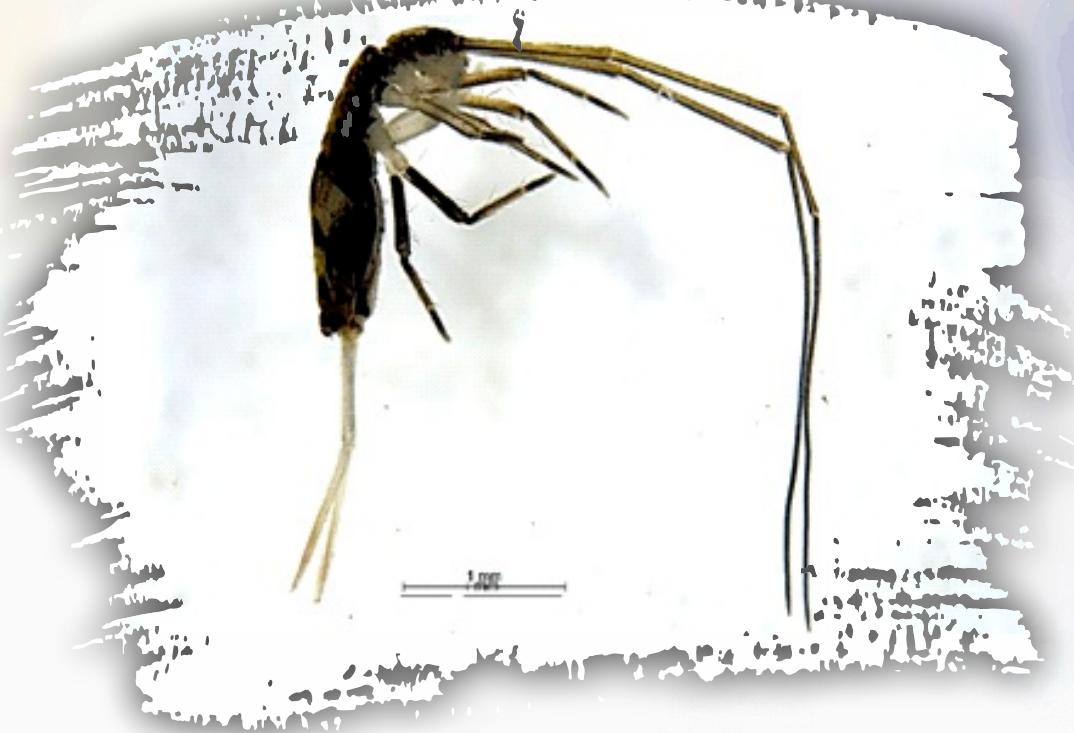


# FAUNA OF INDIA CHECKLIST

ONLINE VERSION 1.0



## ARTHROPODA: COLLEMBOLA

G.P. Mandal<sup>1</sup>, K. K. Bhattacharya<sup>2</sup>, K. K. Suman<sup>3</sup>

Apterygota section, Zoological Survey of India, M – Block, New Alipore, Kolkata – 700053, India.  
<sup>1</sup>gpmandal.zsi@gmail.com; <https://orcid.org/0000-0002-5688-1391>, <sup>2</sup>bhattak76@gmail.com;  
<https://orcid.org/0009-0007-4821-5819>, <sup>3</sup>kusumendrasuman@yahoo.in; <https://orcid.org/0009-0009-7932-4238>, Corresponding author: gpmandal.zsi@gmail.com

**DOI :** <https://doi.org/10.26515/Fauna/1/2023/Arthropoda:Collembola>

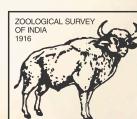
**Key words:** Collembola, springtails, checklist, endemic, biodiversity.

**Citation:** Mandal, G.P., Bhattacharya, K.K. and Suman, K.K. (2024). Fauna of India Checklist: Arthropoda: Collembola. Version 1.0. Zoological Survey India. DOI : <https://doi.org/10.26515/Fauna/1/2023/Arthropoda:Collembola>

**Comments on the checklist:**

E-mail your comments  
and suggestions to improve  
the checklist to

[gpmandal.zsi@gmail.com](mailto:gpmandal.zsi@gmail.com) and  
[apterygota.zsi@gmail.com](mailto:apterygota.zsi@gmail.com)



**ZOOLOGICAL SURVEY OF INDIA**  
Ministry of Environment, Forest & Climate Change

# ARTHROPODA: COLLEMBOLA

G.P. Mandal<sup>1</sup>, K. K. Bhattacharya<sup>2</sup>, K. K. Suman<sup>3</sup>

*Apterygota section, Zoological Survey of India, M – Block, New Alipore, Kolkata – 700053, India.*

<sup>1</sup>[gpmandal.zsi@gmail.com](mailto:gpmandal.zsi@gmail.com); <https://orcid.org/0000-0002-5688-1391>, <sup>2</sup>[bhattak76@gmail.com](mailto:bhattak76@gmail.com);

<https://orcid.org/0009-0007-4821-5819>, <sup>3</sup>[kusumendrasuman@yahoo.in](mailto:kusumendrasuman@yahoo.in); <https://orcid.org/0009-0009-7932-4238>, \*Corresponding author: [gpmandal.zsi@gmail.com](mailto:gpmandal.zsi@gmail.com)

## Introduction

Collembolas are small wingless soft-bodied hexapods measuring usually between 0.2 mm - 6 mm in length possessing a spring like jumping organ, the furcula, underneath the 4<sup>th</sup> abdominal segment. Mouthparts entognathous, principally adapted for biting; antennae usually four segmented. Compound eyes present or absent. Abdomen six segmented. The presence of antennae and absence of cerci distinguishes them from the other entognathous hexapods. Collophore is underneath the 1<sup>st</sup> abdominal segment.

## Global diversity

Collembola or springtails are one of the most predominant mesofauna found in soil, litter and dumpy places of forests, caves, mountains and deserts. Such diverse niche selection makes species richness high which is often neglected due to poor investigation and deficit taxonomic data. There are 9400 published Collembola species till now. On the basis of about 9400 globally described species (Bellinger et al. 1996- 2022), Hopkin (1998) roughly estimated the occurrence of a total 50,000 Collembola species.

## Diversity in India

India, being a megadiverse country encompasses four biodiversity hotspots among 34 world hotspots. It harbors around 7-8% of the total known species of the world. India is also a representative of about 1,01,167 animal species and 49,003 plant species (Panda, 2022). Indian invertebrate faunal community comprises 92,357 species under 28 phyla, sharing 6.08% of total invertebrate species of the world (Chandra & Raghunathan, 2022). The first account of work on Indian Collembola goes to the credit of Ritter (1911). His contribution includes number of new Collembolas described from India (Bombay). Imms (1912) recorded a significant number of Indian Collembolas besides those from Burma and Ceylon. Cassagnou (1980, 1982, 1988, 1990) contributed significantly on collembolan fauna; Baijal (1955 a & b; 1958) described nineteen species of Indian Collembola, based on Prof. M.S. Mani's Entomological expedition in the Northwest Himalaya (1954-56); 12 species among these were from the 'Nival zone of N.W. Himalaya'. Two monotypic genera were also erected, viz., *Salmonia* (= *Appendisotoma*) and *Himlanura*. Salmon (1951-1970) has contributed significantly to our knowledge of Indian Collembola. Yosii (1966 a) has dealt with a number of high altitudes Collembola from Himalaya. These comprised of 38 new species and a new monotypic genus *Nepalanura* (*N. paranuroides*), representing 11 families. All these were based on material from Himalaya as the result of 'Himalayan Expedition of the Chiba University 1963' under the leadership of Prof. M. Namata. Another significant contribution by Yosii (1966 b) of 20 new species was based on material obtained by 'KUPHE expedition 1960', from Bombay and Calcutta. These species represented nine genera. Yosii (1966 b) described 16 new species alone from Malabar Hills and Lonavala and Nasik.

Prabhoo (1970, 1971a) has dealt with Collembola of the suborder Arthropleona, inhabiting soil and litter of South India; chiefly from tea plantations, besides various localities in Western Ghats. This is quite significant contribution on Collembola from South India. It deals with 48 species, including 23

new species and a new monotypic genus *Indoscopus* (*I. spinosus*). Majority of the species represented Entomobryidae.

Collembola of the suborder Symphyleona from South India was dealt by Prabhoo (1971 b, c). This work dealt with soil and litter inhabiting forms from tea growing areas in Western Ghats and certain other localities of Kerala. This contribution accounted 12 species (10 under Sminthuridae and 2 under Neellidae). Of these four were new species and five new records from India.

Mitra (1966a, b, 1967, 1973a, b, c, 1974a,b, 1975, 1976a, b, 1990, 1993) made significant contribution on the taxa. Prabhoo and Muraleedharan (1980) added a new species *Tomocerus mitrai* from Himachal Pradesh.

Hazra and Mandal (2007, 2010 and 2012) recorded 21 species from Nagaland, 27 species from Arunachal, 21 species from Andhra Pradesh, 28 species from Uttarakhand, 18 species of collembolan from Andaman and Nicobar Islands respectively. Mandal and Hazra (2013) published a new record of *Yosiia dehradunia* from Jharkhand.

Mandal (2008) recorded 12 species from Okhla Reserve Forest, near Ghaziabad (U.P.). Mandal & Hazra (2009) published the diversity of Collembola (Hexapoda) from East and North East India with some notes on their Ecology and recorded 76 species under 38 genera of 6 families. Mandal (2011) recorded 16 species of collembolan for the first time from Bibhuti Bushan Wild Life Sanctuary, West Bengal. Mandal & Suman (2013) recorded 9 species of collembolan under 8 genera of 5 families from Sajnekhali Wild Life Sanctuary, West Bengal.

Baquero, Mandal and Jordana (2014) described 7 new species of Collembola from the Ladakh area of Jammu and Kashmir. Baquero, Mandal and Jordana (2015) also described 12 new species of Collembola from Himachal Pradesh, India. Hazra and Mandal (2015) described a new species of Collembola from Duduwa Tiger Reserve, Uttar Pradesh. Mandal and Suman (2015) published Collembola fauna of Uttar Pradesh. Mandal *et al.* (2016) described 4 new species of Collembola from Jharkhand, India. Mandal *et al.* (2017) described 5 new species of Collembola (Isotomidae) from Jharkhand, India. Mandal (2018) described a new monotypic genus *Falcomurus* of Heteromurinae from the Chilika Lake, Odisha, India. Mandal, Suman & Bhattacharya (2019) was described a new species from Shola grassland of Western Ghats, Kerala. Mandal and Arbea (2019) published one new species of Collembola from Satkosia Tiger Reserve, Odisha. Mandal *et al.* 2019 published two new species of collembolan from Satkosia Tiger Reserve, Odisha. Mandal *et al.* 2019 published two new species of collembola from West Bengal, India.

There are 9400 published Collembola species till now to which only 3.86% is revealed from India; this reflects a lot of taxonomic work that is yet to be done in near future. A total of 377 valid species under 123 genera grouped in 20 families have been reported by Mandal *et. al.*, 2023 (in press).

**Table-1:** Diversity of Collembola in the various States of India

Sl. No.	States/UTs	No. of Species	No. of Endemic Species
	<b>INDIA TOTAL</b>	<b>377</b>	<b>195</b>
1.	<b>Andhra Pradesh</b>	<b>26</b>	<b>14</b>
2.	<b>Arunachal Pradesh</b>	<b>37</b>	<b>21</b>
3.	<b>Assam</b>	<b>31</b>	<b>21</b>
4.	<b>Bihar</b>	<b>14</b>	<b>08</b>
5.	<b>Chhattisgarh</b>	<b>07</b>	<b>03</b>
6.	<b>Goa</b>	<b>00</b>	<b>00</b>
7.	<b>Gujarat</b>	<b>00</b>	<b>00</b>
8.	<b>Haryana</b>	<b>02</b>	<b>02</b>

Sl. No.	States/UTs	No. of Species	No. of Endemic Species
	<b>INDIA TOTAL</b>	<b>377</b>	<b>195</b>
1.	Andhra Pradesh	26	14
2.	Arunachal Pradesh	37	21
3.	Assam	31	21
4.	Bihar	14	08
5.	Chhattisgarh	07	03
6.	Goa	00	00
7.	Gujarat	00	00
8.	Haryana	02	02
9.	Himachal Pradesh	75	36
10.	Jharkhand	21	20
11.	Karnataka	01	01
12.	Kerala	86	55
13.	Madhya Pradesh	01	01
14.	Maharashtra	70	42
15.	Manipur	27	14
16.	Meghalaya	24	16
17.	Mizoram	20	12
18.	Nagaland	16	09
19.	Odisha	16	12
20.	Punjab	03	03
21.	Rajasthan	08	08
22.	Sikkim	46	32
23.	Tamil Nadu	45	24
24.	Telangana	00	00
25.	Tripura	12	09
26.	Uttarakhand	46	25
27.	Uttar Pradesh	56	31
28.	West Bengal	102	54
29.	Andaman and Nicobar	18	12
30.	Chandigarh	00	00
31.	Daman and Diu, Dadra & Nagar Haveli	10	08
32.	Delhi	00	00
33.	Jammu and Kashmir	35	24
34.	Ladakh	14	09
35.	Lakshadweep	11	08
36.	Puducherry	09	04

**Endemism:** Among them, 315 species belong to 98 genera of order Poduromorpha +Entomobryomorpha and 37 species belongs to 16 genera of order Symphyleona. Out of 377 species of Collembola fauna recorded from India, 195 species are endemic to India.

**Habitat:** Collembolas are soil and litter dwelling organisms, preferring wet or damp surroundings. They may be found in moss, under stones, in caves, in ant and termite nests but also in the intertidal zone

on the coast, on the surfaces of lakes and ponds or snow fields. These organisms inhabit a wide range of ecological niches. Majority live in environs where moisture and organic matter are present, such as litter, humus and subsoil layer of arable and forest land. They are also found localized under log, stones, loose bark, leaf molds, moss fungus, lichens etc. There are a few inhabitants in the nests of ants and termites. Certain others live on the surface of fresh water bodies (ponds, lakes); while relatively a few representatives inhabit intertidal seashore. Snow at high altitudes is also known to support certain collembolans.

**Ecological Significance:** Collembolas are major components of terrestrial ecosystems, particularly significant members of the soil communities, constituting a significant proportion of the animal biomass. In forest soils, they can reach densities of 200 to 1800 individuals per dm<sup>3</sup>, densities only surpassed by the Acarian soil population (Handschin, 1955).

Collembolan fauna play an important role in the rehabilitation of damaged top soil and being a major member of soil mesofauna helps in pioneer phases of soil formation (Buckland & Cope, 1991). Their presence also indicates health and fertility of soils, thus they act as a potent bio-indicator (Greenslade, 2007). Collembola significantly act as a prey in the detritivorous ecosystem, thus creating more interconnections in the food web at the soil mesofaunal level.

**Human Impact:** There are a large number of endemic species in the group with very restricted irrigation, Water logging, use of chemical fertilizers and pesticides, shifting cultivation, overcultivation, deforestation, soil erosion, overgrazing, mining, radioactive fall-out, solid waste disposal, etc. All these activities are disturbing the upper mineral soil textures and affect the diversity, numbers, and activities of microbes and micro fauna that are important for maintenance of soil fertility. These disturbances can affect structure and function of soil ecology.

**Threatened species as per IUCN:** No species of Collembola is listed as threatened by the IUCN.

**Protected species as per WPA (2022)**

**Species under CITES:** No species of Collembola is listed under CITES.

**Invasive alien species:** No species of Collembola is listed as Invasive Alien Species (IAS).

**Gap areas:** Among the 36 states and Union territories, very little data is obtained from Telangana, Gujarat, Goa, Haryana, Delhi, Chandigarh that are the least studied states and Union territories. Kerala observes a wet climate with seasonal heavy rainfall and possess four of the Ramsar convention, tropical wet evergreen and semi-evergreen forests along with tropical moist and dry deciduous forest which is suitable for collembola fauna inhabitation. On the other hand, with humid subtropical areas in the north and southern tropical savannah, West Bengal represents a variety in species abundances with 97 species. A lot of morphological as well as molecular and habitat specific data is still required for more detailed and accurate study.

#### Systematic list of Collembola of India (Endemic species marked with \*)

**Class Collembola Lubbock, 1870**

**Order Neelipleona Massoud, 1971**

**Family Neelidae Folsom, 1896**

1. *Neelus murinus* Folsom, 1896

2. *Megalothorax minimus* Willem, 1900

**Order Symphyleona Börner, 1901 sensu Massoud, 1971**

**Family Sminthurididae Börner, 1906 sensu Medeiros & al, 2022**

**Tribe Sphaeridiini Richards, 1968**

3. *Sphaeridia biniserrata* (Salmon, 1951) Massoud, 1964

4. *Sphaeridia cornuta* Murphy, 1966

5. *Sphaeridia indica* Prabhu, 1971\*

6. *Sphaeridia pumilis* (Krausbauer, 1898) Agrell, 1934
- Tribe Sminthuridini Börner, 1913 sensu Richards WR, 1968**
7. *Sminthurides antennatus* Baijal and Verma, 1986 \*
  8. *Sminthurides appendiculatus* Imms, 1912\*
  9. *Sminthurides parvulus* (Krausbauer, 1898) Heymons, R & Heymons, H in Brauer, A, 1909
  10. *Sminthurides velii* Prabhoo, 1971\*
  11. *Stenacidia violacea* (Reuter, 1881)
- Family Katiannidae Börner, 1913 Sensu, Bretfeld, 1999**
- Tribe Katiannini Börner, 1913**
12. *Sminthurinus bimaculatus* Axelsson, 1902 \*
  13. *Sminthurinus trinotatus* Axelsson, 1905
- Family Arrhopalitidae Stach, 1956, sensu Bretfeld, 1999**
14. *Arrhopalites caecus* (Tullberg, 1871) Borner, 1906
  15. *Pygmarrhopalites habei* (Yosii, 1956) Vargovitsh, 2009
- Family Collophoridae Bretfeld, 1999**
16. *Collophora mysticosa* Yosii, 1966
  17. *Collophora remanei* Delamare Deboutteville, and Massoud, 1964
- Family Dicyrtomidae Borner, 1906 sensu Deharveng, 2004**
- Subfamily Ptenothricinae Richards, 1968 sensu Bretfeld, 1999**
18. *Ptenothrix keralae* Prabhoo, 1971\*
- Subfamily Dicyrtominae Richards, 1968 sensu Bretfeld, 1999**
19. *Calvatomina bombayensis* Yosii, 1966\*
  20. *Calvatomina cruciata* (Yosii, 1966) Betsch, 1980\*
  21. *Calvatomina pagoda* Yosii, 1966\*
  22. *Calvatomina pallida* Yosii, 1966
  23. *Calvatomina trivandrana* Prabhoo, 1971\*
- Family Bourletiellidae Borner, 1912, Sensu Bretfeld, 1994**
- Subfamily Bourletiellinae Börner, 1912, sensu Betsch, 1974**
24. *Bourletiella arvalis* (Fitch, 1862) Tömösvary, 1883
  25. *Bourletiella captis* Baijal, 1969\*
  26. *Bourletiella hortensis* (Fitch, 1863) Brown, 1918
  27. *Bourletiella meghalayensis* Mandal, 2018\*
  28. *Prorastriopes spathaceus* (Borner, 1907)
  29. *Fasciosminthurus albanicus* (Stach, 1956) Bretfeld, 1992
- Family Sminthuridae Lubbock, 1862, sensu Deharveng, 2004**
- Subfamily Sphyrothecinae Betsch, 1980**
30. *Sphyrotheca (S.) gangetica* Yosii, 1966
  31. *Sphyrotheca (S.) multifasciata* (Reuter, 1881) \*
  32. *Parasphyrotheca indica* (Prabhoo, 1971) Betsch, 1980\*
  33. *Parasphyrotheca submagnifica* Prabhoo, 1971\*
- Subfamily Sminthurinae Lubbock, 1862, sensu Deharveng, 2004**
34. *Pararrhopalites anops* Bonet and Tellez, 1947
  35. *Pararrhopalites indianus* Baijal and Agarwal, 1972\*
  36. *Temeritas bharatensis* Baijal and Kohli, 1972\*
  37. *Temeritas dimna* Mandal, Suman and Bhattacharya, 2016\*
  38. *Sminthurus appendiculatus* Imms, 1912\*
  39. *Sminthurus giantensis* Baijal and Kohli, 1972\*
  40. *Sminthurus hamtaensis* Baijal, 1958
  41. *Sminthurus kuluensis* Baijal, 1958\*
  42. *Sminthurus parvulus* Ritter, 1911\*
  43. *Sminthurus pseudoviolaceus* Ritter, 1911\*
  44. *Sminthurus viridis* (Linn., 1758) Latreille in Sonnini (1802-03)

**Order Poduromorpha Borner, 1913, sensu D'Haese, 2002****Superfamily Onychiuroidea sensu D'Haese, 2002****Family Onychiuridae Lubbock in Börner, 1913****Subfamily Onychiurinae Börner, 1901****Tribe Protaphorurini Bagnall, 1949**

45. *Protaphorura fimata* (Gisin, 1952) Salmon, 1964  
 46. *Protaphorura kultia* (Singh, Baijal & Mathew, 1956) Salmon, 1964  
 47. *Protaphorura sholai* Thunnisa, Arbea & Sanil, 2022\*

**Tribe Thalassaphorurini Pomorski, 1998 sensu Babenko, Chimitova & Stebaeva, 2011**

48. *Thalassaphorura clayae* (Salmon, 1958) Pomorski, 2002  
 49. *Thalassaphorura ghatensis* (Prabhoo, 1971) Pomorski, 2002\*  
 50. *Thalassaphorura udhagaiensis* Thunnisa, Arbea & Sanil, 2022\*  
 51. *Allonychiurus indicus* (Choudhuri & Roy, 1965) Sun, Chen, & Deharveng, 2011\*

**Tribe Onychiurini Börner, 1906**

52. *Onychiurus bhattii* Yosii, 1963\*  
 53. *Orthonychiurus folsovi* (Schäffer, 1900) Jordana & al, 1997  
 54. *Bionychiurus tamilensis* Thunnisa et al., 2021\*

**Family Tullbergiidae Bagnall, 1935****Subfamily Mesaphorurinae Dunger, & Schlitt, 2011**

55. *Mesaphorura choudhurii* Yosii, 1966\*  
 56. *Mesaphorura intermedia* Prabhoo, 1971\*  
 57. *Prabhergia nayarii* Salmon, 1965  
 58. *Paratullbergia indica* Salmon, 1965\*  
 59. *Paratullbergia salmoni* Prabhoo, 1971\*  
 60. *Paratullbergia trivandranica* Prabhoo, 1971\*

**Family Odontellidae Massoud, 1967**

61. *Spinanurida mandibulata* Salmon, 1969\*  
 62. *Superodontella altitudina* Salmon, 1970\*  
 63. *Superodontella macronychia* Prabhoo, 1971\*

**Superfamily Hypogastruroidea Salmon, 1964 sensu Deharveng L, 2004****Family Hypogastruridae Borner, 1906**

64. *Hypogastrura (H.) consanguinea* (Folsom, 1924) Handschin, 1928  
 65. *Hypogastrura (H.) katraensis* Tyagi and Baijal, 1982\*  
 66. *Hypogastrura (H.) manubrialis* (Tullberg, 1869) Linnaniemi, 1912  
 67. *Hypogastrura (H.) nivicola* (Fitch, 1847) Yosii, 1960  
 68. *Hypogastrura (H.) prabhooi* Bhattacharjee, 1985\*  
 69. *Hypogastrura (H.) rangkuli* Martynova in Martynova & Chelnokov, 1975  
 70. *Hypogastrura (H.) satkosiaensis* Mandal and Arbea, 2019\*  
 71. *Hypogastrura (H.) seriensis* Baijal, 1958\*  
 72. *Hypogastrura (H.) sonapani* Baijal, 1958\*  
 73. *Hypogastrura (H.) temarpurensis* Tyagi and Baijal, 1982\*  
 74. *Hypogastrura (H.) unguiculata* (Mitra, 1966) Mitra, 1997\*  
 75. *Willemia delamarei* Prabhoo, 1971\*  
 76. *Willemia setonychia* Prabhoo, 1971\*  
 77. *Ceratophysella armata* (Nicolet, 1842) Borner, 1932  
 78. *Ceratophysella baltica* (Tyagi and Baijal, 1982) \*  
 79. *Ceratophysella communis* (Folsom, 1898) Stach, 1949  
 80. *Ceratophysella indica* Salmon, 1956\*  
 81. *Ceratophysella indovaria* Salmon, 1970\*  
 82. *Ceratophysella narkandae* (Baijal, 1955) \*  
 83. *Acherontiella bougisi* Cassagnau et Delamare Deboutteville, 1955  
 84. *Xenylla hadialii* Baijal, 1955\*

- 85. *Xenylla obscura* Imms, 1912
- 86. *Xenylla reducta* Prabhoo, 1971\*
- 87. *Xenylla sincta* Baijal, 1956
- 88. *Xenylla welchi* Folsom, 1916

**Superfamily Neanuroidea Massoud, 1967 sensu D'Haese, 2002**

**Family Neanuridae Borner, 1901 sensu Yosii, 1956**

**Subfamily Frieseinae Massoud, 1967**

- 89. *Friesea excelsa* Denis, 1936
- 90. *Friesea maxima* Baijal, 1957
- 91. *Friesea yosii*, Prabhoo, 1971\*

**Subfamily Pseudochorutinae Borner, 1906**

- 92. *Cephalochorutes pillai* (Prabhoo, 1971) Bedos and Deharvarg, 1991
- 93. *Pseudachorutes anomalus* Imms, 1912
- 94. *Pseudachorutes periyarensis* Prabhoo, 1971\*
- 95. *Pseudachorutes ponmudiensis* (Prabhoo, 1971) Prabhoo, 1971\*
- 96. *Oudemansia coerulea* Schött, 1893
- 97. *Oudemansia dhriftiae* Mandal, Mandal, Suman & Bhattacharya, 2024 \*
- 98. *Ceratrimeria indica* (Handschin, 1929) Massoud, 1967\*

**Subfamily Uchidanurinae Salmon, 1964 sensu Greenslade, 2015**

- 99. *Assamanura besucheti* Cassagnau, 1980

**Subfamily Neanurinae Borner, 1901, Sensu Cassagnau, 1989**

**Tribe Neanurini Börner, 1901 sensu Smolis & Pasnik, 2020**

- 100. *Protanura carpenteri* Mukherjee, 1932\*
- 101. *Neamura muscorum* (Templeton, in Templeton, & Westwood, 1836) MacGillivray, 1893
- 102. *Paranura coenobita* Cassagnau, 1991\*
- 103. *Paranura garoensis* Cassagnau, 1991\*
- 104. *Paranura squamosa* Cassagnau, 1991\*
- 105. *Paranura tamul* Cassagnau, 1988\*
- 106. *Adbiloba sikkimensis* Yosii, 1966
- 107. *Womersleya marhia* Baijal, 1958

**Tribe Lobellini Yosii, 1965 Cassagnau, 1983**

- 108. *Lobella (P.) assamensis* Yosii, 1966\*
- 109. *Lobella (L.) malabarica* Yosii, 1966\*
- 110. *Lobella (L.) maxillaris* Yosii, 1966\*
- 111. *Hyperlobella kraepelini* (Börner, 1906) Cassagnau, 1988

**Tribe Paleonurini Cassagnau, 1989**

- 112. *Pronura indianae* Salmon, 1969
- 113. *Paleonura badaga* Cassagnau, 1988\*
- 114. *Paleonura barbata* Cassagnau, 1988\*
- 115. *Paleonura decorata* Cassagnau, 1988\*
- 116. *Paleonura lonavlana* (Yosii, 1966) Cassagnau, 1982\*
- 117. *Paleonura macronychia* Cassagnau, 1988\*
- 118. *Paleonura siva* (Yosii, 1966) Cassagnau, 1982
- 119. *Blasconura anamalensis* Cassagnau, 1988\*
- 120. *Blasconura palniensis* Cassagnau, 1988\*
- 121. *Blasconura prabhooi* Cassagnau, 1988\*
- 122. *Blasconura sholica* Cassagnau, 1988\*
- 123. *Blasconura toda* Cassagnau, 1988\*
- 124. *Parvatina colcheni* Cassagnau, 1984\*
- 125. *Parvatina loebli* Cassagnau, 1984\*
- 126. *Inameria corallina* (Imms, 1912) Cassagnau, 1983
- 127. *Nilgirella indica* (Handschin, 1929) Cassagnau, 1983\*

128. *Nilgirella longiseta* Cassagnau, 1988\*
129. *Nilgirella palniensis* Cassagnau, 1988\*
130. *Nilgirella piljainae* Cassagnau, 1988\*
131. *Gnatholonche intermedia* (Imms, 1912) Stach, 1951
132. *Gnatholonche polychaetosa* Cassagnau, 1984\*
133. *Singalimeria pachyderma* Cassagnau, 1984\*
134. *Himalmeria (H.) karmapa* Cassagnau, 1984\*
135. *Himalmeria (H.) ornata* Cassagnau, 1984\*
136. *Himalmeria (Y.) armata* Cassagnau, 1984\*
137. *Himalmeria (Y.) lama* Cassagnau, 1984\*
138. *Himalmeria (Y.) lanata* Cassagnau, 1984\*
139. *Himalmeria (Y.) rostrata* Cassagnau, 1984\*
140. *Himalmeria (Y.) sikkimensis* Cassagnau, 1984\*
141. *Himalmeria (Y.) spatulata* Cassagnau, 1984\*
142. *Calvinura reducta* Cassagnau, 1988\*
143. *Tamulmeria callipygos* Cassagnau, 1988\*
144. *Tamulmeria keralensis* Cassagnau, 1988\*

**Family Brachystomellidae Stach, 1949**

145. *Brachystomella contorta* Denis, 1931
146. *Brachystomella curvula* Gisin, 1948
147. *Brachystomella surendrai* Goto, 1961
148. *Brachystomella terraefolia* Salmon, 1944

**Order Entomobryomorpha Borner, 1913, sensu Soto-Adames *et al.*, 2008**

**Superfamily Tomoceroidea Szeptycki, 1979**

**Family Oncopoduridae Carl and Lebedinsky, 1905**

149. *Oncopodura indica* Yosii, 1966\*

**Family Tomoceridae Schaffer, 1896**

**Subfamily Tomecerinae Schaffer, 1896**

**Tribe Tomocerini Börner C, 1906**

150. *Tomocerus (T.) mitrai* Prabhoo and Muraleedharan, 1980\*
151. *Tomocerus (T.) petalospinus* Salmon, 1969
152. *Tomocerus (T.) serratospinus* Salmon, 1969
153. *Tomocerus (S.) vulgaris* (Tullberg, 1871) Brook, 1883

**Superfamily Isotomoidea Szeptycki, 1979**

**Family Isotomidae Schaffer, 1896**

**Subfamily Proisotominae Stach, 1947**

154. *Proisotoma himalayana* Baijal, 1958
155. *Proisotoma minuta* (Tullberg, 1871) Linnaniemi, 1907
156. *Proisotoma pakurensis* Mandal, Suman and Bhattacharya, 2017\*
157. *Proisotoma senetijohani* Baijal and Chandra, 1970\*
158. *Folsomides parvulus* Stach, 1922
159. *Folsomina onychiurina* Denis, 1931
160. *Scutisotoma ladaki* (Denis, 1936) Potapov, Babenko, and Fjellberg, 2006
161. *Isotopenola nilgiris* (Denis, 1947) Potapov, Babenko, Fjellberg and Greenslade, 2009\*
162. *Ballistura bengalensis* Yosii, 1966\*
163. *Ballistura fitchi* (Denis, 1933) Potapov, 2001

**Subfamily Anurophorinae Borner, 1901**

164. *Appendisotoma tridentata* (Baijal, 1958) Potapov, 2001
165. *Cryptopygus indicus* Brown, 1932\*
166. *Cryptopygus tridentatus* (Handschin, 1929) \*
167. *Hemisotoma thermophila* (Axelson, 1900) Bagnall, 1949

168. *Rhodanella fasciata* (Carpenter, 1912) \*
169. *Isotomodes dagamae* Prabhoo, 1971
170. *Folsomia arunachalensis* Mandal, 2018\*
171. *Folsomia baijali* Prabhoo, 1971\*
172. *Folsomia candida* Willem, 1902
173. *Folsomia fimetaria* (Linnaeus, 1758) Willem, 1925
174. *Folsomia octoculata* Handschin, 1925
175. *Folsomia santokhi* (Baijal, 1958)
176. *Isotomiella minor* (Schaffer, 1896) Yosii, 1939

**Subfamily Isotominae Schaffer, 1896**

177. *Axelsonia nitida* (Folsom, 1899) Borner, 1906
178. *Isotomurus balteatus* (Reuter, 1876) Handschin, 1929
179. *Isotomurus dhanbadensis* Mandal, Suman and Bhattacharya, 2017\*
180. *Isotomurus indicus* Mandal, Suman and Bhattacharya, 2017\*
181. *Isotomurus jharkhandensis* Mandal, Suman and Bhattacharya, 2017\*
182. *Isotomurus palustris* (Muller, 1776) Borner, 1903
183. *Isotomurus plumosus* Bagnall, 1940 \*
184. *Isotomurus pseudopalustris* Carapelli, Frati, Fanciulli & Dallai, 2001 \*
185. *Isotomurus sahebganjensis* Mandal, Suman and Bhattacharya, 2017\*
186. *Isotomurus stuxbergi* (Tullberg, 1877) Babenko & Bulavintsev, 1993
187. *Procerura indica* (Baijal, 1958) Greenslade, 2003
188. *Procerura transequatoria* (Salmon, 1969) Greenslade, 2003
189. *Isotoma himalayana* (Baijal, 1955)
190. *Isotoma pinnata fasciata* Borner, 1909
191. *Isotoma plumosa* (Salmon, 1969) Lawrence, 1978
192. *Isotoma sarkundensis* Baijal, 1958
193. *Isotoma spinicauda* Bonet, 1930
194. *Desoria jayasrae* Bhattacharjee, 1985\*
195. *Desoria mazda* Yosii, 1971
196. *Desoria trispinata* (Mac Gillivray, 1896) Mendoza Arviso, 1999
197. *Parisotoma notabilis* (Schaffer, 1896) Bagnall, 1940
198. *Aackia karakoramensis* Yosii, 1966

**Superfamily Entomobryoidea Womersley, 1934, sensu Zhang et al., 2019****Family Orchesellidae Borner, 1906 sensu Zhang et al., 2019****Subfamily Heteromurinae Absolon & Kseneman, 1942 sensu Zhang et Deharveng, 2015****Tribe Heteromururini Absolon & Kseneman, 1942 sensu Zhang et Deharveng, 2015**

199. *Dicranocentrus cercifer* (Imms, 1912) Mari Mutt, 1979
200. *Dicranocentrus fraternus* Mari Mutt and Bhattacharjee, 1980\*
201. *Dicranocentrus indicus* Bonet, 1930
202. *Dicranocentrus nepalensis* Mari Mutt & Bhattacharjee, 1980 \*
203. *Dicranocentrus simplex* Yosii, 1959
204. *Dicranocentrus singularis* Mari Mutt and Bhattacharjee, 1980
205. *Dicranocentrus spinosus* (Prabhao, 1971) \*
206. *Dicranocentrus stachi* (Denis, 1925) Handschin, 1929\*
207. *Falcomurus chilikaensis* Mandal, 2018\*
208. *Alloscopus aspinosus* (Prabhao, 1971) Yoshii & Suhardjono, 1989\*
209. *Alloscopus spinosus* (Prabhao, 1971) Yoshii & Suhardjono, 1989\*
210. *Alloscopus tetricanthus* (Borner, 1906) Handschin, 1928

**Subfamily Orchesellinae Borner, 1906 sensu Zhang & Deharveng, 2015****Tribe Corynothrichini Mari Mutt, 1980**

211. *Corynothrix borealis* Tullberg, 1877
212. *Orchesellides boraoi* Bonet, 1930

213. *Orchesellides crassus* (Imms, 1912) Denis, 1936

**Family Paronellidae Börner, 1913**

**Subfamily Paronellinae Börner, 1906 sensu Zhang et al., 2019**

**Tribe Cyphoderini Börner, 1906, sensu Zhang et al., 2019**

214. *Cyphoderus albinus* Nicolet, 1842

215. *Cyphoderus assimilis* Börner, 1906

216. *Cyphoderus ganeensis* Tyagi and Baijal, 1979\*

217. *Cyphoderus indicus* Mandal, Suman and Bhattacharya, 2016\*

218. *Cyphoderus javanus* Börner, 1906

219. *Cyphoderus jharkhandensis* Mandal, Suman and Bhattacharya, 2016\*

220. *Cyphoderus limboxiphius* Börner, 1913

221. *Cyphoderus rubiae* Baijal, 1955

222. *Cyphoderus sarojini* Bhattacharjee, 1985\*

223. *Pseudocyphoderus annandalei* Imms, 1912\*

224. *Pseudocyphoderus squamicaudus* (Silvestri, 1917) Thibaud, 2013\*

225. *Cyphoderodes ceylonicus* Silvestri, 1910\*

226. *Cyphoderodes dubius* Börner, 1913\*

227. *Cyphoderodes mitrai* Yosii, 1987\*

228. *Serroderus tridenticulatus* Denis, 1948

229. *Delamarerus immsi* Mitra, 1977\*

**Tribe Bromacanthini Mitra, 1993 sensu Zhang et al., 2019**

230. *Lepidonella ceylonica* (Yosii, 1966) Deharveng and Bedos, 1995

231. *Lepidonella duodecimoculata* (Prabhoo, 1971) Deharveng and Bedos, 1995\*

**Subfamily Troglopedetinae Börner, 1913**

232. *Troglopedetes rasendrani* Bhattacharjee, 1985

233. *Cyphoderopsis ceylonica* Yosii, 1966\*

234. *Cyphoderopsis decemoculatus* Prabhoo, 1971\*

235. *Cyphoderopsis gorumaraensis* Mandal, Suman and Bhattacharya, 2019\*

236. *Cyphoderopsis gracilis* Carpenter, 1924\*

237. *Cyphoderopsis kempfi* Carpenter, 1917

238. *Cyphoderopsis nepalensis* (Wilson, 1982) Thibaud and Najt, 1988

239. *Cyphoderopsis sexocellatus* Yosii, 1966\*

**Subfamily Salininae Absolon & Kseneman, 1942 sensu Zang et al., 2019**

**Tribe Cremastocephalini Handschin, 1926 sensu Zhang F et al., 2019**

240. *Salina (S.) bengalensis* Mitra, 1966\*

241. *Salina (S.) bicinctoides* Yosii, 1960\*

242. *Salina (S.) biformis* Mitra, 1966\*

243. *Salina (S.) bulbosa* (Salmon, 1957) Mitra, 1993\*

244. *Salina (S.) celebensis* (Schaffer, 1898) Denis, 1936

245. *Salina (S.) choudhurii* Mitra, 1973\*

246. *Salina (S.) dubiosa* Denis, 1936

247. *Salina (S.) grieta* Tyagi and Baijal, 1979\*

248. *Salina (S.) indica* (Imms, 1912) Yosii, 1960

249. *Salina (S.) javana* (Handschin, 1928) Yayuk, 1989

250. *Salina (S.) montana* (Imms, 1912) Salmon, 1957

251. *Salina (S.) quattuorfasciata* (Handschin, 1928) Handschin, 1929\*

252. *Salina (S.) tricolor sikkimensis* Mitra, 1973\*

253. *Salina (S.) striata* (Handschin, 1928) Handschin, 1929\*

254. *Salina (S.) tricolor* (Handschin, 1928) Handschin, E, 1929

255. *Salina (S.) yosii* Salmon, 1964

256. *Pseudosalina christianseni* Mitra, 1974\*

257. *Pseudosalina multiformis* Mitra, 1974\*

258. *Pseudosalina nigrocephala* (Mitra, 1966) \*
259. *Pseudosalina rapoporti* Mitra, 1974\*
260. *Yosiia dehradunia* Mitra, 1967\*
- Tribe Callyntrurini Mitra, 1977 sensu Zhang et al., 2019**
261. *Callyntrura (C.) carli* (Handschin, 1929) \*
262. *Callyntrura (C.) cingulata* Bonet, 1930
263. *Callyntrura (C.) escheri* (Handschin, 1929) \*
264. *Callyntrura (C.) fissisetosa* (Handschin, 1929) \*
265. *Callyntrura (C.) nigerrima* Prabhoo, 1971\*
266. *Callyntrura (C.) prabhooi* Mitra, 1974\*
267. *Callyntrura (C.) semiviolacea* (Handschin, 1929) \*
268. *Callyntrura (C.) sudindica* Prabhoo, 1971\*
269. *Callyntrura (C.) variabilis* Mitra, 1974\*
270. *Callyntrura (C.) zaheri* Mitra, 1974\*
271. *Callyntrura (H.) delamarei* Mitra, 1974\*
272. *Callyntrura (H.) lineata* (Parona, 1892) Mandal & Hazra, 2009
273. *Callyntrura (H.) longicornis* (Oudemans in Weber, 1890) Mitra & Dallai, 1980
274. *Callyntrura (H.) serrata* Salmon, 1957
275. *Callyntrura (H.) vestita* (Handschin, 1925) Uchida, 1954
276. *Callyntrura (J.) japonica* (Kinoshita, 1917) Yosii, 1969
277. *Dicranocentroides duduensis* Hazra and Mandal, 2015\*
278. *Dicranocentroides fasciculatus* Imms, 1912
279. *Dicranocentroides flavescens* Yosii, 1966
280. *Dicranocentroides gisini* Mitra, 1975\*
281. *Dicranocentroides indicus* (Handschin, 1929) Mandal & Hazra, 2009\*
282. *Dicranocentroides salmoni* Mitra, 1975\*
283. *Plumachaeas insularis* (Uchida, 1944) Oliveira, Greenslade, & Bellini, 2019
284. *Idiomerus pallidus* Imms, 1912\*
- Family Entomobryidae Schaffer, 1896 sensu Zhang F et al., 2019**
- Subfamily Willowsiinae Yoshi and Suhardjono, 1989**
285. *IncertaeSedis brahma* (Imms, 1912) Zhang, Chen & Deharveng, 2011\*
- Tribe Willowsiini Yoshii and Suhardjono, 1989**
286. *Willowsia arunachalensis* Mandal, Mandal, Suman & Bhattacharya, 2024 \*
287. *Willowsia jacobsoni* (Borner, 1913) Stach, 1965
288. *Willowsia kalatopensis* Baquero, Mandal and Jordana, 2015
289. *Willowsia nigromaculata* (Lubbock, 1873), Shoebotham, 1917
290. *Willowsia shiae* Pan, Zhang, et Chen, 2006
291. *Willowsia sikkimensis* Mandal, Mandal, Suman & Bhattacharya, 2024 \*
292. *Janetschekbrya brahamides* (Denis, 1936) Yosii, 1971
293. *Drepanosira frigida* (Imms, 1912)
294. *Drepanosira hussi* Neuhertz, 1976
295. *Drepanosira raviensis* Baquero, Mandal and Jordana, 2015
296. *Drepanosira shimlaensis* Baquero, Mandal and Jordana, 2015
297. *Drepanosira subornata* (Denis, 1936) Bonet, 1942
- Tribe Lepidosirini Yoshii & Suhardjono, 1989 Zang & al, 2017**
298. *Lepidosira nilgiri* (Denis, 1936) Yosii, 1955\*
299. *Lepidosira unguserrata* Salmon, 1970
300. *Epimetrura caudata* (Carpenter, 1917) Denis, 1948
301. *Lepidocyrtoides malabaricus* Mandal, Suman and Bhattacharya, 2019\*
302. *Lepidocyrtoides quatuordecimocellata* Prabhoo, 1971\*
- Subfamily Entomobryinae Schaffer, 1896 sensu Zhang & Deharveng, 2015**
- Tribe Entomobryini Borner, 1906 sensu Zhang & Deharveng, 2014**

303. *Entomobrya barogensis* Baquero, Mandal and Jordana, 2015  
 304. *Entomobrya choudhurii* Baquero, Mandal and Jordana, 2014  
 305. *Entomobrya diskitensis* Baquero, Mandal and Jordana, 2014  
 306. *Entomobrya himalayensis* (Baijal, 1955) Salmon, 1964  
 307. *Entomobrya indica* (Baijal, 1955) Christiansen, 1958  
 308. *Entomobrya kajjairensis* Baquero, Mandal and Jordana, 2015  
 309. *Entomobrya kultinalensis* Baijal, 1958  
 310. *Entomobrya logisticata* Baijal, 1958  
 311. *Entomobrya ladakhi* Baquero, Mandal and Jordana, 2014  
 312. *Entomobrya lampreyi* Salmon, 1957  
 313. *Entomobrya manii* (Baijal, 1955) Salmon, 1964  
 314. *Entomobrya mehtai* Baquero, Mandal and Jordana, 2014  
 315. *Entomobrya nigrita* Baijal, 1958  
 316. *Entomobrya nivalis* (Linnaeus, 1758) Rondani, 1861  
 317. *Entomobrya rohtangensis* Baijal, 1958  
 318. *Himalanura baijali* Baquero, Mandal and Jordana, 2014  
 319. *Himalanura chailensis* Baquero, Mandal and Jordana, 2015  
 320. *Himalanura himachalenis* Baquero, Mandal and Jordana, 2015  
 321. *Himalanura indica* Baijal, 1958  
 322. *Mesentotoma hutchinsoni* (Denis, 1936) Jordana, 2012  
 323. *Calx kailashi* Mandal, 2018\*

**Tribe Homidiini Janssens, 2017 sensu Zhang & Deharveng, 2014**

324. *Homidia cingula* (Borner, 1906) Yosii, 1959  
 325. *Homidia kali* (Imms, 1912) Mitra, 1976\*  
 326. *Homidia lakhanpurensis* Baquero, Mandal and Jordana, 2015

**Tribe Sinellini Janssens, 2017 sensu Zhang & Deharveng, 2014**

327. *Sinella curviseta* Brook, 1882  
 328. *Sinella jaldaparaensis* Mandal, Suman and Bhattacharya, 2019\*  
 329. *Sinella siva* (Imms, 1912) Chen and Christiansen, 1993  
 330. *Coecobrya montana* (Imms, 1912) Zhang, Deharveng, & Chen, 2009\*

**Subfamily Lepidocyrtinae Wahlgren, 1906 sensu Zang et al., 2019****Tribe Lepidocyrtini Gisin, 1963**

331. *Lepidocyrtus exploratorius* Carpenter, 1924  
 332. *Lepidocyrtus (L.) agraensis* Baijal and Singha, 1971\*  
 333. *Lepidocyrtus (L.) curvicollis* Bourlet, 1839  
 334. *Lepidocyrtus (L.) neofasciatus* Wray, 1948  
 335. *Lepidocyrtus (L.) orientalis* Handschin, 1929\*  
 336. *Lepidocyrtus (L.) robustus* Imms, 1912\*  
 337. *Lepidocyrtus (L.) absens* Zhang, Chatterjee and Chen, 2009\*  
 338. *Lepidocyrtus (Lanocyrtus) caeruleicornis* Bonet, 1930\*  
 339. *Lepidocyrtus (Lanocyrtus) cinereus* Folsom, 1924  
 340. *Lepidocyrtus (Lanocyrtus) cyaneus* Tullberg, 1871  
 341. *Lepidocyrtus (Allocyrtus) lepidornatus* (Handschin, 1930) Yoshii, 1982  
 342. *Lepidocyrtus (A.) magnificus* Carpenter, 1924  
 343. *Lepidocyrtus (A.) scaber* Ritter, 1911  
 344. *Lepidocyrtus (A.) suborientalis* (Yoshii, 1959) Ellis & Bellinger, 1973  
 345. *Lepidocyrtus (C.) medius* Schaffer, 1898  
 346. *Lepidocyrtus (Cinctocyrtus) satkosiaensis* Mandal, Suman and Bhattacharya, 2019\*  
 347. *Lepidocyrtus (Setogaster) indicus* Handschin, 1929  
 348. *Lepidocyrtus (Setogaster) kulluensis* Baquero, Mandal and Jordana, 2015  
 349. *Lepidocyrtus (Setogaster) manipuri* Salmon, 1969  
 350. *Lepidocyrtus (Acrocyrtus) cheni* Pan, Chatterjee, et Zhang, 2011\*

351. *Lepidocyrtus (Acrocyrtus) cryptocephalus* Handschin, 1929\*
352. *Lepidocyrtus (Acrocyrtus) heterolepis* Yosii, 1959
353. *Lepidocyrtus (Acrocyrtus) himachalensis* Baquero, Mandal and Jordana, 2015
354. *Lepidocyrtus (Acrocyrtus) malayanus* Yosii, 1959
355. *Acanthurella betlaensis* Mandal, Suman and Bhattacharya, 2016\*
356. *Acanthurella javana* (Borner, 1906) Handschin, 1925
357. *Acanthurella satkosaiaensis* Mandal, Suman and Bhattacharya, 2019\*
358. *Pseudosinella petterseni* Borner, 1901
359. *Lepidiaphanus kashmirensis* (Arora & Singh, 1962) Arora & Singh, 1962
360. *Pseudocorytus dentatus* Prabhoo, 1967\*
361. *Pseudocorytus projectus* Salmon, 1956
362. *Pseudocorytus salmoni* Prabhoo, 1967\*

#### **Subfamily Seirinae Yosii, 1961 sensu Zhang & al, 2019**

363. *Lepidocyrtinus indianicus* Paliwal and Baijal, 1985\*
364. *Lepidocyrtinus mandawerica* Paliwal and Baijal, 1985\*
365. *Seira (S.) arunachala* Mitra, 1976
366. *Seira (S.) cinerea* Yosii, 1966\*
367. *Seira (S.) cooperi* (Handschin, 1929) Yosii, 1959\*
368. *Seira (S.) delamarei* Jacquemart, 1980
369. *Seira (S.) hazrai* Baquero, Mandal and Jordana, 2014
370. *Seira (S.) indica* (Ritter, 1911) Yosii, 1966
371. *Seira (S.) indra* Imms, 1912\*
372. *Seira (S.) keethumensis* Paliwal and Baijal, 1985\*
373. *Seira (S.) lateralis* Yosii, 1966\*
374. *Seira (S.) nidarensis* Baquero, Mandal and Jordana, 2014
375. *Seira (S.) prabhooi* Baquero, Mandal and Jordana, 2015
376. *Seira (S.) punctata* (Ritter, 1911) \*
377. *Seira (S.) simbalwaraensis* Baquero, Mandal and Jordana, 2015\*

#### **References**

- Arora, G.L. and Singh, M. 1962. A new species of Lepidiaphanus from Kashmir (Entomobryidae: Collembola). *Journal of Bombay Natural History Society*, **59**(1): 309-311.
- Baijal, H.N. 1955a. Two new species of Collembola. *Agra University Journal Research (Science)*, **4**: 175-177.
- Baijal, H.N. 1955b. Entomological Survey of the Himalayas Part XI. - On Five New Species of Collembola. *Agra University Journal of Research (Science)*, **4** (2): 531-538.
- Baijal, H.N. 1956. Entomological survey of Himalayas: Part-IV. Two new species of Collembola. *Agra University Journal of Research (Science)*, **4** (1): 175-178.
- Baijal, H.N. 1958. Nival Collembolan from the North-West Himalaya. *Proceedings National Academy of Science, Allahabad (India)*, **28**: 349-360.
- Baijal, H.N. 1971a. On new species of the genus *Pararrhopalites* Bonet and Telbez (Collembola: Arrhopaliatini) from India. *Zoologischer Anzeiger*, **189** (1-2): 94-96.
- Baijal, H.N. 1971b. Indian species of *Sminthurus* Borner (Collembola: Sminthurinae). *Zoologischer Anzeiger*, **189** (5-6): 405-408.
- Baijal, H.N. and Verma, R. 1986. On a new species of *Sminthurides* (Collembola: Sminthuridae). *Journal of Entomological Research (New Delhi)*, **10**(1): 91-93.
- Baquero, E., Mandal, G.P. and Jordana, R. 2014. Singular fauna of Entomobryidae (Collembola from "Land of passes" at the Himalayas (Entomobryidae from Ladakh, India). *Florida Entomologist*, **97** (4): 1554-1587.

- Baquero, E., Mandal, G.P. and Jordana, R. 2015. Entomobryoidea (Collembola) from Himachal Pradesh (India) in the Himalayas. *Zootaxa*, **4027** (1): 001–041.
- Bellinger, P.F., Christiansen, K.A. and Janssens, F. 1996–2018. Checklist of the Collembola of the World. Available from: <http://www.collembola.org/taxa> (accessed 18th February, 2023).
- Bhattacharjee, R.K. 1985. Three new species of Collembola from North East India. *Pan-Pacific Entomologist*, **61**(4): 349–357.
- Bonet, F. 1930. Sur quelques Collemboles de L'Inde. *Earth and space science news (Eos)*, **6**: 249–273.
- Brown, J.M. 1932. A new species of *Proisotoma* from India. *Proceedings of the Hawaiian Entomological Society*, **8**: 35–36.
- Carpenter, G.H. 1917. Collembola: Zoological results of the Abor expedition 1911–1912. *Records of Indian Musuem, Calcutta*, **8**: 561–568.
- Carpenter, G.H. 1924. Collembola of the Siju cave, Garo Hills, Assam. *Records Indian Museum, Calcutta*, **25**: 285–289.
- Cassagnau, P. 1980. Sur le genre *Assamanura* n. g. du nord-est de l'Inde et sur la lignee Uchidanurienne (Collemboles). *Travaux du Laboratoire d'Ecologie des Arthropodes Edaphiques, Toulouse*, **2** (3): 1–7.
- Cassagnau, P. 1988. Les Collemboles Neanurinae des Massifs du sud de L'Inde et de Ceylan. *Travaux du Laboratoire d'Ecologie des Arthropodes Edaphiques, Toulouse*, **5** (4): 21–51.
- Cassagnau, P. 1990. Les Collemboles Neanurinae de l'Himalaya: I. Genres *Synameria*, *Singalimeria* et *Stenomeria*. *Annales de la Société entomologique de France*, **26** (1): 19–32.
- Chandra, K., & Raghunathan, C. 2022. Status, Issues, and Challenges of Biodiversity: Invertebrates. In: *Biodiversity in India. Status, Issues and Challenges, Singapore*: Springer Nature Singapore, pp. 77–117.
- Choudhuri, D.K. and Roy, S. 1965. A new species of *Onychiurus* (Insecta: Collembola) from West Bengal. *Revue d'Ecologie Et De Biologie Du Sol*, **2**: 123–127.
- Denis, J.R. 1936. Yale North India-Expedition: Report on Collembola. *Memoirs of the Connecticut Academy of Arts and Sciences*, **10**: 261–282.
- Denis, J.R. 1947. Deux *Proisotoma* de l'Inde (Collembola). *Proceedings of Royal Entomological Society London*, **16**: 101–104.
- Handschin, E. 1925. Beitrage zur Collembolen fauna der Sundain seln. *Treubia*, **6**: 225–270.
- Handschin, E. 1929. Beitrage zur Collembolen fauna von Sud Indien. *Revue Suisse de Zoologie, Geneva*, **36**: 229–262.
- Hazra, A.K., Mandal, G.P., Mitra, S.K. & Bhattacharyya, B. 2003. Insecta: Apterygota: Collembola. In: *Fauna of Sikkim. State fauna series, Zoological Survey of India*, **9**(2): 109–123.
- Hazra, A.K., Mandal, G.P., Mitra S.K. and Bhattacharyya, B. 2004. Insecta: Apterygota: Collembola. In: *Fauna of Manipur. State Fauna Series, Zoological Survey of India*, **10**: 51–66.
- Hazra, A.K., Mandal, G.P., Mitra, S. K. and Bhattacharyya, B. 2006a. Insecta: Collembola. In: Fauna of Nagaland. State fauna series, *Zoological Survey of India*, **12**: 67–74.
- Hazra, A.K., Mandal, G.P., Mitra S.K. and Bhattacharyya, B. 2006b. Insecta: Collembola. In: *Fauna of Arunachal Pradesh. State fauna series, Zoological Survey of India*, **13**(2): 55–65.
- Hazra, A.K. and Mandal, G.P. 2007. Insecta: Apterygota: Collembola. In: *Fauna of Andhra Pradesh. State Fauna Series, Zoological Survey of India*, **5**(3): 87–104.
- Hazra, A.K. and Mandal, G.P. and B. Bhattacharyya. 2007. Insecta: Apterygota: Collembola. In: *Fauna of Mizoram. State fauna Series, Zoological Survey of India*, **14**: 129–141.
- Hazra, A.K. and Mandal, G.P. 2010. Insecta: Collembola. In: *Fauna of Uttarakhand. State fauna series, Zoological Survey of India*, **18**(2): 1–12.

- Hazra, A.K. and Mandal, G.P. 2012. Insecta: Collembola (Apterygota). In: *Fauna of Andaman and Nicobar Islands. State fauna series, Zoological Survey of India*, **19**(1): 7-14.
- Hazra, A.K. and Mandal, G.P. 2015. A New Species of *Dicranocentroides* (Collembola: Paronellidae) from India. *Journal of Threatened Taxa*, **7**(9): 7547-7551.
- Hopkin, S.P. 1998. Collembola: the most abundant insects on earth. *Antenna*, **22** (3):117–121.
- Imms, A.D. 1912. On some Collembola from India, Burma and Ceylon with a catalogue of the Oriental species of the order. *Proceedings of Zoological Society of London*, **1912**: 80-125.
- Kerketta, D., Yadav, R.S. and Painkra, G.P. 2018. A Preliminary Report of Collembola (Arthropoda: Collembola) from Northern Hill Region of Chhattisgarh, India, International Journal of Current Microbiology and Applied Sciences, **8**(9): 3385-3392.
- Mandal, G.P. and Hazra, A.K. 2004. On a collection of Collembola insects from Himachal Pradesh with Zoogeographical note. *Bionotes*, **6** (4):116-117.
- Mandal, G.P. and Hazra, A.K. 2005. Notes on some Collembola (Apterygota: Insecta) from Rajasthan. *Records Zoological Survey of India*, **104** (1-2): 1-6.
- Mandal, G.P and Hazra, A.K. 2009. The Diversity of Collembola (Hexapoda) from East and North East India with some notes on their Ecology. *Records Zoological Survey of India*, Occasional Paper.no. **298**: 1-206.
- Mandal, G.P. 2011. Collembola (Hexapoda) fauna from Bibhuti Bhushan Wildlife Sanctuary, Parmadan, West Bengal, India. *Records Zoological Survey of India*, **111** (2): 61-66.
- Mandal, G.P. and Suman K.K. 2013a. Collembola fauna from Sajnakhali Wildlife Sanctuary, South 24pgs., West Bengal, India. *Prommalia*, **1**: 69-78.
- Mandal, G.P. and Suman, K.K. 2013b. Collembola fauna from Simbalwara Wildlife Sanctuary, Himachal Pradesh, India. *Records Zoological Survey of India*, **113** (3): 23-28.
- Mandal, G.P. 2013. Two additional New Records of Collembola from Arunachal Pradesh, India. *Bionotes*, **15** (3): 85.
- Mandal, G.P. 2014. New records of Collembola (Hexapoda) from Hazaribagh National Park, Jharkhand. *Biological Forum*, **6** (2): 197-202.
- Mandal, G.P. and Suman, K.K. 2014. Collembola (Hexapoda) from Radhanagari Wild Life Sanctuary. *Fauna of Radhanagari WildLife Sanctuary, Conservation Area Series*, **52**: 53-60.
- Mandal, G.P. & Suman, K.K. 2015. Insecta: Collembola (Apterygota). In: *Fauna of Uttar Pradesh, State fauna Series, Zoological Survey of India*, **22** (2):139-155.
- Mandal, G.P. and Suman, K.K. 2016. First Record of Collembola (Hexapoda) from Chhattisgarh, India. *Records Zoological Survey of India*, **116** (1): 35-39.
- Mandal, G.P., Suman, K.K. and Bhattacharya, K.K. 2016. Four New Species of Springtails (Hexapoda: Collembola) from Jharkhand, India. *Records Zoological Survey of India*, **116** (1): 41-52.
- Mandal, G.P. & Suman, K.K. 2017. Apterygota: Collembola. In: *Faunal Diversity of Kalatop-Kajjair W.L. Sanctuary, H.P., India. Conservation Area series*, **55**: 19-24.
- Mandal, G.P., Suman K.K. and Bhattacharya, K.K. 2017. Five New Species of Collembola (Isotomidae) from Jharkhand, India. *Rec. Zool. Surv. India*, **117** (2): 97-112.
- Mandal, G.P. 2018. Collembola of India-An Updated Checklist, Halteres, **9**:116-130.
- Mandal, G.P. 2018. Three new species of Collembola from India., Rec. Zool. Surv. India, **118**(2): 107-127.
- Mandal, G.P. 2018. A new genus of Heteromurinae (Collembola: Entomobryidae) with dental base falcate macrochaetae from India, *Halteres*, **9**: 74-85.

- Mandal, G.P., Suman, K.K. & Bhattacharya, K.K. 2019. Collembola., In: Fauna of Malabar Wildlife Sanctuary, Kozhikode, Kerala, Conservation Area Series, Zool. Surv. India, **62**: 17-24.
- Mandal, G.P., Suman, K.K., Bhattacharya, K.K. 2019. Two new species of collembola *Sinella jaldaparaensis* (Entomobryidae) and *Cyphoderopsis gorumaraensis* (Paronellidae) from India., Journal of Entomology and Zoology Studies, **7**(4): 145-150.
- Mandal, G.P., Arbea, J. 2019. Critical Checklist of the Indian species of Hypogastrura (Collembola: Hypogastruridae) with a description of a new species from Satkosia WildLife Sanctuary, Zootaxa, **4608**(2), 279-290.
- Mitra, S.K. 1966a. On some Indian Collembola with the description of a new species of *Xenylla* (Collembola: Hypogastruridae). Science and Culture, Calcutta, **32**: 210-211.
- Mitra, S.K. 1966b. Two new species of *Salina* Mac Gillivray (Collembola: Entomobryidae: Paronellinae) Journal of Entomology, New Delhi, **28**(1): 67-73.
- Mitra, S.K. 1967. A new genus and species of Indian springtail (Insecta: Paronellinae) Proceedings of Zoological Society, Calcutta, **20**: 43-47.
- Mitra, S.K. 1973a. A new Paronellinae genus of Indian spring tail (Collembola: Entomobryidae: Paronellinae) with the descriptions of three new species. Revue d'Ecologie Et De Biologie Du Sol, **10** (3): 359-377.
- Mitra, S.K. 1973b. A revision of Salina MacGillivray, 1894 (Collembola: Entomobryidae) from India. Oriental Insects, **7** (2):159-202.
- Mitra, S.K. 1974a. On the post embryonic morphological differentiation including chaetotaxy in *Callyatrura (Handschinphysa) lineata* (Collembola: Entomobryidae: Paronellinae). Pedobiologia, **14**: 323.
- Mitra, S.K. 1974b. A critical study on some species of *Callyntrura* Borner, 1906 (Collembola: Entomobryidae: Paronellinae) from India. Revue d'Ecologie Et De Biologie Du Sol, **11**(3): 397-439.
- Mitra, S.K. 1975. Studies on the genus *Dicranocentriodes* Imms (1912) (Collembola: Entomobryidae: Paronellinae) from India. Records Zoological Survey of India, **71**: 57-95.
- Mitra, S.K. 1976a. Some Collembola from Arunachal Pradesh (Entomobryidae). Oriental Insects, **10**(1): 145-150.
- Mitra, S.K. 1976b. A new genus and species of termitophilous Collembola (Entomobryidae: Cyphoderinae) from India. Revue d'Ecologie Et De Biologie Du Sol., **13**(4): 645-652.
- Mukherjee, D. 1932. Description of a new species of Collembola and its anatomy. Records Indian Musuem, **34**: 47-49.
- Paliwal, A.K., Baijal, H.N. 1985. Three new species of the genus *Lepidocyrtinus* Borner (Collembola: Entomobryidae) from India. Journal of Entomological Research, **9**(1): 94-99.
- Panda, R. M. 2022. *Plant Ecology of Indian Himalaya*. Springer Nature.
- Prabhoo, N.R. 1971a. Soil and litter Collembola of South India. I. Arthropleona. Oriental Insects, **5**: 1-46.
- Prabhoo, N.R. 1971b. Soil and litter Collembola of South India. II. Symphypleona. Oriental Insects, **5**(2): 243-262.
- Prabhoo, N.R. 1971c. Bark and moss inhabiting Collembola of South India. Bulletin of Entomology, **12** (1): 41-47.
- Prabhoo, N.R., Muraleedharan, 1980. A new species of *Tomocerus* (Tomoceridae: Collembola) from India. Entomon, **5** (3): 207-210.
- Prabhoo, N.R. 1970. Two new records of soil Collembola from, South India. Journal of Bombay Natural History Society, **70** (3): 572-574.
- Ritter, W. 1910. Neue Thysanuren und Collembolen aus Ceylon und Bombay, gesamelt von Dr. Uzel, Annalen des Naturhistorischen Hofmuseums, **24**: 379-398.
- Salmon, J.T. 1956a. On two Hypogastruridae (Collembola) from India. Proceedings of Royal Entomological Society London (B), **25**: 171-174.

- Salmon, J.T. 1956b. A new species of *Parafolsomia* (Collembola) from India. *Proceedings of Royal Entomological Society London (B)*, **25**: 127-128.
- Salmon, J.T. 1957a. Some Paronellinae (Collembola) from India. *Acta Zoologica Cracoviensia*, **11**(14): 313-362.
- Salmon, J.T. 1957b. A new species of Entomobryidae from India (Collembola). *Proceedings of Royal Entomological Society London (B)*, **26**: 49-50.
- Salmon, J.T. 1958. A new Onychiurid Collembola from India *Proceedings of Royal Entomological Society London (B)*, **27**: 145-146.
- Salmon, J.T. 1963. New Collembola Symphyleona from India and Australia. *Bulletin of Royal Society of New Zealand*, **3** (8): 81-84.
- Salmon, J.T. 1965. New Onychiurid Collembola from India and New Guinea. *Transactions of the Royal Society of New Zealand, Zoology*, **5**: 225-231.
- Salmon, J.T. 1969. New Collembola from India. *Zoology publications from Victoria University College*, **51**: 40-49.
- Salmon, J.T. 1970. Some new records and new species of Collembola from India. *Bulletin of Royal Society of New Zealand*, **12** (13): 145-152.
- Thunnisa, A.M., Arbea, J.I., Sumithra, N., Mandal, G.P. and Sanil, R., 2022. Two new species and two new records of Onychiurinae (Collembola, Onychiuridae) from the Nilgiris, India. *Zootaxa*, **5182** (5), 448-464.
- Tyagi, N., Baijal, H.N. 1978. Two new species of Collembola collected from sugarcane field of District Bijnore, Uttar Pradesh. *Journal of Entomological Research*, **3** (2): 177-181.
- Tyagi, N. and Baijal, H.N. 1982. Three New Species of Hypogastrura (Collembola: Hypogastrura) from India. *Bulletin of Pure and Applied Sciences*, **1**: 6-10.
- Yadav, R.S. 2017. Preliminary checklist of springtails (Arthropoda: Collembola) of Uttar Pradesh, India, Journal of Threatened Taxa, **9**(12), 11054-11059.
- Yadav, R.S., Kerketta, D., Kumar, D. et Prasad, S. 2018. Vertical Distribution of Collembola (Arthropoda: Collembola) at Varanasi, India. *International Journal of Current Microbiology and Applied Sciences*, **7**:609-613.
- Yadav, R.S., Prasad, S. et Kumar, D. 2018. Diversity of epigeic Collembola of Bibhutibhusan Wildlife Sanctuary, North 24 Parganas, West Bengal (India)., *International Journal of Fauna and Biological Studies*, **5** (2):17-21.
- Yosii, R. 1966a. On some Collembola of Afghanistan, India and Ceylon, collected by the Kuphe Expedition, 1960. *Research Kyoto University Science Expedition Karakoram and Hindukush 1955*, **8**: 333-405.
- Yosii, R. 1966b. Collembola of Himalaya. *Journal of the College of Arts and Sciences, Chiba University. (Natural Sciences Series)*, **4** (4): 4.
- Zhang, F., Chatterjee, T., & Chen, J. X. 2009. A new species of the genus *Lepidocyrtus* Bourlet and a new record of *Seira delamarei* Jacquemart (Collembola: Entomobryidae) from the east coast of India. *Zootaxa*, **2310** (1): 43-50.