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**A CHECKLIST OF THE CHINESE SPECIES OF THE FAMILY
PERLIDAE (PLECOPTERA: PERLOIDEA) ***

DU Yuzhou¹, Ignac SIVEC² and HE Junhua¹

1- Department of Plant Protection, Zhejiang University, Hangzhou 310029,
Zhejiang, China. E-mail: jhhe@ns.zjau.edu.cn

2- Prirodoslovni muzej Slovenije, Prešernova 20, 1000 Ljubljana, Slovenija
E-mail: ignac.sivec@guest.arnes.si

Abstract - Examination of numerous collections and published records has resulted in a checklist of the family Perlidae from China. A total of 165 species representing two subfamilies and twenty genera is found in China. Eight new combinations, one synonym and seven species *incertae sedis* are proposed in this checklist.

KEY WORDS: Plecoptera, Perlidae, checklist, China.

Izvleček - SEZNAM KITAJSKIH VRST DRUŽINE PERLIDAE (PLECOPTERA: PERLOIDEA)

Seznam vrst iz družine Perlidae za območje Kitajske je rezultat pregleda številnih zbirk in objavljenih podatkov. Na območju Kitajske je ugotovljenih 165 vrst, zastopnic dveh poddružin in dvajsetih rodov. Predlagamo osem novih kombinacij, en nov sinonim, sedem vrst pa uvrščamo med vrste *incertae sedis*.

KLJUČNE BESEDE: Plecoptera, Perlidae, seznam vrst, Kitajska.

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PERLINAE**CLAASSENIINI****I. *Claassenia* Wu**

1. *C. bischoffi* (Wu, 1935)
2. *C. caudata* (Klapálek, 1916)
3. *C. fulva* Wu, 1973
4. *C. gigas* (Klapálek, 1916)
5. *C. longistyla* Wu, 1973
6. *C. magna* Wu, 1948
7. *C. manchuriana* (Banks, 1920)
8. *C. radiata* (Klapálek, 1916)
9. *C. semibrachyptera* Wu et Claassen, 1934
10. *C. tincta* (Navás, 1922)

PERLINI**II. *Agnentina* Klapálek**

11. *A. aequalis* (Banks, 1937)
12. *A. armata* (Banks, 1940)
13. *A. chrysodes* (Navás, 1919)
14. *A. curvigladiata* Du et Chou, 1998
15. *A. duplistyla* (Wu, 1962)
16. *A. extrema* (Navás, 1912)
17. *A. gladiata* (Wu, 1962)
18. *A. kryzhanovskii* Sivec et Zhiltzova, 1997
19. *A. longihirta* Du et Chou, 1998
20. *A. multispinosa* (Wu, 1938)
21. *A. navasi* (Wu, 1935)
22. *A. praeusta* (Klapálek, 1912)
23. *A. quadrituberculata* (Wu, 1935)
24. *A. spinata* (Wu, 1949)
25. *A. starki* Du et Chou, 1998

III. *Etrocorema* Klapálek

26. *E. hochii* (Wu, 1938)

IV. *Kamimuria* Klapálek

27. *K. acutispina* Wu, 1973
28. *K. amoena* Klapálek, 1912
29. *K. brunneicornis* Klapálek, 1921
30. *K. cheni* Wu, 1947
31. *K. chingtechenensis* Wu, 1935
32. *K. chungnanshana* Wu, 1938
33. *K. coarctata* Klapálek, 1912
34. *K. crassispina* Wu, 1947
35. *K. formosana* (Klapálek, 1921)
36. *K. infumata* (Navás, 1936)
37. *K. integra* (Klapálek, 1916)

38. *K. jeanneli* Wu, 1935
39. *K. kirinensis* Wu, 1938
40. *K. lepida* Klapálek, 1913
41. *K. longispina* Wu, 1947
42. *K. magna* Wu, 1938
43. *K. manchuriana* Wu, 1938
44. *K. melli* Wu, 1935
45. *K. nigrita* Wu, 1962
46. *K. orthogonia* Wu, 1962
47. *K. robusta* Wu, 1947
48. *K. similis* Klapálek, 1912
49. *K. simplex* (Chu, 1929)
50. *K. taoi* Wu, 1935
51. *K. tenuispina* Wu, 1947
52. *K. tienmushanensis* Wu, 1938
53. *K. trapezoidea* Wu, 1962
54. *K. tuberosa* Wu, 1973
- V. *Neoperlops* Banks**
55. *N. cheni* (Wu, 1938)
56. *N. gressitti* Banks, 1939
57. *N. obscuripennis* Banks, 1939
- VI. *Oyamia* Klapálek**
58. *O. nigribasis* Banks, 1920
- VII. *Paragnetina* Klapálek**
59. *P. acutistyla* Wu, 1973
60. *P. chinensis* (Klapálek, 1912)
61. *P. hummelina* (Navás, 1936)
62. *P. indentata* Wu et Claassen, 1934
63. *P. insignis* Banks, 1939
64. *P. lacrimosa* Klapálek, 1921
65. *P. lutescens* Navás, 1911
66. *P. neimongolica* Yang et Yang, 1996
67. *P. ochrocephala* Klapálek, 1921
68. *P. pieli* Navás, 1933
69. *P. planidorsa* (Klapálek, 1913)
70. *P. schenklingi* Klapálek, 1921
- VIII. *Togoperla* Klapálek**
71. *T. tricolor* Klapálek, 1921
72. *T. fortunati* (Navás, 1926)
73. *T. perpicta* Klapálek, 1921
- IX. *Tyloperla* Sivec et Stark**
74. *T. attenuata* (Wu et Claassen, 1934)
75. *T. formosana* (Okamoto, 1912)
76. *T. planistyla* (Wu, 1973) n. comb.

77. *T. sinensis* Yang et Yang, 1993
 78. *T. transversa* (Wu, 1962) n. comb.
 79. *T. sauteri* (Navás, 1929)

NEOPERLINI

X. *Chinoperla* Zwick

80. *Ch. furcomacula* (Wu, 1973)
 81. *Ch. nigrifrons* (Banks, 1939)
 82. *Ch. nigroflavata* (Wu, 1948)

IX. *Furcaperla* Sivec

83. *F. jiangxiensis* Yang et Yang, 1991
 84. *F. bifurcata* (Wu, 1948)

XII. *Neoperla* Needham

A. Clymene group:

85. *N. cavaleriei* (Navás, 1922)
 86. *N. flavescens* Chu, 1929
 87. *N. formosana* Okamoto, 1912
 88. *N. foveolata* Klapálek, 1921
 89. *N. infuscata* Wu, 1935
 90. *N. microtumida* Wu & Claassen, 1934
 91. *N. minor* Chu, 1929
 92. *N. sauteri* Klapálek, 1912
 93. *N. uniformis* Banks, 1937

B. Montivaga group:

94. *N. angustilobata* Zwick, 1988
 95. *N. banksi* (Illies, 1966)
 96. *N. bicornua* Wu, 1973
 97. *N. bicornuta* Yang et Yang, 1995
 98. *N. bilineata* Wu et Claassen, 1934
 99. *N. chui* Wu et Claassen, 1934
 100. *N. costalis* (Klapálek, 1913)
 101. *N. curvispina* Wu, 1948
 102. *N. dorsispina* Yang et Yang, 1996
 103. *N. fanjingshana* Yang et Yang, 1992
 104. *N. forcipata* Yang et Yang, 1992
 105. *N. guizhouensis* Yang et Yang, 1991
 106. *N. hainanensis* Yang et Yang, 1995
 107. *N. han* Stark, 1987
 108. *N. klapaleki* Banks, 1937
 109. *N. limbatella* Navás, 1933
 110. *N. longispina* Wu, 1937
 111. *N. lushana* Wu, 1935
 112. *N. maolanensis* Yang et Yang, 1993
 113. *N. mnong* Stark, 1987 new record
 114. *N. perpicillata* Zwick, 1980 new record

115. *N. quadrata* Wu & Claassen, 1934
116. *N. qingyuanensis* Yang et Yang, 1995
117. *N. rotunda* Wu, 1948
118. *N. signatalis* Banks, 1937
119. *N. sinensis* Chu, 1928
120. *N. taihorinensis* Klapálek, 1913
121. *N. taiwanica* Sivec et Zwick, 1987
122. *N. tingwushanensis* Wu, 1935
123. *N. trilobata* Wu, 1935
124. *N. truncata* Wu, 1948
125. *N. tuberculata* Wu, 1937
126. *N. wui* Yang et Yang, 1990
127. *N. yao* Stark, 1987

C. Species incertae sedis

128. *Neoperla binodosa* (Wu, 1973) n. comb.
129. *N. hatakeyamae* Okamoto, 1912
130. *N. obscurolulva* (Wu, 1962)
131. *Ochthopetina multidentata* Wu, 1962

XIII. *Phanoperla* Banks

132. *Ph. pallipennis* (Banks, 1938)

ACRONEURIINAE

XIV. *Acroneuria* Pictet

133. *A. grahami* Wu et Claassen, 1934
134. *A. hainana* Wu, 1938
135. *A. omeiana* Wu, 1948
136. *A. quadriplagiata* Wu, 1938
137. *A. violacea* (Enderlein, 1909)
138. *A. yiui* (Wu, 1935)
139. *A. zhejiangensis* Yang et Yang, 1995

XV. *Brahmana* Klapálek

140. *B. flavomarginata* Wu, 1962

XVI. *Gibosia* Okamoto

141. *G. albopila* Wu, 1948
142. *G. biocellata* (Chu, 1929)
143. *G. lucida* (Klapálek, 1913)
144. *G. ovalolobata* Wu, 1948
145. *G. perspicillata* Klapálek, 1916

XVII. *Kiotina* Klapálek

146. *K. chekiangensis* (Wu, 1938) n. comb.
147. *K. chiangi* (Banks, 1939) n. comb.
148. *K. collaris* (Banks, 1937)
149. *K. kelloggi* Wu & Claassen, 1934

150. *K. nigra* (Wu, 1938) n. comb.
 151. *K. quadrituberculata* Wu, 1948
 152. *K. resplendens* Banks, 1939
 153. *K. spatulata* Wu, 1948
XVIII. *Perlesta* Banks
 154. *P. chaoi* Wu, 1948
 155. *P. spatulata* Wu, 1938
XIX. *Sinacroneuria* Yang et Yang
 156. *S. flavata* (Navás, 1933) n.comb.
 157. *S. orientalis* Yang et Yang, 1994
XX. *Mesoperla* Klapálek
 158. *M. crucigera* Klapálek, 1913
XXI. Species incertae sedis
 159. *Kamimuria fulvescens* Klapálek, 1912
 160. *K. klapaleki* (Wu et Claassen, 1934)
 161. *K. liui* (Wu, 1941)
 162. *K. ramosa* Navás, 1936
 163. *Paragnetia excavata* Klapálek, 1921
 164. *Perla comstocki* Wu, 1937
 165. *P. stictica* Navás, 1922

References

- Banks, N.**, 1920: New neuropteroid insects. *Bull. Harvard Coll., Mus. Comp. Zool.*, 64: 314-325.
Banks, N., 1937a: Perlidae. In: Neuropteroid insects from Formosa. *Philippine J. Sci.*, 62: 269-275.
Banks, N., 1937b: Philippine neuropteroid insects. *Philippine J. Sci.*, 63: 134-137.
Banks, N., 1938: New Malayan neuropteroid insects. *J. Federated Malay States Mus.*, 18: 221-223.
Banks, N., 1939: New genera and species of neuropteroid insects. *Bull. Mus. Comp. Zool.*, 85:439-504.
Banks, N., 1940: Report on certain groups of neuropteroid insects from Szechwan, China. *Proc. U.S.Nation. Mus.*, 88:173-220.
Chu, Y.T., 1928: Descriptions of a new genus and three new species of stone-flies from Hangchow. *China Journal*, 9(4):194-198.
Chu, Y.T., 1929: Descriptions of four new species and one new genus of stone-flies in the family Perlidae from Hangchow. *China Journal*, 10(2): 88-92.
Claassen, P.W., 1940: A catalogue of the Plecoptera of the world. *Mem. Agr. Exp. Sta.*, 232:147.
Du Yuzhou, 1998: Two new record species of genus *Neoperla* Needham (Plecoptera: Perlidae) from China. *J. Zhejiang Agricult. Univ.*, 24(4): 392-394.
Du Yuzhou, Chou Io, 1998: Taxonomic study of the genus *Agnentina* Klapálek (Plecoptera: Perlidae: Perlinae) from China. *Entomotaxonomia*, 20(2):100-110.

- Enderlein, G.**, 1909: Klassifikation der Plecopteren sowie diagnosen neuer gattungen und arten. *Zool. Anz.*, 34: 385-419.
- Klapálek, Fr.**, 1912a: Plecopterorum genus: Kamimuria Kl. *Casopis České Spolec. Ent.*, 9: 84-110.
- Klapálek, Fr.**, 1912b: Plecoptera. In H. Sauter's Formosa-Ausbeute. *Ent. Mitt.*, 1: 342-351.
- Klapálek, Fr.**, 1913: Plecoptera II. In: H. Sauter's Formosa-Ausbeute. *Suppl. Ent.*, 2: 112-123.
- Klapálek, Fr.**, 1916: Subfamilia Acroneuriinae Kl. *Casopis České Spolec. Ent.*, 13: 45-84.
- Klapálek, Fr.**, 1921: Plecopteres nouveaux. *Ann. Soc. Ent. Belg.*, 61:57-67, 146-150, 320-327.
- Klapálek, Fr.**, 1923: Plecopteres II. Fam. Perlidae. *Collections zool. du Baron Edm. de Selys Longchamps*, Bruxelles, 4(2):1-193.
- Illies, J.**, 1966: Katalog der rezenten Plecoptera. *Das Tierreich*, 82:1-632.
- Navás, R.P.L.**, 1911: Fam. Perlidae. In: Névropteres nouveaux de l'extreme Orient. *Rev. ent. URSS*, Moskau, 11: 111-112.
- Navás, R.P.L.**, 1912: Famille Perlidae. In: Quelques névropteres de la Sibirie méridionale-orientale. *Rev. ent. URSS* (Moskau), 12: 417-418.
- Navás, R.P.L.**, 1919: Plecoptera. In: Névropteres de l'Indo-Chine. *Insecta, Rennes.*, 9:186-189.
- Navás, R.P.L.**, 1922a: Plecópteros. In: Insectos exóticos. *Brotéria, Ser. Zool.* (Lisboa), 20: 49-50.
- Navás, R.P.L.**, 1922b: Plecópteros. In: Insectos nuevos o poco conocidos. *Mem. R. Acad. Cienc. Artes* (Barcelona), 17(15): 6-9.
- Navás, R.P.L.**, 1922c: Plecópteros. In: Algunos insectos del Museo de Paris. *Rev. Acad. Cien. I.* Zaragoza, 7: 33-44.
- Navás, R.P.L.**, 1926: Plecópteros. In: Algunos insectos del Museo de Paris. *Broteria. Ser. Zool.*, Lisboa., 23:103-112.
- Navás, R.P.L.**, 1929: Plecópteros. In: Insectos del Museo de Hamburgo. *Bol. Soc. ent. Esp.* (Zaragoza), 12:75-83.
- Navás, R.P.L.**, 1933a: Plécopteres. In: Névropteres et insectes voisins (Chine et pays environnants). *Notes Ent. Chin., Musée Heude* (Shanghai), 1(9): 15-16.
- Navás, R.P.L.**, 1933b: Insecta orientalia. *Mem. Accad. Sci. Nuovi Lincei*, 17:81-85.
- Navás, R.P.L.**, 1936: Schwedisch-chinesische wissenschaftliche expedition nach den nordwestlichen Provinzen Chinas, Plecoptera. *Ark. Zool.*, Uppsala, 27A: 1-11.
- Okamoto, H.**, 1912: Erster Beitrag zur Kenntnis der japanischen Plecoptera. *Trans. Sappora Nat. Hist. Soc.*, 4: 105-170.
- Sivec, I.**, 1984: Redescription of *Neoperla klapaleki* Banks holotype from Taiwan/Formosa (Plecoptera: Perlidae). *Biol. Vestn.*, 32: 105-108.
- Sivec, I., P. Zwick**, 1987: Some *Neoperla* from Taiwan (Plecoptera: Perlidae). *Beitr. Entomol.* 37: 391-406.
- Sivec, I., P. Zwick**, 1989: Addition to the knowledge of genus *Chinoperla* (Plecoptera: Perlidae). *Aquatic Insects*, 11 (1): 11-16.

- Sivec, I., A. Zhiltzova**, 1996: Description of *Neoperla ussurica* sp.n. from the Russian Far East (Plecoptera: Perlidae). *Acta Entomol. Sloven.*, 4 (1): 13-18.
- Sivec, I. et al.**, 1988: Synopsis of the world genera of Perlinae (Plecoptera: Perlidae). *Scopolia*, 16:1-66.
- Sivec, I. et al.**, 1997: Name lists of insects in Taiwan-Plecoptera. *Chinese J. Entomol.*, 17(3): 188-193.
- Stark, B.P.**, 1987: Records and descriptions of oriental Neoperlini (Plecoptera: Perlidae). *Aquat. Insects*, 9: 45-50.
- Stark, B.P., I. Sivec**, 1991: Descriptions of oriental Perlini (Plecoptera: Perlidae). *Aquatic Insects*, 13(3):151-160.
- Uchida, S.**, 1987: The lectotype of *Neoperla formosana* Okamoto (Plecoptera: Perlidae). *Aquatic Insects* 9 (3):159-160.
- Wu, C.F.**, 1934: A homonym of a plecopterous genus. *Ann. Ent. Soc. Amer.*, 27: 256.
- Wu, C.F.**, 1935a: New species of stoneflies from east and south China. *Peking Nat. Hist. Bull.*, 9: 227-243.
- Wu, C.F.**, 1935b: Catalogus insectorum Sinensium. *Fan Memorial Inst. Biol.*, 1: 299-315.
- Wu, C.F.**, 1935c: Aquatic insects of China. Article XXII. Two new species of stoneflies from Kwangsi (Order Plecoptera). *Peking Nat. Hist. Bull.*, 10: 61-62.
- Wu, C.F.**, 1935d: Supplementum primum catalogi insectorum Sinensium. *Peking Nat. Hist. Bull.*, 10: 63-88.
- Wu, C.F.**, 1936-38: The stoneflies of China (Order Plecoptera). *Peking Nat. Hist. Bull.*, 11: 49-82, 163-189 (1936); 11: 297-307, 441-443; 12: 57-70, 127-166 (1937); 12: 225-252, 319-351; 13: 53-87 (1938).
- Wu, C.F.**, 1938: Plecopterorum sinensium. A monograph of stoneflies of China (Order Plecoptera), pp.1-225.
- Wu, C.F.**, 1939-40: First supplement to the stoneflies of China (Order Plecoptera). *Peking Nat. Hist. Bull.*, 14(2): 153-157.
- Wu, C.F.**, 1940-41: Second supplement to the stoneflies of China (Order Plecoptera). *Peking Nat. Hist. Bull.*, 14(4): 331-333.
- Wu, C.F.**, 1947-49: Third-sixth supplements to the stoneflies of China (Order Plecoptera). *Peking Nat. Hist. Bull.* 16(3-4): 265-272 (1947-48); 17(1): 75-80(1948-49); 17(2): 145-150 (1948-49); 17(4): 251-256 (1949).
- Wu, C.F.**, 1962: Results of the zoologico-botanical expedition to Southwest China, 1955-1957 (Plecoptera). *Acta Ent. Sin.*, Suppl., 11:139-153.
- Wu, C.F.**, 1973: New species of Chinese stoneflies (Order Plecoptera). *Acta Ent. Sin.*, 16(2):97-118.
- Wu, C.F., P.W. Claassen**, 1934: New species of China stoneflies. *Peking Nat. Hist. Bull.*, 9: 111-129.
- Yang Chikun, Yang Ding**, 1990: New and little known species of Plecoptera from Guizhou province(I). *Guizhou Sci.*, 8(4): 1-4. (Chinese, English summary)
- Yang Chikun, Yang Ding**, 1991a: New and little known species of Plecoptera from Guizhou province(II). *Guizhou Sci.*, 9(1):48-50. (Chinese, English summary)
- Yang Chikun, Yang Ding**, 1993: One new species of the genus *Tyloperla* Sivec et Stark

- from Guangxi (Plecoptera: Perlidae). *J. Guangxi Acad. Sci.*, 9(1): 61-62. (Chinese, English summary)
- Yang Chikun, Yang Ding**, 1994: A new genus and new species of Plecoptera from East China (Perlidae: Acroneuriinae). *Ent. J. East China*, 4(1): 1-2. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1991: One new species of the genus *Furcaperla* from Jiangxi (Plecoptera Perlidae). *Acta Agricult. Univ. Jiangxiensis*, 13(1): 16-18. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1992: Plecoptera: Perlidae. In: Insects of Wuling Mountains Area, Southwestern China (Ed. Huang Fusheng), Science Press, Beijing, pp. 62-65. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1993: New and little known species of Plecoptera from Guizhou province(III). *Entomotaxonomia*, 15(4): 235-238. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1995a: Three new species of Plecoptera from Hainan Province. *Acta Agricult. Univ. Pekinensis*, 21(2): 223-225. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1995b: Plecoptera: Perlidae. In: Insects of Baishanzu Mountain, Eastern China (Ed. Wu Hong). China Forestry Press, Beijing, pp.59-60. (Chinese, English summary)
- Yang Ding, Yang Chikun**, 1996: Four new species of Plecoptera from Nei Mongol. *J. China Agricult. Univ.* 1(5): 115-118. (Chinese, English summary)
- Yang Xingke, Sun Hongguo**, 1991: Catalogue of the insect typ specimens preserved in the insect collections of the Institute of Zoology, Academia Sinica. Agricultural Press, Beijing, pp.5-9.
- Zwick, P.**, 1973a: Die Plecopteren-Arten Enderliens (Insecta); revision der typen. *Annales Zool.*, Warszawa, 31(16): 471-4507.
- Zwick, P.**, 1973b: Insecta:Plecoptera, phylogenetisches system und katalog. *Das Tierreich*, 94:1-465.
- Zwick, P.**, 1982a: A revision of the stonefly genus *Phanoperla* (Plecoptera: Perlidae). *Syst. Ent.*, 7: 87-126.
- Zwick, P.**, 1982b: Contribution to the knowledge of *Chinoperla* (Plecoptera: Perlidae:Neoperlini). *Aquatic Insects*. 4: 167-170.
- Zwick, P.**, 1984a: Notes on the genus *Agnentina*(=*Phasganophora*) (Plecoptera: Perlidae). *Aquat. Insects*, 6:71-79.
- Zwick, P.**, 1984b: The genera *Tetropina* and *Neoperlops* (Plecoptera: Perlidae). *Aquat. Insects*, 6: 169-176.
- Zwick, P.**, 1988a: Notes on Plecoptera (16). *Tylopyge Klapálek*: a synonym of *Paragnetina Klapálek*. *Aquatic Insects*, 10: 201-203.
- Zwick, P.**, 1988b: Species of *Neoperla* from the South East Asian mainland (Plecoptera: Perlidae). *Ent. Scand.*, 18: 393-407.
- Zwick, P., I. Sivec**, 1980: Beiträge zur Kenntnis der Plecoptera des Himalaja. *Entomol. Basiliensa*, 5: 59-138.

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Autor(en)/Author(s): Du Y. , Sivec Ignac, J. He

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