



An updated Checklist of Family Hydropsychidae Curtis, 1835 (Insecta: Trichoptera) from India

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Abstract

An updated checklist of the Caddisflies belonging to the one of most diverse family Hydropsychidae Curtis, (1835) of order Trichoptera is prepared based on the recent published scientific records as well as online resources. To remove disparity, the species localities are put into the current Indian states which were earlier united or were part of original state based on the type locality mentioned in the original description of species. At present the family Hydropsychidae is represented by 4 subfamilies, 15 genera and 128 species from India.

Keywords: Caddisflies, Checklist, Distribution, India, Trichoptera

Introduction

The order Trichoptera (Caddisflies) comprises a group of holometabolous insects that are closely related to the order Lepidoptera and together they represent the super order Amphiesmenoptera (Kristensen, 1991; 1997). Adult caddisflies vary in size from very minute with a wing span of less than 3 mm to large with a wing span approaching 100 mm. Some of the species have very striking color and wing patterns but majority of the species generally have color from dull yellow through grey, or brown to black, are moth like insects with wings covered by hair and not scales as in Lepidoptera. Adults have very prominent, and in some species exceptionally long, antennae (more than double the length of the forewing). With some exceptions they have well developed maxillary and labial palps, but never the coiled proboscis that characterizes most adult Lepidoptera.

Fischer (1960-1973) produced a world catalogue of caddisflies that recorded 5,546 species. This catalogue formed the basis of Higler's Checklist (1992). Present day Trichoptera World Checklist (TWC, 2018) includes most of the earlier as well as recent works on caddisflies. An updated Checklist of Indian Trichoptera was provided by Saini *et al.* (2001) as well as Sharma and Chandra

(2009). Family Hydropsychidae is the third largest family as well as most diverse net spinning Annulipalpi of Trichoptera. It was erected by Curtis (1835) and five subfamilies are currently recognized: Arctopsychinae Martynov (1924), Macronematinae Ulmer (1905), Hydropsychinae Curtis (1835), Diplectroninae Ulmer (1951), and Smicrideinae Flint (1974). This family is represented by 4 subfamilies, 15 genera and 128 species from India as given in Table 1.

The List of species with distribution

Family HYDROPSYCHIDAE Curtis, 1835

Subfamily ARCTOPSYCHINAE Martynov, 1924

Genus *Arctopsyche* McLachlan, 1868

1. *Arctopsyche arcuata* Schmid, 1968 (Arunachal Pradesh, Sikkim)
2. *Arctopsyche bicornis* Schmid, 1968 (Arunachal Pradesh)
3. *Arctopsyche composita* Martynov, 1930 (Uttarakhand, Arunachal Pradesh, Sikkim)
4. *Arctopsyche fissa* Schmid, 1968 (Sikkim)
5. *Arctopsyche inaequispinosa* Schmid, 1968 (Sikkim)
6. *Arctopsyche integra* Schmid, 1968 (Arunachal Pradesh, Sikkim)

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Table 1.

Family Hydropsychidae		
Subfamily	Number of genera from India	Number of species from India
Arctopsychinae Martynov, 1924	<i>Arctopsyche</i> McLachlan, 1868	08
	<i>Parapsyche</i> Betten, 1934	04
Diplectroninae Ulmer, 1951	<i>Diplectrona</i> Westwood, 1840	08
Hydropsychinae Curtis, 1835	<i>Cheumatopsyche</i> Wallengren, 1891	20
	<i>Hydromanicus</i> Brauer, 1865	08
	<i>Hydropsyche</i> Pictet, 1834	54
	<i>Potamyia</i> Banks, 1900	03
	<i>Schmidopsyche</i> Oláh and Scheffer, 2008	01
Macronematinae Ulmer, 1905	<i>Amphipsyche</i> McLachlan, 1872	05
	<i>Macrostemum</i> Kolenati, 1859	08
	<i>Oestropsyche</i> Brauer, 1868	01
	<i>Pseudoleptonema</i> Mosely, 1933	01
	<i>Trichomacronema</i> Schmid, 1964	01
	<i>Aethaloptera</i> Brauer, 1875	02
	<i>Polymorphanus</i> Walker, 1875	04
Total 04	15	128

7. *Arctopsyche pluviosa* Návas, 1916 (West Bengal)

8. *Arctopsyche tricornis* Schmid, 1968 (Meghalaya)

Genus *Parapsyche* Betten, 1934

9. *Parapsyche kchina* Schmid, 1968 (Arunachal Pradesh)

10. *Parapsyche mahati* Schmid, 1968 (Sikkim)

11. *Parapsyche tchandratshuda* Schmid, 1968 (Manipur)

12. *Parapsyche varyiasi* Schmid, 1968, (Arunachal Pradesh)

Subfamily DIPLECTRONINAE Ulmer, 1951

Genus *Diplectrona* Westwood, 1840

13. *Diplectrona brunnea* (Betten, 1909) (Assam)

14. *Diplectrona hilareia* Malicky, 2002 (Kerala)

15. *Diplectrona indica* Mosely, 1931 (Karnataka)

16. *Diplectrona ingethel* Malicky, 2012 (Kerala)

17. *Diplectrona ismene* Malicky, 2002 (Tamil Nadu)

18. *Diplectrona marginata* Betten, 1909 (Himachal Pradesh, West Bengal)

19. *Diplectrona orientalis* Betten, 1909 (Assam)

20. *Diplectrona salai* Návas, 1932 (Maharashtra)

Subfamily HYDROPSYCHINAE Curtis, 1835

Genus *Cheumatopsyche* Wallengren, 1891

21. *Cheumatopsyche barakambra* Oláh & Johanson, 2008 (Orissa)

22. *Cheumatopsyche bhatrapura* Malicky, 1979 (Andaman Islands)

23. *Cheumatopsyche capitella* Martynov, 1927 (Uttarakhand)

24. *Cheumatopsyche chlorogastra* Návas, 1932 (Maharashtra) (*nomina dubia* According to Pandher, Malicky & Parey, 2018)

25. *Cheumatopsyche columnata* Martynov, 1935 (Andhra Pradesh)

26. *Cheumatopsyche curvata* Martynov, 1935 (Karnataka)

27. *Cheumatopsyche dhanikari* Malicky, 1979 (Andaman Islands)

28. *Cheumatopsyche galahittigama* (Schmid, 1958) (Orissa)

29. *Cheumatopsyche guadunica* Li & Dudgeon, 1988 (Sikkim, Uttarakhand)

30. *Cheumatopsyche indica* (Návas, 1932) (Maharashtra) (*nomina dubia* According to Pandher, Malicky & Parey, 2018)

31. *Cheumatopsyche lebasi* (Návas, 1932) West Bengal (*nomina dubia* According to Pandher, Malicky & Parey, 2018)

32. *Cheumatopsyche mariannae* Oláh & Johanson, 2008 (Karnataka)

33. *Cheumatopsyche meghalayaensis* Pandher, Malicky & Parey, 2018 (Meghalaya)

34. *Cheumatopsyche nigrocephala* Pandher, Malicky & Parey, 2018 (Uttarakhand)
35. *Cheumatopsyche ningmapa* Schmid, 1975 (Himachal Pradesh)
36. *Cheumatopsyche similis* Pandher, Malicky & Parey, 2018 (Uttarakhand)
37. *Cheumatopsyche stenocyta* (Návas, 1932) (Maharashtra) (**nomina dubia** According to Pandher, Malicky & Parey, 2018)
38. *Cheumatopsyche suffusa* (Návas, 1932) (Maharashtra) (**nomina dubia** According to Pandher, Malicky & Parey, 2018)
39. *Cheumatopsyche suswanad* Oláh & Johanson, 2008 (Uttarakhand)
40. *Cheumatopsyche truncata* Martynov, 1935 (Assam), (Uttarakhand)
- Genus **Hydromanicus** Brauer, 1865
41. *Hydromanicus decaniel* Malicky, 2012 (Meghalaya)
42. *Hydromanicus erato* Malicky, 2000 (Kerala, Tamil Nadu)
43. *Hydromanicus krsamgin* Oláh & Johanson, 2008 (Meghalaya)
44. *Hydromanicus luctuosus* Ulmer, 1905 (West Bengal, Arunachal Pradesh, Assam, Meghalaya)
45. *Hydromanicus naraik* Oláh & Johanson, 2008 (Tamil Nadu)
46. *Hydromanicus palnis* Oláh & Johanson, 2008 (Tamil Nadu)
47. *Hydromanicus spatulatus* Martynov, 1935 (Maharashtra)
48. *Hydromanicus topali* Oláh & Johanson, 2008 (Karnataka)
- Genus **Hydropsyche** Pictet, 1834
49. *Hydropsyche afghanistanica* Schmid, 1963 (Jammu & Kashmir), (Himachal Pradesh)
50. *Hydropsyche aiakos* Malicky, 1997 (Arunachal Pradesh)
51. *Hydropsyche appendicularis* Martynov, 1931 (Uttarakhand, Himachal Pradesh)
52. *Hydropsyche asiatica* Ulmer, 1905 (Sikkim, West Bengal)
53. *Hydropsyche astyanax* Malicky & Chantaramongkol, 2000 (Kerala)
54. *Hydropsyche athamas* Malicky & Chantaramongkol, 2000 (Uttarakhand)
55. *Hydropsyche atlas* Malicky & Chantaramongkol, 2000 (Himachal Pradesh)
56. *Hydropsyche augeias* Malicky & Chantaramongkol, 2000 (Uttarakhand)
57. *Hydropsyche binaria* Mey, 1996 (Sikkim, Uttarakhand)
58. *Hydropsyche briseus* Malicky & Chantaramongkol, 2000 (Manipur)
59. *Hydropsyche camillus* Malicky & Chantaramongkol, 2000 (Sikkim, Himachal Pradesh)
60. *Hydropsyche charon* Malicky & Chantaramongkol, 2000 (Assam, Uttarakhand)
61. *Hydropsyche chotanagpurensis* Pandher, Kaur, Parey & Saini, 2017 (Jharkhand, West Bengal, (Orissa, Bihar, Chhattisgarh)
62. *Hydropsyche claviformis* Mey, 1996 (Sikkim, Assam, Uttarakhand)
63. *Hydropsyche curvata* Pandher, Kaur, Parey & Saini, 2017 (Jammu and Kashmir)
64. *Hydropsyche darbori* Malicky, 2012 (Meghalaya)
65. *Hydropsyche dhusaravarna* Schmid, 1975 (Arunachal Pradesh)
66. *Hydropsyche dike* Malicky & Chantaramongkol, 2000 (Kerala)
67. *Hydropsyche diktyis* Malicky & Chantaramongkol, 2000 (Arunachal Pradesh)
68. *Hydropsyche ditalon* Tian & Li, 1988 (Assam)
69. *Hydropsyche doctersi* Ulmer, 1951 (Manipur, Sikkim).
70. *Hydropsyche ekaropa* Oláh & Scheffer 2008 (Manipur)
71. *Hydropsyche gautamittra* Schmid, 1961 (Uttarakhand)
72. *Hydropsyche golitarensis* Pandher, Kaur, Parey & Saini, 2017 (Sikkim).
73. *Hydropsyche hackeri* Mey, 1998 (Himachal Pradesh, Assam)
74. *Hydropsyche hajinensis* Pandher, kaur, Parey & Saini, 2017 (Jammu and Kashmir)
75. *Hydropsyche harpagofalcata* Mey, 1995 (Uttarakhand)
76. *Hydropsyche homunculus* Schmid, 1965 (Uttarakhand)
77. *Hydropsyche igunapali* Oláh & Scheffer, 2008 (Assam)
78. *Hydropsyche indica* Betten, 1909 (West Bengal)
79. *Hydropsyche januha* Oláh & Barnard, 2008 (Meghalaya)
80. *Hydropsyche kamenga* Oláh & Scheffer, 2008 (Assam)
81. *Hydropsyche kangra* Oláh & Barnard, 2008 (Himachal Pradesh)
82. *Hydropsyche kaznakovi* Martynov, 1914 (West Bengal, Uttarakhand)
83. *Hydropsyche keralana* Oláh & Barnard, 2008 (Kerala)

84. *Hydropsyche khasigiri* Oláh & Barnard, 2008 (Meghalaya)
85. *Hydropsyche kiogupa* Oláh & Schefter, 2008 (Manipur)
86. *Hydropsyche lobulata* Martynov, 1936 (West Bengal, Himachal Pradesh).
87. *Hydropsyche minutanga* Oláh & Johanson, 2008 (Arunachal Pradesh)
88. *Hydropsyche mizora* Oláh & Schefter, 2008 Mizoram
89. *Hydropsyche narayana* Oláh & Johanson, 2008 (Orissa)
90. *Hydropsyche nuristanica* Schmid, 1963 (Jammu & Kashmir)
91. *Hydropsyche orectis* Mey, 1999 (Sikkim), (Jammu & Kashmir)
92. *Hydropsyche pallipenne* Banks, 1938 (Meghalaya, Himachal Pradesh)
93. *Hydropsyche quadrata* (Li & Dudgeon, 1990) (Sikkim)
94. *Hydropsyche rakshakaha* Oláh, 1994 (Assam, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, West Bengal)
95. *Hydropsyche rhomboana* Martynov, 1909 (Kashmir).
96. *Hydropsyche sagittata* Martynov, 1936 (Bihar)
97. *Hydropsyche saranganica* Ulmer, 1951 (Andaman, Nicobar Island)
98. *Hydropsyche shillonga* Oláh & Barnard, 2008 (Assam)
99. *Hydropsyche Sikkimensis* Mey, 1999 (Sikkim)
100. *Hydropsyche tabulifera* Schmid, 1963 (Jammu & Kashmir)
101. *Hydropsyche tritiyaha* Oláh & Barnard, 2008 (Meghalaya)
102. *Hydropsyche uvana* Mey, 1995 (Meghalaya, Manipur)

Genus **Potamyia** Banks, 1900

103. *Potamyia Assamana* Oláh & Schefter, 2008 (Assam)
104. *Potamyia daphne* Malicky, 1998 (Kerala)
105. *Potamyia pallidipennis* Martynov, 1935 (Uttarakhand)

Genus **Schmidopsyche** Oláh & Schefter, 2008

106. *Schmidopsyche rossi* Oláh & Schefter, 2008 (Sikkim)

Subfamily MACRONEMATINAE Ulmer, 1905

Genus **Amphipsyche** McLachlan, 1872

107. *Amphipsyche apicalis* Banks, 1939 (Karnataka)
108. *Amphipsyche bengalensis* Martynov, 1935 (West Bengal)
109. *Amphipsyche distincta* Martynov, 1935 (Andhra Pradesh)
110. *Amphipsyche extrema* Martynov, 1935 (West Bengal)
111. *Amphipsyche meridian* Ulmer, 1909 (Bihar, West Bengal, Maharashtra)

Genus **Macrostemum** Kolenati, 1859

112. *Macrostemum fuscum* (Martynov, 1935) (Assam, West Bengal, Sikkim)
113. *Macrostemum giganteum* (Martynov, 1935) (Maharashtra)
114. *Macrostemum indistinctum* (Banks, 1911) (Bihar)
115. *Macrostemum marpessa* Malicky, 1998 (Kerala)
116. *Macrostemum pallidipennis* (Martynov, 1935) (Maharashtra)
117. *Macrostemum pseudoneura* (Brauer, 1865) (West Bengal)
118. *Macrostemum punctatum* (Betten, 1909) (Himachal Pradesh)
119. *Macrostemum thomasi* Mey, 1993 (Sikkim)

Genus **Oestropsyche** Brauer, 1868

120. *Oestropsyche vitrina* (Hagen, 1859) (Andhra Pradesh)

Genus **Pseudoleptonema** Mosely, 1933

121. *Pseudoleptonema quinquefasciatum* (Martynov, 1935) (Uttarakhand)

Genus **Trichomacronema** Schmid, 1964

122. *Trichomacronema shanorum* Schmid, 1964 (Manipur)

Genus **Aethaloptera** Brauer, 1875

123. *Aethaloptera gracilis* (Martynov, 1935) (West Bengal, Bihar)
124. *Aethaloptera sexpunctata* (Kolenati, 1859) (West Bengal, Bihar)

Genus **Polymorphanisus** Walker, 1852

125. *Polymorphanisus nigricornis* Walker, 1852 (Assam)
126. *Polymorphanisus ocularis* Ulmer, 1906 (Bihar, Orissa)
127. *Polymorphanisus tumidus* Banks, 1939 (Karnataka)
128. *Polymorphanisus umbripes* Barnard, 1980 (Karnataka)

Acknowledgements

We are grateful to Dr. Hans Malicky of Austria and Dr. John C. Morse, USA for the help rendered in the form of relevant literature and the valuable suggestions. Financial support provided by SERB-DST is also thankfully acknowledged.

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