

FAUNA OF INDIA CHECKLIST

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ARTHROPODA: INSECTA: PSOCODEA: 'PSOCOPTERA'

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

ARTHROPODA: INSECTA: PSOCODEA: 'PSOCOPTERA'

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Introduction: The order Psocodea includes parasitic lice of birds and mammals (Phthiraptera), free-living booklice and barklice (Psocoptera). Earlier, Phthiraptera and Psocoptera were regarded to represent separate orders. However, morphological and molecular studies have revealed that the Phthiraptera is actually a part of the Psocoptera. It is one of the lesser-known orders of paraneopteran insects, distributed worldwide in a wide range of terrestrial environments.

Global diversity: The order has around 6000 described species spread across all continents (Lienhard, 2016).

Diversity in India: In India, 138 species belonging to 66 genera and 22 families in three suborders are recorded and highest species diversity is reported from West Bengal and followed by Maharashtra, Kerala, Tamil Nadu, Meghalaya and Assam. After gap of two decades the new species and new country records of psocids were described and published (Ramesh *et al.*, 2020, 2021, 2022). State wise species diversity and endemism is provided in the table-1.

Table-01. Diversity in States

Sl. No.	State/UT	No. of species	No. of Endemic species
	INDIA TOTAL	138	62
1	Andhra Pradesh	0	0
2	Arunachal Pradesh	4	1
3	Assam	13	7
4	Bihar	0	0
5	Chhattisgarh	0	0
6	Gujarat	0	0
7	Goa	0	0
8	Haryana	0	0
9	Himachal Pradesh	0	0
10	Jharkhand	2	1
11	Karnataka	1	0
12	Kerala	23	4
13	Madhaya Pradesh	0	0
14	Maharashtra	28	18

Sl. No.	State/UT	No. of species	No. of Endemic species
15	Manipur	8	5
16	Meghalaya	18	4
17	Mizoram	0	0
18	Nagaland	0	0
19	Odisha	1	1
20	Punjab	0	0
21	Rajasthan	0	0
22	Sikkim	0	0
23	Tamil Nadu	22	9
24	Telangana	0	0
25	Tripura	7	3
26	Uttarpradesh	0	0
27	Uttarakhand	8	3
28	West Bengal	45	16
29	Andaman & Nicobar	1	0
30	Chandigarh	0	0
31	Dadra Nagar Haveli, Daman & Diu	0	0
32	Delhi	0	0
33	Jammu & Kashmir	7	5
34	Ladakh	0	0
35	Lakshadweep	0	0
36	Puducherry	0	0

Endemism: Sixty-two species are endemic to India. High endemism is reported from the Western Ghats of Tamil Nadu, Kerala, Maharastra and Indian Himalaya of Jammu and Kashmir, Uttarakhand, West Bengal (North Bengal) and Arunachal Pradesh.

Habitat: Psocids are lives on tree trunks and branches, under barks, leaf litter, rocks and in nest of birds and mammals, old books, cereals, and room walls. They are scavengers and generally not only feed on fungi, algae, lichen, and organic detritus but also known to feed on stored grains, museum specimens and books.

Ecological Significance: The psocids graze on honeydew moulds and other coverings which reduces photosynthesis and enhance light penetration through leaves. They are prey to a variety of arboreal predators and thus being important components of complex arboreal food webs. They are important indicators of habitat quality, such as air pollution in industrial areas (Mey and Tietze, 1979).

Human Significance: Some psocids are allergen and minor pest for stored grains.

Threatened species: Species from India are not assessed for IUCN threat categories.

Protected Species as per WPA (2022): Psocids are not listed under any schedules of Wildlife Protection Act (2022).

Species under CITES: Psocids are not listed under any appendices of CITES.

Invasive alien species: No Psocids species are reported to be invasive in Indian environments.

Gap areas: Psocids are poorly documented from many states, especially from states of Deccan, Gangetic plains, Himalaya and North Eastern India biogeographic zones and union territories and Western Ghats of Karnataka and Goa. There are no reports of Psocids from 15 states and six union territories.

Systematic list (Endemic species marked with *)

PSOCODEA Hennig, 1966

ARCHIPSOCIDAE Pearman, 1936

1. *Archipsocopsis fernandi* (Pearman, 1934)
2. *Archipsocus recens* Enderlein, 1903

AMPHIPSOCIDAE Pearman, 1936

3. *Amphipsocus heterothrix* Thornton and Wong, 1966
4. *Amphipsocus pilosus* McLachlan, 1872
5. *Taenostigma ingens* Enderlein, 1903
6. *Dasypsocus solox* (Enderlein, 1903)
7. *Kolbia punctata* (Banks, 1914)*
8. *Kodamaius anaimalaicus* (Datta, 1969)*
9. *Kodamaius besucheti* Badonnel, 1981*
10. *Kodamaius khasiensis* Badonnel, 1981*
11. *Kodamaius loebli* Badonnel, 1981*
12. *Kodamaius mirabundus* (Datta, 1969)

CAECILIUSIDAE Mockford, 2000

13. *Asiocaecilius assamensis* Mockford, 2000*
14. *Thorntoniella lalea* (Thornton, 1984)
15. *Caecilius bhimtalensis* Badonnel, 1981*
16. *Caecilius latreillei* Badonnel, 1981
17. *Caecilius persimularis* (Thornton and Wong, 1966)
18. *Dypsocopsis nathani* Mockford, 2000*
19. *Dypsocus coleopratus* (Hagen, 1858)
20. *Dypsocus fucosus* Thornton and Wong, 1966
21. *Coryphosmilla dolabrata* (Hagen, 1858)
22. *Stenocaecilius pictifrons* (Thornton and Wong, 1966)
23. *Valenzuela bengalensis* (Badonnel, 1981)*
24. *Valenzuela furculatus* (Navas, 1934)*
25. *Valenzuela himalayanus* (Enderlein, 1903)
26. *Valenzuela indicus* (Navas, 1934)*
27. *Valenzuela labratus* (Navas, 1934)*
28. *Valenzuela mueggenburgi* (Enderlein, 1903)

PARACAECILIIDAE Mockford, 1989

29. *Enderleinella ceylonica* (Enderlein, 1903)
30. *Enderleinella flavata* (Navas, 1934)*
31. *Paracaecilius navasi* Mockford, 2000*

STENOPSOCIDAE Pearman, 1936

32. *Stenopsocus pallidus* Thornton and Wong, 1966
33. *Stenopsocus uniformis* (Hagen, 1859)

DOLABELLOPSOCIDAE Eertmoed, 1973

34. *Auroropsocus orientis* Eertmoed, 1973
35. *Bertkauia loebli* (Badonnel, 1981)*

EIPSOCIDAE Mockford, 2000

36. *Epipsocopsis completa* (Banks, 1916)
37. *Epipsocopsis conspersa* (Banks, 1914)*

38. *Epipsocopsis costalis* (Banks, 1914)
39. *Epipsocopsis dubia* (Karny, 1925)
40. *Hinduipsocus annulipes* Badonnel, 1981*
41. *Hinduipsocus atratus* Badonnel, 1981*

ECTOPSOCIDAE Roesler, 1944

42. *Ectopsocus annandalei* Datta, 1969*
43. *Ectopsocus bengalensis* Datta, 1965*
44. *Ectopsocus briggsi* McLachlan, 1899
45. *Ectopsocus cinctus* Thornton, 1962
46. *Ectopsocus denudatus* Enderlein, 1903*
47. *Ectopsocus myrmecophilus* (Enderlein, 1903)
48. *Ectopsocus pilosus* Badonnel, 1968
49. *Ectopsocus pumilis* (Banks, 1920)
50. *Ectopsocus ramburi* Datta, 1965*
51. *Ectopsocus maindroni* Badonnel, 1935

ELIPSOCIDAE Pearman, 1936

52. *Elipsocus rubrostigma* Navas, 1934*

LACHESILLIDAE Pearman, 1936

53. *Lachesilla falcicula* Badonnel, 1981
54. *Lachesilla pedicularia* (Linnaeus, 1758)
55. *Lachesilla sonamarga* Garcia Aldrete, 1988*
56. *Lachesilla tectorum* Badonnel, 1931
57. *Lachesilla aethiopica* (Enderlein, 1902)
58. *Lachesilla vellimalai* Ramesh, Babu, Subramanian and Garcia-Aldrete, 2021*

PERIPSOCIDAE Roesler, 1944

59. *Diplopsocus anoplus* (Thornton and Wong, 1968)
60. *Diplopsocus dachigamensis* (Badonnel, 1981)*
61. *Diplopsocus punctigaster* (Datta, 1969)*
62. *Diplopsocus similaris* (Badonnel, 1981)*
63. *Diplopsocus sinensis* (Datta, 1963)*
64. *Peripsocus bhaktai* Badonnel, 1981*
65. *Peripsocus brunneus* Datta, 1965*
66. *Peripsocus hinduensis* Garcia Aldrete, 1999*
67. *Peripsocus kashmirensis* Badonnel, 1981*
68. *Peripsocus quercicola* Enderlein, 1906
69. *Peripsocus sclerotus* Thornton and Wong, 1966*

PSEUDOCAECILIIDAE Pearman, 1936

70. *Allocaecilius heterothorax* Lee and Thornton, 1967*
71. *Phallocaecilius indicus* Ramesh, Babu and Subramanian, 2022*
72. *Heterocaecilius fuscipalpus* Lee and Thornton, 1967
73. *Mesocaecilius pictipennis* (McLachlan, 1872)
74. *Ophiodopelma multipunctatum* (Hagen, 1859)
75. *Pseudocaecilius citricola* (Ashmead, 1879)
76. *Pseudocaecilius fletcheri* Datta, 1965*
77. *Pseudocaecilius lanatus* (Hagen, 1859)
78. *Scytopsocopsis hirtipenna* Lee and Thornton, 1967

HEMIPSOCIDAE Pearman, 1936

79. *Hemipsocus chloroticus* (Hagen, 1858)
80. *Hemipsocus ornatus* Datta, 1969
81. *Hemipsocus rubellis* Navas, 1934*

MYOPSOCIDAE Pearman, 1936

82. *Lichenomima indica* Datta, 1969*

83. *Myopsocus fraternus* McLachlan, 1866*
84. *Myopsocus pluviosus* Navas, 1934*
85. *Myopsocus australis* (Brauer, 1865)
86. *Thorntonodes pattoni* (Datta, 1966)*

PSOCIDAE Hagen, 1865

87. *Blaste (Euclismia) cinerea* (Enderlein, 1903)*
88. *Clematostigma indicum* (Enderlein, 1903*)
89. *Metylophorus nebulosus* (Stephens, 1836)
90. *Metylophorus paranebulosus* New, 1978
91. *Psocidus nubilus* (Navas, 1934)*
92. *Psocidus salai* (Navas, 1934)*
93. *Psocidus signifer* (Navas, 1934)*
94. *Ptycta schneideri* Badonnel, 1981*
95. *Trichadenotecnum apertum* Thornton, 1961
96. *Trichadenotecnum distinctum* Datta, 1969
97. *Trichadenotecnum spiniserrulum* Datta, 1969
98. *Longivalvus nubilus* (Enderlein, 1906)
99. *Psococerastis asiatica* Datta, 1966*
100. *Psococerastis assamensis* Datta, 1966*
101. *Psococerastis bengalensis* (Kolbe, 1883)
102. *Psococerastis cosmoptera* (McLachlan, 1866)
103. *Psococerastis gibbosa* (Sulzer, 1766)
104. *Psococerastis nilae* Datta, 1966*
105. *Psococerastis nirvana* (Banks, 1914)
106. *Psococerastis sinensis* Thornton, 1960
107. *Psococerastis taprobanes* (Hagen, 1858)
108. *Sigmatoneura (Sigmatoneura) subcostalis* (Enderlein, 1903)

AMPHIENTOMIDAE Enderlein, 1903

109. *Diamphipsocus striatum* (Thornton, 1984)
110. *Stimulopalpus japonicus* Enderlein, 1907
111. *Tineomorpha jacobsoniana* Enderlein, 1926

LIPOSCOLIDAE Broadhead, 1950

112. *Embidopsocus kumaonensis* Badonnel, 1981*
113. *Embidopsocus trichurensis* Menon, 1942
114. *Liposcelis bengalensis* Badonnel, 1981*
115. *Liposcelis bostrychophila* Badonnel, 1931
116. *Liposcelis paeta* Pearman, 1942
117. *Liposcelis entomophila* (Enderlein, 1907)
118. *Liposcelis transvaalensis* (Enderlein, 1909)
119. *Liposcelis divinatoria* (Müller, 1766)

PACHYTROCTIDAE Enderlein, 1904

120. *Psylloneura pygmaea* Datta, 1969*
121. *Tapinella fasciata* Thornton and Wong, 1966*
122. *Tapinella formosana* Enderlein, 1908
123. *Pachytroctes bicoloripes* Badonnel, 1949
124. *Peritroctes bengalensis* Thornton and Wong, 1966
125. *Peritroctes cochinchinensis* Menon, 1938
126. *Psacadium georgi* Menon, 1938*

LEPIDOPSOCIDAE Enderlein, 1903

127. *Lepium chrysochlorum* Enderlein, 1907*
128. *Soa papanasam* Ramesh, Babu and Subramanian, 2020*
129. *Lepolepis bicolor* Broadhead, 1955

PSOQUILLIDAE Lienhard & Smithers, 2002

130. *Eosilla (Empheriella) denervosa* (Enderlein, 1912)
131. *Rhyopsocus afer* (Badonnel, 1948)
132. *Psocathropos cuttackae* (Behura and Dash, 1968)*
133. *Psocathropos lachlani* Ribaga, 1899
134. *Psocathropos pilipennis* (Enderlein, 1931)
135. *Psyllipsocus bombayensis* Menon, 1942*
136. *Psyllipsocus edentulus* Menon, 1942*
137. *Psyllipsocus ramburii* Selys, 1872

TROGIIDAE Roesler, 1944

138. *Lepinotus indicus* Badonnel, 1981*

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