Steneotarsonemus amlisoae Ganguly, Mondal & Karmakar
Stictochironomus bengalensis Konar
Stoliczkia vanhnuailianai Lalronunga *et al.*
Stonedahlia mishmiensis Yashwanth & Konstantinov
Strangulotilla sureshani Terine *et al.*
Stygarctus keralensis Vishnudattan *et al.*
Subdoluseps nilgiriensis Ganesh *et al.*
Syllophopsis peetersi Akbar *et al.*
Syscia indica Aswaj *et al.*
Taeniura meyeni Müller & Henle, 1841
Tarsocryptus laboriosa (Tilbrook, 2006)
Tarsonemus mondouriensis Karmakar & Ganguly
Tarsonemus narkelae Karmakar & Mondal
Teleogryllus rohinae Jaiswara & Jain.
Teloganopsis jinghongensis (Xu, You & Hsu, 1984)
Teratodiplogaster glomerata Gupta *et al.*
Teretamon kapota Mitra & Pati.
Thespea aka N. Singh & Ahmad
Thosea lutea Heylaerts, 1890
Tibetanja tagoroides Naumann *et al.*, 2020
Torleya dibruensis Selvakumar *et al.*
Torleya simbalbarensis Selvakumar *et al.*
Torodora macrosigna Gozmány, 1973
Trachynotothrips brevispinis Masumoto & Okajima
Trachynotothrips striatus Masumoto & Okajima
Trigonoderus periyarensis Surya & Sureshan
Trilocha nicobari N. Singh & Ahmad.
Triteleia flagellata Abhilash & Rajmohana.
Triteleia robusta Abhilash & Rajmohana.
Tritodynamia bengalensis Trivedi *et al.*
Tuberaleyrodes monpa Dubey.
Tylencholaimellus brassicas Handoo *et al.*
Tylencholaimus macroamphidius Islam & Ahmad
Tylencholaimus mirabilis (Butschli, 1873)
Tylencholaimus orientalis Handoo *et al.*
Tylencholaimus shamimi Islam & Ahmad
Tylencholaimus southindicus Islam & Ahmad
Tylencholaimus striatus Islam & Ahmad
Tylencholaimus tamiliensis Islam & Ahmad
Typhlodromips cinchonai Molla & Karmakar
Typhlodromips jhilimiliensis Bhowmik & Karmakar
Typhlodromips neosyzygii Bhowmik & Karmakar
Typhlodromus (Anthoseius) adhatoda Karmakar *et al.*
Typhlodromus (Anthoseius) barapanicus Kar & Karmakar
Typhlodromus (Anthoseius) bengalensis Karmakar *et al.*
Typhlodromus (Anthoseius) bolpurensis Bhowmik & Karmakar
Typhlodromus (Anthoseius) bulbosis Karmakar *et al.*
Typhlodromus (Anthoseius) campana Kar & Karmakar
Typhlodromus (Anthoseius) cherrapunjiensis Kar & Karmakar
Typhlodromus (Anthoseius) sagaricus Karmakar
Tzustigmus sahyadriensis Tessy *et al.*
Uropelts jerdoni Ganesh *et al.*
Varadia amboliensis Bhosale *et al.*
Xenortholitha falcata Yazaki, 1993
Xyleutes ramamurthyi Yakovlev & Sankararaman
Xylophis deepaki Narayanan *et al.*
Yalvaciana allowpora Shah & Usmani
Yelahanka canaraica Viraktamath *et al.*
Yelahanka kodaiensis Viraktamath *et al.*
Yelahanka montana Viraktamath *et al*
Yelahanka shillongensis Viraktamath *et al.*
Yelahanka sikkimensis Viraktamath *et al.*
Yelahanka trifida Viraktamath, Webb & Yeshwanth
Yelicones achterbergi Rishabanu *et al.*
Zadadra confusa Dubatolov *et al.*
Zaommomentedon giraulti Jamali & Zeya
Zeuxevania bengalensis Rameshkumar & Kazmi
Zeuxevania hayati Rameshkumar & Kazmi
Zeuxevania hubeni Kazmi & Rameshkumar
Zographetus dzonguensis Kunte *et al.*
Zoramia virdiventer Greenfield *et al.*
Zyxomma breviventre (Burmeister, 1839)

Greater biodiversity leads to greater stability in ecosystems, species, and individuals. The discovery of new species broadens our understanding of biodiversity. It is significant because it helps to protect them now and in the future. It also enables the general public to understand the existence of all species worldwide, as well as our ability to shape the social, political, and financial forces that influence conservation efforts. Zoological Survey of India is playing major role in the exploration of the fauna of our country. Since 2007, ZSI has stepped forward to collate information of faunal discoveries in India and publish them as a document entitled "Animal Discoveries- New Species and New Records" every year. The present book for the year 2021 deals with 540 new discoveries which include 406 new species and 134 newly recorded species to India. As a result of it, the faunal diversity of India has been enhanced to 1,03,258 species which is equivalent to 6.1 per cent of the Global faunal diversity.

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