

## A species list of Chinese mayflies (Insecta: Ephemeroptera)

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### Abstract

Totally 304 mayfly species in 21 families from China are reported so far. Among them, Ametropodidae and Metretropodidae are new records to this country. However, there are some species known only with names, especially those early described ones. Although the species diversity of Chinese mayflies have shown in certain level by the present list, a lot of typical locations are expected to sample, and many species are waiting to know, identify and describe.

**Key words:** Ametropodidae, Metretropodidae, new combination, new synonym, new record, distribution

The earliest record on Chinese mayflies (Ephemeroptera) can be found in *The Book of Odes* which was written more than 2000 years ago, and the scientific description of this group insects dates back in 1853, in which year Walker named the *Caenis sinensis*. From then on, many researchers reported mayflies from China. By the end of the year 2012, 304 species in 21 families as far as we know have been recorded, they are listed below. A checklist upon specimens are preparing by the author.

The references in this list, which begins with original description, focus on Asian literatures, especially those in Chinese. If the types of species are not from China, the list begins with the first report of this species and list of some important descriptions, such as the finding of females or nymphs. The taxa in this list are arranged alphabetically. Abbreviations and symbols used in this checklist are as follows: male: male imago, female: female imago, nymph: nymph stage, fig.: figure(s), adult: adult unknown sex. The formal modern spelling ones replaces the old names of Chinese locations and places where the types or specimens were collected. For example: Beijing (Peking, Peping), Guangdong (Kanton, Kwangton), Guangxi (Kwangsi), Gansu (Kansu), Taiwan (Formosa) et al.

### Ameletidae

#### Genus *Ameletus* Eaton, 1885

##### 1. *Ameletus atratus* Kang and Yang, 1994

*Ameletus atratus* Kang and Yang, 1994f, 266, fig. 3 (nymph). Types: Nymph, Chihtuan, Tatung, Iilan County, Taiwan.

**Distribution:** China (Taiwan).

##### 2. *Ameletus costalis* (Matsumura, 1931)

*Chimura costalis* Matsumura, 1931, 1474 (imago), Japan (*Chimura* is synonymised to *Ameletus* by Edmunds, 1960, 24).

*Ameletus costalis*: Tshernova et al., 1986, 126 (first record from China); Quan et al., 2002, 242, figs. 1, 83, 109, 140, 189 (nymph).

**Distribution:** China (Heilongjiang, Jilin), Korea, Japan, Russia.

##### 3. *Ameletus formosus* Kang and Yang, 1994

*Ameletus formosus* Kang and Yang, 1994f, 263, figs. 1, 4 (nymph, egg). Types: Nymph, Tzuenchiao, Hsiulin, Hsinchu, Taiwan.

**Distribution:** China (Taiwan).

#### 4. *Ameletus montanus* Imanishi, 1930

*Ameletus montanus* Imanishi, 1930, 265, figs. 3–5 (imago and nymph). Types: Male, Japan.

*Ameletus montanus*: Gose, 1979, 45; Ishiwata, 2001, 64; Tshernova et al., 1986, 126 (first record from China); Bae and Liu, 1999, 4; Quan et al., 2002, 242, figs. 2, 110 (nymph).

*Ameletus metanus* [sic.]: Gose, 1979, 45.

**Distribution:** China (Shaanxi, Heilongjiang, Jilin), Korea, Japan, Russia.

#### 5. *Ameletus montivagus* Kang and Yang, 1994

*Ameletus montivagus* Kang and Yang, 1994, 265, fig. 2 (nymph). Types: Nymph, Hohuanchi, Lenai, Nantou County, Taiwan.

**Distribution:** China (Taiwan).

### Ametropodidae

(first record from China)

#### Genus *Ametropus* Albarda, 1878

#### 6. *Ametropus fragilis* Albarda, 1878

*Ametropus fragilis* Albarda, 1878, 129 (males, females and female subimagos). Types: Syntype, Holland.

*Ametropus fragilis*: Eaton, 1885, 231 (first record from southern Russia, Caucasus and Armenia); Kłonowska-Olejniak and Jazdzewska, 2003, 459 (egg).

*Ametropus eatoni* Brodsky, 1930a, 33 (synonymized by Landa, 1969, 139); Keffermüller, 1959, 3 (nymph)

*Ametropus* sp.: Behning, 1932, 90, (Nymph). Named as *Ametropus eatoni* by Keffermüller, 1959, 3.

**Distribution:** Europe (Holland, Poland, Slovakia, Hungary, Bulgaria, Rumania, Estonia and Lithuania, Italy), Russia (Siberia, Amur River), China (Xingjiang, Helongjiang).

### Baetidae

#### Genus *Acentrella* Bengtsson, 1912

#### 7. *Acentrella gnom* Kluge, 1983

*Acentrella gnom* Kluge, 1983, 74, figs. 80–93, nymph and adults. Type: Male, Russia.

*Pseudocloeon ultimum* Müller-Liebenau, 1985, 100, fig. 5, 11, 18 (nymph). Types: Tatu River, Taiwan, first record from China. Synonymized by Waltz and McCafferty, 1987c, 560.

*Acentrella gnom*: Waltz and McCafferty, 1987c, 560; Ishiwata, 2000, 75; Ishiwata, 2001b, 179.

**Distribution:** China (Taiwan), Japan, Korea, Russia.

#### 8. *Acentrella lata* (Müller-Liebenau, 1985)

*Pseudocloeon latum* Müller-Liebenau, 1985, 100, figs. 4, 10, 17 (nymph). Types: Tatu River, Taiwan.

*Acentrella lata*: Waltz and McCafferty, 1987c, 560; Ishiwata and Kobayashi, 2003, 304.

**Distribution:** China (Taiwan), Japan.

#### 9. *Acentrella sibirica* (Kazlauskas, 1963)

*Pseudocloeon sibirica* Kazlauskas, 1963, 589, figs. 37–41 (nymph). Types: Nymph, Angara River, Siberia, Russia.

*Pseudocloeon sibiricum*: Kluge, 1980, 566.

*Pseudocloeon fenestratum* Kazlauskas, 1963, 588, figs. 31–36 (nymph, in part). Type: Nymph, Russia. Synonymized by Kluge, 1980, 566.

*Pseudocloeon fenestratum*: Bajkova, 1968, 523 (nec. *Pseudocloeon fenestratum* Kazlauskas, 1963, 588). Synonymized by Kluge, 1980, 566.

*Baetis (Acentrella) sibiricus*: Tshernova et al., 1986, 135.

*Pseudocloeon japonica* Yoon and Bae, 1988a, 114 (nec. *Acentrella japonica* Imanishi, 1930, 263). Synonymized by Park et al., 1996, 58.

*Baetiella* nX Imanishi, 1940, 230, fig. 28 (nymph, first record from China) (named as *Pseudocloeon fenestratum* by Kazlauskas, 1963, 588 and Bajkova, 1968, 523; but renamed as *Pseudocloeon sibiricum* by Kluge, 1980, 566).

*Baetiella japonica*: Bae et al., 1994, 34.

*Acentrella sibirica*: Waltz and McCafferty, 1987c, 560; Bae and Yoon, 1997, 44; Park et al., 1996, 57. Ishiwata, 2001a, 65; Quan et al., 2002, 242, figs. 3, 82, 97, 126, 127, 159 (nymph).

**Distribution:** China (Heilongjiang), Japan, Korea, Russia.

#### Genus *Alainites* Waltz and McCafferty, 1987

#### 10. *Alainites acutulus* Tong and Dudgeon, 2000

*Alainites acutulus* Tong and Dudgeon, 2000a, 115, figs. 1–11 (nymph, female). Types: Nymph, Tai Po Kau Forest Stream, Hong Kong.

**Distribution:** China (Hong Kong).

**11. *Alainites clivosus* (Chang and Yang, 1994)**

*Baetis* (*Acerbaetis*) *clivosus* Chang and Yang, 1994, 37 (in Kang et al., 1994), figs. 17, 30 (nymph). Types: Nymph, Shanglinsi, Luku, Nantou County, Taiwan.

*Alainites clivosus*: Waltz and McCafferty, 1997, 135.

**Distribution:** China (Taiwan).

**12. *Alainites lingulatus* Tong and Dudgeon, 2000**

*Alainites lingulatus* Tong and Dudgeon, 2000d, 116, figs. 12–24 (nymph, male). Types: Nymph, male imago, Pak Ngau Shek, Hongkong.

**Distribution:** China (Hong Kong).

**13. *Alainites navasi* Müller-Liebenau, 1974**

*Baetis navasi* Müller-Liebenau, 1974, 29, figs. 13–16 (nymph). Types: Nymph, Prov. Beira Alta, Portugal.

*Baetis navasi*: Müller-Liebenau, 1976, 65, figs. 1–4 (male and female), Portugal; Gui et al. 1999, 327, figs. 11–14 (first report from China, probably wrong).

*Alainites navasi*: Waltz et al., 1994, 34.

**Distribution:** China (Fujian), Europe.

**14. *Alainites pekingensis* Ulmer, 1936**

*Baetis pekingensis* Ulmer, 1935–1936, 209, 214, figs. 9–10 (male, female, subimago). Types: Male, female, subimago, Beijing.

*Baetis pekingensis*: Gui, 1985, 81; You and Gui, 1995, 30, fig. 25 (male).

*Alainites pekingensis*: Waltz et al., 1994, 34.

**Distribution:** China (Beijing).

**15. *Alainites yehi* (Kang and Yang, 1994)**

*Baetis* (*Acerbaetis*) *yehi* Kang and Yang, 1994, 39 (in Kang et al., 1994), figs. 18, 31, nymph. Types: Nymph, Sanmin, Kaohsiung County, Taiwan.

*Alainites yehi*: Waltz and McCafferty, 1997, 135.

**Distribution:** China (Taiwan).

**16. *Alainites yixiani* (Gui and Lu, 1999)**

*Baetis yixiani* Gui and Lu, 1999, 297, figs. 1–13 (male, nymph). Types: Male, nymph, Nanjing.

*Alainites yixiani*: Jia, Qin and Zhou, 2010, 2, figs. 1–4 (male, female, nymph).

**Distribution:** China (Jiangsu).

**Genus *Baetiella* Uéno, 1931**

**17. *Baetiella ardua* (Kang and Yang, 1994)**

*Baetis* (*Tenuibaetis*) *arduus* Kang and Yang, 1994, 29 (in Kang et al., 1994), figs. 14, 27, nymph. Types: Nymph, Tzuenchiao, Hsiulin, Hualien County, Taiwan.

*Baetiella ardua*: Waltz and McCafferty, 1997, 136.

**Remarks:** The subgenus or genus *Tenuibaetis* was synonymized as the genus *Baetiella* by Waltz and McCafferty, 1997, but Fujitani (2003a, 130) validated it as a genus. In my own opinion, the exact status of the genus *Baetiella*, *Tenuibaetis* and this species need more research.

**Distribution:** China (Taiwan).

**18. *Baetiella bispinosa* (Gose, 1980)**

*Pseudocloeon bispinosus* Gose, 1980, 211, fig. 53 (nymph). Type: Nymph, Japan.

*Neobaetiella macani* Müller-Liebenau, 1985, 108, figs. 6, 12, 13, 19 (nymph). Types: Nymph, Tatu River, Taiwan. Synonymized by Waltz and McCafferty, 1987, 563.

*Neobaetiella imanishi* Müller-Liebenau, 1985, 108, fig. 19 (nymph). Types: Nymph, Tatu River, Taiwan. Synonymized by Waltz and McCafferty, 1987c, 563.

*Pseudocloeon nigrovena* Gui et al. 1999, 328; Zhou et al., 1998, 221 (new synonym).

*Baetiella bispinosa*: Waltz and McCafferty, 1987c, 563; Tong and Dudgeon, 2000, 143.

**Distribution:** China (Guangdong, Fujian, Henan, Hong Kong and Taiwan), Japan.

**19. *Baetiella inornata* (Kang and Yang, 1994)**

*Baetis* (*Tenuibaetis*) *inornatus* Kang and Yang, 1994, 28 (in Kang et al., 1994), figs. 12, 13, 26 (nymph). Types: Nymph, Shitsun, Fuhsing, Taoyuan County, Taiwan.

*Baetiella inornata*: Waltz and McCafferty, 1997, 136.

**Distribution:** China (Taiwan).

**20. *Baetiella japonica* (Imanishi, 1930)**

*Acentrella japonica* Imanishi, 1930, 263, figs. 1–2 (male, female). Types: Male, female, Hiragawa, Lake Biwa, Japan.

?*Acentrella* sp. Uéno, 1928, 51, plate 17, fig. 18 (nymph).

*Baetiella japonica*: Uéno, 1931b, 220, figs. 30, 31

(nymph and imago); Uéno, 1969, 225, figs. 14–19 (male, female), Taiwan (first record from China).

**Distribution:** China (Taiwan), Japan.

**21. *Baetiella pseudofrequenta* (Müller-Liebenau, 1985)**

*Baetis pseudofrequentus* Müller-Liebenau, 1985, 98, figs. 3, 9, 16 (nymph). Types: Nymph, Tatu River, Taiwan.

*Baetis (Tenuibaetis) pseudofrequentus*: Kang et al., 1994, 26, figs. 11, 25 (nymph).

*Baetiella pseudofrequenta*: Waltz and McCafferty, 1997, 136; Tong and Dudgeon, 2000, 144 (nymph and adult).

*Tenuibaetis pseudofrequentus*: Fijitani, 2003a, 130, figs. 1A, 2D, 3A, 4A, 5B, 6C, 7B, 8C (nymph), 2003b, 216, fig. 3 (nymph, male, female, female subimago).

**Distribution:** China (Hong Kong and Taiwan), Japan.

**22. *Baetiella trispinata* Tong and Dudgeon, 2000**

*Baetiella trispinata* Tong and Dudgeon, 2000b, 145, figs. 1–14, 21–22 (nymph and adult). Types: Nymph, Ma Po Mei, Lam Tsuen River near Lam Kam Road.

**Distribution:** China (Hong Kong and Guangdong).

**23. *Baetiella tuberculata* (Kazlauskas, 1963)**

*Pseudocloeon (Baetiella) tuberculata* Kazlauskas, 1963, 586, figs. 25–30 (nymph, imago). Types: Imago, nymph, Irkut river, Russia.

*Baetiella tuberculata*: Quan et al., 2002, 243, fig. 6 (nymph) (first record from China).

**Distribution:** China (Heilongjiang and Jilin), Korea, Russia.

**Genus *Baetis* Leach, 1815**

**24. *Baetis aculeatus* (Navás, 1915)** Nomen dubium in China

*Baetis aculeatus* Navás, 1915, 54 (female). Types: Female, Figaró, Spain.

*Baetis aculeatus* (Nomen dubium): Müller-Liebenau, 1970, 190; Alba-Tercedor and Peters, 1985, 218; Su et al., 1995, 40, figs. 2–3 (adult) (first record from China, probably wrong).

**Distribution:** China (Zhejiang), Europe.

**25. *Baetis chinensis* Ulmer, 1936**

*Baetis chinensis* Ulmer, 1935–1936, 208, 214, figs. 7, 8 (male, female). Types: Male, female, Beijing.

*Baetis chinensis*: Gui, 1985, 81; You and Gui, 1995, 31, fig. 26 (male)

**Distribution:** China (Beijing).

**26. *Baetis fuscatus* (Linnaeus, 1761)**

*Ephemerella fuscatus* Linnaeus, 1761, 376, species No. 1474.

*Baetis* sp. nla. Imanishi, 1940, 221, fig. 22 (nymph, Korea and China, first record from China) (named by Bae and Soldán, 1997, 145).

*Baetis fuscatus*: Müller-Liebenau, 1970, 128; Kluge, 1980, 562; Tshernova et al., 1986, 133; Bae and Soldán, 1997, 145; Bae et al., 1998, 90.

*Baetis (Baetis) fuscatus* Novikova and Kluge, 1987, 8; Kluge, 1997b, 194.

*Ephemerella bioculata* Linnaeus, 1758 (fuller description in 1761, 376) (nec. *Ephemerella bioculata* Linnaeus, 1746 which is *Centroptilum luteolum* now). Synonymized by Bengtsson, 1912a, 5.

*Baetis fuscatus* Eaton, 1885, 158 (mis-synonymized to *Baetis bioculatus*).

*Baetis fuscatus* Bengtsson, 1912a, 5; Bae and Liu, 1999, 4; Quan et al., 2002, 242, figs. 4, 128, 129, 160, 177 (nymph).

*Baetis bioculatus*: Matsumura, 1904, 160, male; Uéno, 1928, 50, nymph; Uéno, 1931b, 220; Uéno, 1935, 64, male, nymph.

**Distribution:** China (Heilongjiang, Jilin and Liaoning), Korea, Russia, Japan.

**27. *Baetis hainanensis* She et al., 1995**

*Baetis hainanensis* She, Gui and You, 1995, 78, 79, fig. 7 (male). Types: Male, Jianfeng of Hainan.

*Baetis hainanensis*: You and Gui, 1995, 31, fig. 27 (male).

**Distribution:** China (Hainan).

**28. *Baetis pseudothermicus* Kluge, 1983**

*Baetis pseudothermicus* Kluge, 1983b, 65, figs. 1–15 (imago, nymph). Types: Adults, Russia.

*Baetis pseudothermicus*: Bae and Liu, 1999, 4 (first record from China); Quan et al., 2002, 243, figs. 5, 56, 57, 84, 111, 112, 178 (nymph).

**Distribution:** China (Heilongjiang and Jilin), Korea, Russia.

**29. *Baetis taiwanensis* Müller-Liebenau, 1985**

*Baetis taiwanensis* Müller-Liebenau 1985, 94 (fig. 2 as *B. tatuensis*) (nymph). Types: Nymph, Ta-Tu-river, Taiwan.

*Baetis (Tatubaetis) tatuensis* Kang et al., 1994, 23, figs. 10, 24 (nymph) (misidentification).

*Baetis tatuensis*: Waltz and McCafferty, 1997, 137; Fujitani et al., 2004, 40, figs. 1–21 (male, male subimago, nymph).

**Distribution:** China (Taiwan), Japan.

**30. *Baetis vaillanti* Navás, 1931**

*Baetis vaillanti* Navás, 1931b, 121 (adult, fig. 59). Types: Adult, Gansu, Shanxi.

*Baetis vaillanti*: Wu, 1935, 250; Ulmer, 1935–1936, 214; Gui, 1985, 81.

**Distribution:** China (Gansu and Shanxi).

**Genus *Centroptilum* Eaton, 1869**

**31. *Centroptilum chinensis* She et al., 1995**

*Centroptilum chinensis* She, Gui and You, 1995, 78, 79, fig. 8 (male). Types: Male, Qionghai of Hainan.

*Centroptilum chinensis*: You and Gui, 1995, 38, fig. 34 (male).

**Distribution:** China (Hainan).

**32. *Centroptilum henanensis* Zhou et al., 1997**

*Centroptilum henanensis* Zhou et al., 1997, 268, fig. 1–5 (male, female). Types: Male, female, Long-yu-wang and Bai-Yun-Shan, Henan.

**Distribution:** China (Henan).

**Genus *Chopralla* Waltz and McCafferty, 1987**

**33. *Chopralla fusina* Tong and Dudgeon, 2003**

*Chopralla fusina* Tong and Dudgeon, 2003, 17, figs. 1–16 (nymph and adults). Types: Nymph, Hong Kong.

**Distribution:** China (Hong Kong).

**Genus *Cloeodes* Traver, 1938**

**34. *Cloeodes longisetosus* (Braasch and Soldán, 1980)**

*Centroptella longisetosa* Braasch and Soldán, 1980, 123, figs. 1–15 (nymph). Types: Nymph, Liu Chui, Kuj Fon Shan, China.

*Cloeodes longisetosus* Waltz and McCafferty, 1987a, 177; 1987b, 201; Tong, Dudgeon and McCafferty, 2003, 669, figs. 1–15 (adult).

**Distribution:** China (Kuj Fon Shan and Hong Kong).

**Genus *Cloeon* Leach, 1815**

**35. *Cloeon navasi* (Navás, 1933)**

*Cloeon apicatum* Navás, 1933b, 17 (nec. Navás, 1931a, 11 and 1932a, 21) (subimago). Types: Subimagos, male and female, Chusan, Zhejiang Prov. Renamed by von Bruggen, 1957, 37.

*Cloeon apicatum*: Wu, 1935, 250; Ulmer, 1935–1936, 214; Gui, 1985, 82.

*Cloeon navasi*: Bruggen, 1957, 37; Alba-Tercedor and Peters, 1985, 221.

**Distribution:** China (Zhejiang).

**36. *Cloeon bimaculatum* Eaton, 1885**

*Cloeon bimaculatum* Eaton, 1885 (in 1883–1888, 182), 182, plate 17, fig. 31d (male, female). Types: Male, female, Ceylon.

*Cloeon bimaculatum*: Needham, 1909, 191, plate 20, figs. 6, 10; Ulmer, 1913, 113, fig. 12; Lestage, 1921, 219; Lestage, 1929, 97; Uéno, 1931b, 214; 1969, 226; Wu, 1935, 250; Ulmer, 1936, 214; Imanishi, 1940, 215 (nymph); Gui, 1985, 82; You and Gui, 1995, 34, fig. 29 (male, female); Ulmer, 1924, 60, figs. 30, 31 (male, female) (first record from China).

**Distribution:** China (Southeastern and Taiwan).

**37. *Cloeon dipterum* (Linnaeus, 1761)**

*Ephemera diptera* Linnaeus, 1761. Types: Adult, Europe.  
*Caenis sinensis* Walker, 1853, 584 (male), first record from China; Eaton, 1871, 105; Eaton, 1885, 189; Ulmer, 1925, 101; Wu, 1935, 250; Ulmer, 1935–1936, 214; Imanishi, 1940, 215, fig. 29; Gui, 1985, 82. Synonymized by Kimmins, 1960, 292.

*Cloeon dipterum*: Ulmer, 1935–1936, 211, 214; You and Gui, 1995, 33, fig. 28 (male); Bae, 1997, 408.

**Distribution:** China (Northern), Palaearctic, Cosmopolitan.

**38. *Cloeon harveyi* Kimmins, 1947**

*Procloeon harveyi* Kimmins, 1947, 94, fig. 2, 6, 10 (male, female). Type: Female, Calcutta, Bengal.

*Procloeon harveyi*: Gillies, 1949, 176; Kimmins, 1971, 314; Hubbard and Peters, 1978, 11; Hubbard and Srivastava, 1984, 3.

*Cloeon harveyi*: Müller-Liebenau and Hubbard, 1986,

538; Hubbard, 1986, 248 (first record from China).

**Distribution:** China (Hong Kong), Malaysia, India.

### 39. *Cloëon marginale* Hagen, 1858

*Cloë marginalis* Hagen, 1858, 477 (female). Types: Female, Rainodde, Ceylon.

*Cloëon marginale*: Eaton, 1885 (in 1883–1888); 181 (male, female); Ulmer, 1913, 115; Lestage, 1921, 221; Ulmer, 1924, 56, fig. 28, 29; Lestage, 1929, 98–99; Ulmer, 1912, 369 (first record from China, Taiwan); Uéno, 1931b, 214; 1969, 226; Wu, 1935, 250; Ulmer, 1935–1936, 214; Gui, 1985, 82; You and Gui, 1995, 35, fig. 30 (male, female).

**Distribution:** China (Taiwan and Guangdong), Ceylon Java, Sumatra, Bengalen, Japan.

### 40. *Cloëon pielinum* Navás, 1933

*Cloëon pielinum* Navás, 1933b, 8, fig. 42 (adult). Type: adults, Shanghai, China.

*Cloëon pielinum*: Wu, 1935, 250; Ulmer, 1935–1936, 214; Gui, 1985, 82.

**Distribution:** China (Shanghai).

### 41. *Cloëon virens* Klapálek, 1905

*Cloëon virens* Klapálek, 1905, 106. Types: Adult, Java.

*Cloëon virens* Ulmer, 1912, 369 (adults, first record from China, Taiwan); Ulmer, 1913, 112; Ulmer, 1924, 53, fig. 26, 27; Ulmer, 1935–1936, 211, 214; Wu, 1935, 251; Gui, 1985, 82; You and Gui, 1995, 36, fig. 31 (male); Gui et al., 1999, 327, figs. 11–5.

**Distribution:** China (Taiwan and Guangdong), Java, Sumatra, Australia.

### 42. *Cloëon viridulum* Navás, 1931

*Cloëon viridulum* Navás, 1931a, 6, fig. 14 (female, subimago). Types: Female, subimago, Jiangsu=Kiangsu, Shanghai.

*Cloëon viridulum*: Navás, 1933b, 17; Wu, 1935, 251; Ulmer, 1935–1936, 215.

**Distribution:** China (Shanghai, Zo-Se=Zhoushan, Chusan and Kiangsu).

### Genus *Fallceon* Waltz and McCafferty, 1987

#### 43. *Fallceon candidus* Kang and Yang, 1996

*Baetis (Fallceon) candidus* Kang and Yang, 1996, 61, figs. 1–11 (nymph). Types: Nymph, Wufeng,

Taichung, Taiwan.

*Fallceon candidus*. **New combination**

**Distribution:** China (Taiwan).

### Genus *Labiobaetis* Novikova and Kluge, 1987

#### 44. *Labiobaetis molawinensis* (Müller-Liebenau, 1982)

*Baetis (Mullerbaetis) molawinensis* Müller-Liebenau, 1982, 75. Types: Nymph, Philippines.

*Baetis (Mullerbaetis) molawinensis*: Kang et al., 1994, 32, figs. 15, 28 (nymph, first record from China).

*Labiobaetis molawinensis*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan), Philippines.

#### 45. *Labiobaetis morus* Chang and Yang, 1994

*Baetis (Mullerbaetis) morus* Chang and Yang, 1994, 32 (in Kang et al., 1994), figs. 16, 29 (nymph). Types: nymph, Kuohsing, Nantou Tsien, Taiwan.

*Labiobaetis morus*: Waltz and McCafferty, 1997, 138.

*Baetis atrebatinus orientalis* Kluge, 1983b, 74 (male, female, nymph). Synonymized by Fujitani et al., 2005, 142.

*Baetis (Labiobaetis) atrebatinus orientalis* Tshernova et al., 1986, 131 (male); Novikova and Kluge, 1987, 13 (nymph). Synonymized by Fujitani et al., 2005, 142.

*Baetis* sp. G: Kobayashi, 1987, 42 (nymph); Yamasaki, 1987, 13 (nymph); Ishiwata and Kobayashi, 2003, 304 (nymph). Synonymized by Fujitani et al., 2005, 142.

*Baetis (Mullerbaetis) morus*: Chang and Yang, in Kang et al., 1994, 33 (nymph). Synonymized by Fujitani et al., 2005, 142.

*Baetis (Labiobaetis) atrebatinus*: Kluge, 1995, 14. Synonymized by Fujitani et al., 2005, 142.

*Labiobaetis atrebatinus*: McCafferty and Waltz, 1995, 21; Bae and Park, 1998, 8 (male, female, nymph).

*Labiobaetis morus*: Waltz and McCafferty, 1997, 137.

*Pseudocloëon atrebatinum*: Lugo-Ortiz et al., 1999, 25.

*Labiobaetis* sp. G: Fujitani, 2002, 114 (nymph); Fujitani et al., 2003b, 130.

*Pseudocloëon morum*: Soldán and Yang, 2003, 415.

**Distribution:** China (Taiwan), Japan, Korea, Russia.

#### 46. *Labiobaetis mustus* (Kang and Yang, 1996)

*Baetis (Labiobaetis) mustus* Kang and Yang, 1996b, 63, figs. 12–23 (nymph). Types: Nymph, Hsinshe,

Taichung, Taiwan.

*Labiobaetis mustus*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**Genus *Nigrobaetis* Novikova and Kluge, 1994**

**47. *Nigrobaetis facetus* (Chang and Yang, 1994)**

*Baetis* (*Margobaetis*) *facetus* Chang and Yang, 1994, 21 (in Kang et al., 1994), fig. 9, 23 (nymph). Types: Nymph, Shuangtung, Kuohsing, Nantou County, Taiwan.

*Nigrobaetis facetus*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**48. *Nigrobaetis gracilentus* (Chang and Yang, 1994)**

*Baetis* (*Margobaetis*) *gracilentus* Chang and Yang, 1994, 17 (in Kang et al., 1994), figs. 7, 21 (nymph). Types: Nymph, Hwesunlinchun, Lenai, Nantou County, Taiwan.

*Nigrobaetis gracilentus*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**49. *Nigrobaetis mundus* (Chang and Yang, 1994)**

*Baetis* (*Margobaetis*) *mundus* Chang and Yang, 1994, 13 (in Kang et al., 1994), figs. 1, 2, 3, 19 (nymph, egg). Types: Kuanwu, Wufeng, Hinchu County, Taiwan.

*Nigrobaetis mundus*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**50. *Nigrobaetis taiwanensis* (Müller-Liebenau, 1985)**

*Baetis taiwanensis* Müller-Liebenau, 1985, 94, fig. 2 (not figure 1), 7, 14 (nymph). Types: Nymph, Ta-Tu-River, 4 km N. of Tsaotun, Taiwan.

*Baetis* (*Margobaetis*) *taiwanensis*: Kang et al., 1994, 15, figs. 4, 5, 6, 20 (nymph, egg).

*Nigrobaetis taiwanensis*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**51. *Nigrobaetis terminus* (Chang and Yang, 1994)**

*Baetis* (*Margobaetis*) *terminus* Chang and Yang, 1994, 19 (in Kang et al., 1994), figs. 8, 22 (nymph). Types: Nymph, Piluchi, Lenai, Nantou County, Taiwan.

*Nigrobaetis terminus*: Waltz and McCafferty, 1997, 138.

**Distribution:** China (Taiwan).

**Genus *Platybaetis* Müller-Liebenau, 1980**

**52. *Platybaetis bishopi* Müller-Liebenau, 1980**

*Platybaetis bishopi* Müller-Liebenau, 1980, 95, figs. 1–4 (nymph). Type: Nymph, Malaysia.

*Platybaetis bishopi*: Tong and Dudgeon, 2002, 24 (nymph, female imago) (first record from China, Guangdong).

**Distribution:** China (Hong Kong and Guangdong), Peninsular Malaysia.

**Genus *Procloeon* Bengtsson, 1915**

**53. *Procloeon tatalis* Waltz and McCafferty, 1985**

*Procloeon tatalis* Waltz and McCafferty, 1985, 121, figs. 1–6 (nymph). Types: Nymph, Ta-tu River, Taiwan.

**Distribution:** China (Taiwan).

**54. *Procloeon pennulatum* (Eaton, 1870)**

*Centroptilum pennulatum* Eaton, 1870, 2, adults. Type: Male, Britain.

*Centroptilum pennulatum*: Eaton, 1871, 139; Rostock, 1878, 85; Eaton, 1885, 176; Keffermüller and Sowa, 1984, 317.

*Centroptilum infrequens* McDunnough, 1924a, 98. Synonymized by Lowen and Flannagan, 1990, 173.

*Cloeoptilum pennulatum pennulatum*: Kazlauskas, 1972, 338. Transferred by Keffermüller and Sowa, 1984, 317.

*Pseudocentroptilum pennulatum*: Belfiore and d'Antonio, 1990, 117.

*Procloeon pennulatum*: McCafferty and Waltz, 1990, 780; McCafferty, 1993, 237.

*Cloeon* (*Procloeon*) *pennulatum*: Kluge and Novikova 1992, 74.

*Procloeon* (*Procloeon*) *pennulatum*: Haybach, 2010, 12.

*Procloeon* sp. Bae and Soldán, 1997, 146.

*Procloeon pennulatum*: Bae and Liu, 1999, 4; Quan et al., 2002, 244, figs. 8, 60, 64, 85, 113, 162, 208 (nymph).

**Distribution:** Most area of China, Korea, Russia.

**Genus *Pseudocloeon* Klapálek, 1905**

**55. *Pseudocloeon chonganensis* Gui et al., 1999**

*Pseudocloeon chonganensis* Gui et al., 1999, 328, fig. 11–7 (male).

**Distribution:** China (Fujian).

**56. *Pseudocloeon kraepelini* Klapálek, 1905**

*Pseudocloeon kraepelini* Klapálek, 1905, 105 (male), figs. 1–4. Type: Male, Java.

*Pseudocloeon kraepelini* Ulmer, 1924, 66, figs. 32, 33; Uéno, 1931b, 211, 214, Taiwan (first record from China); Gui, 1985, 83; You and Gui, 1995, 37, fig. 32 (male).

**Distribution:** China (Taiwan), Java.

**57. *Pseudocloeon purpurata* Gui et al., 1999**

*Pseudocloeon purpurata* Gui et al., 1999, 329, figs. 11–8 (male). Types: Male, Sangang, Fujian.

**Distribution:** China (Fujian).

**Caenidae**

**Genus *Brachycercus* Crutis, 1834**

**58. *Brachycercus harrisella* Curtis, 1834**

*Brachycercus harrisella* Curtis, 1834, 122 (mentioned name only).

*Caenis harrisella*: Stephens, 1835, 61.

*Caenis pennata* Stephens, 1835, 61.

*Eurycaenis harrisella*: Bengtsson, 1917, 186.

*Brachycercus pallidus* Tshernova, 1928, 114.

*Brachycercus magnus* Tshernova, 1952, 284.

*Brachycercus harrisella*: Curtis, 1834 [= *Caenis pennata* Stephens]. Synonymized by Kimmins, 1971, 318.

*Brachycercus harrisella*: Curtis, 1834 [= *Eurycaenis harrisella* Bengtsson, 1917, 186]. Synonymized by Jacob, 1974, 96.

*Brachycercus arcticus* Soldán, 1986, 297. Synonymized by Sun and McCafferty, 2008, 54.

*Brachycercus edmundsi* Soldán, 1986: 301. Synonymized by Sun and McCafferty, 2008, 54.

*Brachycercus harrisella*: Curtis, 1834 [= *B. pallidus* Tshernova, 1952 = *B. magnus* Tshernova, 1952]. Synonymized by Kluge, 1991b: 14.

*Brachycercus* YUa Quan et al., 2002, 244 (first record from China).

*Brachycercus harrisella*: Sun and McCafferty, 2008, 54.

**Distribution:** Northeastern China, Europe.

**Genus *Sparbarus* Sun and McCafferty, 2008**

**59. *Sparbarus capnicus* (Zhou, Sun and McCafferty, 2004)**

*Brachycercus capnicus* Zhou, Sun and McCafferty, 2004, 312, figs. 1–18, nymph and adult. Types: Male, Yun-

nan (Transferred by Sun and McCafferty, 2008, 23)

**Distribution:** China (Yunnan).

**Genus *Caenis* Stephens, 1835**

**60. *Caenis argillosa* Kang and Yang, 1994**

*Caenis argillosa* Kang and Yang, 1994, 95, figs. 1, 8, 16 (nymph). Types: Nymph, Peikang, Kuohsing, Nantou County, Taiwan.

**Distribution:** China (Taiwan).

**61. *Caenis aspera* Tong and Dudgeon, 2002**

*Caenis aspera* Tong and Dudgeon, 2002, 233, figs. 1–10, nymph. Type: Nymph, Hong Kong.

**Distribution:** China (Guangdong and Hong Kong).

**62. *Caenis bella* Kang and Yang, 1994**

*Caenis bella* Kang and Yang, 1994, 99, figs. 3, 10, 18 (nymph). Types: Nymph, Sanchan, Hsincheng, Hualien County, Taiwan.

**Distribution:** China (Taiwan).

**63. *Caenis bicornis* Tong and Dudgeon, 2002**

*Caenis aspera* Taong and Dudgeon, 2002, 234, figs. 11–20, nymph. Type: Nymph, Hong Kong.

**Distribution:** China (Hong Kong).

**64. *Caenis cornigera* Kang and Yang, 1994**

*Caenis cornigera* Kang and Yang, 1994, 103, figs. 5, 19 (nymph). Types: Nymph, Kanchiao, Shuangchi, Taipei County, Taiwan.

**Distribution:** China (Taiwan).

**65. *Caenis corpulenta* Kang and Yang, 1994**

*Caenis corpulenta* Kang and Yang, 1994, 101, figs. 4, 11 (nymph). Types: Nymph, Pinglin, Tsaotun, Nantou County, Taiwan.

**Distribution:** China (Taiwan).

**66. *Caenis granifera* Kang and Yang, 1994**

*Caenis granifera* Kang and Yang, 1994, 105, figs. 6, 12, 13, 20 (nymph). Types: Nymph, Kanchiao, Shuangchi, Taipei County, Taiwan.

**Distribution:** China (Taiwan).

**67. *Caenis melanoleuca* Zhou and Zheng, 2004**



*Caenis melanoleuca* Zhou and Zheng, 2004, 5, figs. 5, 7, 12, nymph and adults. Type: Male, Guizhou.

**Distribution:** China (Guizhou).

**68. *Caenis montana* Kang and Yang, 1994**

*Caenis montana* Kang and Yang, 1994, 107, figs. 7, 14, 15, 21 (nymph). Types: Nymph, Wuling Farm, Hoping, Taichung County, Taiwan.

**Distribution:** China (Taiwan).

**69. *Caenis nishinoae* Malzacher, 1996**

*Caenis nishinoae* Malzacher, 1996, 1, figs. 1–3 (all stages). Type: Male, Japan.

*Caenis* nb: Imanishi, 1940, 212, fig. 20, China (Liaoning Province). Named by Hwang and Bae, 1999, 241).

*Caenis* KUa Yoon and Bae, 1988a, 183; Bae and Soldán, 1997, 146. Named by Hwang and Bae, 1999, 241).

*Caenis nishinoae*: Quan et al., 2002, 244.

**Distribution:** China (Jilin and Liaoning), Korea, Japan.

**70. *Caenis nigropunctata* Klapálek, 1905**

*Caenis nigropunctata* Klapálek, 1905, 104. Types: Adult, Java.

*Caenis nigropunctata*: Ulmer, 1935–1936, 208, 213, first record from China; Wu, 1935, 249; Ulmer, 1940, 520; Gui, 1985, 90; You and Gui, 1995, 143, fig. 154 (male, female); Zhou and Zheng, 2004, 4, figs. 3, 10.

**Distribution:** Most parts of China, Java.

**71. *Caenis nitida* Kang and Yang, 1994**

*Caenis nitida* Kang and Yang, 1994, 97, figs. 2, 9, 17 (nymph). Types: Nymph, Taipei County, Taiwan.

**Distribution:** China (Taiwan).

**72. *Caenis parviforcipis* (Zhou et al., 2000)**

*Brachycercus parviforcipis* Zhou et al., 2000, 132, figs. 1–3, males. Type: Male, Kunming, Yunnan. Transferred by Zhou and Zheng, 2004, 1.

**Distribution:** China (Yunnan).

**73. *Caenis pycnacantha* Jia et al., 2010**

*Caenis pycnacantha* Jia, Qin, Ju and Zhou, 2010, 61, figs. 1–18 (all stages). Type: Male, Nanjing, China.

**Distribution:** China (Nanjing).

**74. *Caenis rivulorum* Eaton, 1884**

*Caenis rivulorum* Eaton, 1884, 143 (as *Caenis dimidiata* var. *rivulorum*).

*Caenis nivea* Bengtsson, 1917, 181. Synonymized by Saaristo, 1966, 75.

*Caenis nigroforceps* Zhou et al., 1997, 270. Synonymized by Zhou and Zheng, 2004a, 5.

**Distribution:** North China, Russia, Europe.

**75. *Caenis sinensis* Walker, 1853**

*Caenis sinensis* Walker, 1853, 584 (male). Types: Male, northern China. Types: Male, Sangang, Fujian. Nom. praecoc.

*Caenis sinensis*: Gui, Zhou and Su, 1999, 343, figs. 11–27 (male); Zhou and Zheng, 2004a, 2, figs. 2, 6, 9.

**Distribution:** Most parts of China.

**76. *Caenis yangi* Kang and Yang, 1996**

*Caenis yangi* Kang and Yang, 1996a, 55, figs. 1–14 (nymph). Types: Nymph, Hoping, Taichung County, Taiwan.

**Distribution:** China (Taiwan).

**Genus *Caenoculis* Soldán**

**77. *Caenoculis acutalis* Zhou et al., 2003**

*Caenoculis acutalis* Zhou, Sun and McCafferty, 2003, 185, figs. 1–18, nymph. Types: Nymph, Yunnan.

**Distribution:** China (Yunnan).

**Chromarcyidae**

**Genus *Chromarcys* Navás, 1932**

**78. *Chromarcys magnifica* Navás, 1932**

*Chromarcys magnifica* Navás, 1932b, 928, fig. 45 (female). Types: Female, Yunnan.

*Chromarcys magnifica*: Wu, 1935, 247; Ulmer, 1935–1936, 212; Hsu, 1937, 141; Demoulin, 1967, 2, fig. 1 (female); Gui, 1985, 93.

*Chromarcys feuerborni* Ulmer, 1940, 654, figs. 110–112 (first description on nymph). Synonymized by Demoulin, 1967, 1 (?).

*Chromarcys* sp. (one nymph from China) Ulmer, 1940, 660.

**Distribution:** China (Yunnan and Fujian), Southern Asia.

## Ephemerellidae

### Genus *Kangella* Sartori, 2004

(=*Eburella* Kang and Yang, 1995)

#### 79. *Kangella brocha* (Kang and Yang, 1995)

*Eburella brocha* Kang and Yang, 1995, 105, figs. 5, 18, 19 (nymph, egg). Types: Nymph, Kuolai, Pinglin, Taipei County, Taiwan. Transferred by Sartori, 2004, 76.

**Remarks:** This genus was synonymized by Jacobus and McCafferty (2008, 240) as *Teloganopsis* and this species then transferred into the latter. But in my opinion, the mandible and body pattern of this species are very unique. It deserves a distinct genus.

**Distribution:** China (south and Taiwan).

### Genus *Cincticostella* Allen, 1971

#### 80. *Cincticostella bifurcata* Xie et al., 2009

*Cincticostella bifurcata* Xie, Jia, Chen, Jacobus and Zhou, 2009, 54, figs. 1–13 (nymph). Type: Nymph, China (Sichuan).

**Distribution:** China (Yunnan, Fujian and Sichuan).

#### 81. *Cincticostella colossa* Kang and Yang, 1995

*Cincticostella colossa* Kang and Yang, 1995, 102, figs. 4, 11–13 (nymph, egg). Types: Nymph, Pinghu, Pingchi, Taipei County, Taiwan.

*Cincticostella colossa*: Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53.

**Distribution:** China (Taiwan).

#### 82. *Cincticostella elongatula* (McLachlan, 1875)

*Leptophlebia elongatula* McLachlan, 1875, 169 (female). Types: Female, Japan (Lectotype designated by Kimmins, 1960, 304).

*Leptophlebia elongatula*: Wu, 1935, 249; Gui, 1985, 88.

*Ephemerella elongatula*: Eaton, 1884, 131; Edmunds, 1959, 546; Kimmins, 1960, 304; 1971, 313; Ishiwata, 1987, 29; 2001, 64.

*Ephemerella nigra* (not *Ephemerella nigra* Uéno, 1928, 44); Horasawa, 1931a, 31; Imanishi, 1937, 325; Tshernova, 1972, 612 (in part).

*Ephemella* [sic] *elongatula*: Ulmer, 1935–1936, 213.

*Ephemerella* sp. (tentatively named “EC”) Gose, 1962, 15; 1970a, 15.

*Ephemerella* (*Cincticostella*) *nigra* (not *Ephemerella*

*nigra* Uéno, 1928): Allen, 1971, 513; 1975, 18; Tshernova et al., 1986, 138;

*Ephemerella* (*Cincticostella*) *okumai* Gose, 1980, 288; 1980, 368; 1985, 26. Synonymized by Ishiwata, 2003, 316.

*Cincticostella okumai* Uchida, 1986, 4; Ishiwata, 1987, 29; Yamasaki, 1987, 115; Hatta and Ishiwata, 1990, 167; Ishiwata et al., 1991, 26; Tiunova, 1995b, 6; Ishiwata, 1997, 293; 1997, 13; Bae, 1997, 409; Ishiwata, 2000, 74; 2001a, 60; 2001b, 175; 2002, 7.

*Cincticostella* (*Cincticostella*) *elongatula*: Ishiwata, 2003, 316.

*Ephemerella elongatula* Ulmer, 1929, 164, figs. 5–7 (first record from China); Gui, 1985, 89;

*Cincticostella elongatula*: Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53.

**Distribution:** Most China.

#### 83. *Cincticostella femorata* (Tshernova, 1972)

*Asiatella femorata* Tshernova, 1972, 612, fig. 5 (nymph).

Type: Nymph, Vietnam (objective synonym).

*Ephemerella* TEA Gose, 1969, 132, figs. 23–37 (nymph) (renamed as *Ephemerella* (*Cincticostella*) *boja* by Allen, 1975, 18).

*Ephemerella* (*Cincticostella*) *boja*: Allen, 1975, 18. Synonymized by Jacobus and McCafferty, 2008, 239.

*Ephemerella* (*Cincticostella*) *femorata*: Allen, 1975, 20.

*Cincticostella femorata*: Xie et al., 2009, 53 (first record from China); Jacobus and McCafferty, 2008, 239.

**Distribution:** China (most parts), Vietnam.

#### 84. *Cincticostella fusca* Kang and Yang, 1995

*Cincticostella fusca* Kang and Yang, 1995, 100, figs. 3, 14–17 (nymph, egg). Types: Nymph, Wuling Faum, Hoping, Taichung, Taiwan.

*Cincticostella fusca*: Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53.

**Distribution:** China (south and Taiwan).

#### 85. *Cincticostella gosei* Allen, 1975

*Ephemerella* TEB Gose, 1969, 135, figs. 38–55 (nymph).

Type (designed by Allen, 1975, 20), nymph, Thailand, renamed as *Ephemerella* (*Cincticostella*) *gosei* by Allen, 1975, 20 (nymph). Types: Nymph, Chanta Buri, Thailand.

*Cincticostella gosei* Allen, 1980, 82; Zhou et al., 1998b,

222 (first record from China); Xie et al., 2009, 53; Jacobus and McCafferty, 2008, 239.

*Ephemerella (Serratella) tianmushanensis* Xu et al., 1980, 60. **New Synonym**

*Ephemerella (Serratella) nigromaculata* Xu et al., 1980, 61. **New Synonym**

*Notacanthella tianmushanensis*: Jacobus and McCafferty, 2008, 236.

*Notacanthella nigromaculata*: Jacobus and McCafferty, 2008, 236.

**Distribution:** most of China, Thailand.

#### 86. *Cincticostella insolta* Allen, 1971

*Ephemerella insolta* Allen, 1971, 516, figs. 4, 8, 12, 14, 18, nymph. Type: Nymph, Thailand.

*Ephemerella (Cincticostella) insolta*: Allen, 1975, 20.

*Cincticostella insolta* Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53 (first record from China).

**Distribution:** China (Yunnan), Thailand.

#### 87. *Cincticostella levanidovae* (Tshernova, 1952)

*Ephemerella levanidovae* Tshernova, 1952, 274, figs. 77–78 (nymph). Types: Nymph, Amur River, Russia (Lectotype designaed by Kluge, 1995, 41).

*Ephemerella nay* Imanishi, 1940, 206 fig. 18 (nymph, first record from China, renamed by Gose, 1980, 288 and Tshernova et al., 1986, 138)

*Ephemerella levanidovae*: Tshernova, 1958, 74; Edmunds, 1959, 545; Bajkova, 1962, 205; Levanidova, 1968, 265; Bajkova, 1979a, 16 (as junior synonym of *Ephemerella orientalis*).

*Ephemerella (Serratella) levanidovae*: Edmunds, 1959, 545.

*Ephemerella (Cincticostella) castanea* Allen, 1971, 514; Allen, 1975, 18; Yoon and Kim, 1981, 38; Gose, 1988, 26. Synonymized by Bae et al., 1998, 91.

*Ephemerella (Cincticostella) levanidovae*: Allen, 1971, 516; 1975, 21; Tshernova et al., 1986, 138; Kluge, 1995, 41; 1997b, 211; Bae et al., 1998, 91.

*Ephemerella (Cincticostella) delicata* Allen, 1971, 517; Allen, 1975, 19; Bajkova, 1979a, 16 (as junior synonym of *Ephemerella orientalis*).

*Ephemerella (Cincticostella) costanea* [sic] Gose, 1980, 288; 1985, 26.

*Ephemerella (Cincticostella) orientalis*: Gose 1980, 288; 1985, 26 (not *Ephemerella orientalis* Tshernova,

1952, 279). Synonymized by Tshernova et al., 1986, 138.

*Cincticostella levanidovae*: Tiunova, 1984, 49; Bae, 1997, 409; Bae and Yoon, 1997, 45; Bae et al., 2000, 393; Ishiwata, 2001a, 60; Bae and Liu, 1999, 4; Quan et al., 2002, 245; Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53.

*Cincticostella (Cincticostella) levanidovae*: Ishiwata, 2003, 327.

*Cincticostella castanea*: Ishiwata, 1987, 29; Yoon and Bae, 1988a, 169; 1988b, 27; Bae et al., 1994, 35; Bae, 1997, 409; Yu, 1998, 436.

**Distribution:** Northeastern China, Japan, Korea, Russia.

#### 88. *Cincticostella nigra* (Uéno, 1928)

*Ephemerella nigra* Uéno, 1928, 44, figs. 9, 9a–9n (lectotype designaed by Ishiwata, 2003, 332, all life stages), nymph. Type, Nymph, Japan.

*Ephemerella nigra*: Uéno, 1959, 48; Gose, 1962, 15; Tshernova, 1972, 612 (in part); Uéno, 1973, 523; Okazaki, 1982, 26.

*Chitonophora (?) nigra* Uéno, 1931a, 224.

*Ephemerella* sp. (tentatively named as “nay”) (in part): Imanishi, 1940, 206 (first record from China).

*Cincticostella (Cincticostella) nigra*: Allen, 1980, 82; Ishiwata, 2003, 333; Tshernova et al., 1986, 138; Gose, 1980, 288; 1980, 368; 1985, 26; Ishiwata, 2003, 332.

*Cincticostella nigra* Ishiwata, 1987, 29; Yamasaki, 1987, 115; Hatta and Ishiwata, 1990, 169; Ishiwata et al., 1991, 25; Tiunova, 1995b, 6; Ishiwata and Inada, 1996, 38; Ishiwata, 1997, 293; Bae, 1997, 409; Ishiwata, 2000, 73; 2001, 60; 2002, 7; Jacobus and McCafferty, 2008, 239; Xie et al., 2009, 53.

**Distribution:** West and north China, Japan, Korea, Russia.

#### 89. *Cincticostella (Cincticostella) orientalis* (Tshernova, 1952)

*Ephemerella orientalis* Tshernova, 1952, 279 [lectotype designated by Kluge, 1995, 42, Russia]

*Ephemerella* sp. (tentatively named “nax”): Imanishi, 1940, 205; Tshernova, 1952, 274; Gose, 1962, 15.

*Ephemerella orientalis*: Tshernova, 1958, 74; Levanidova, 1968, 271; Bajkova, 1972, 192.

*Ephemerella tshernovae* Bajkova, 1962, 202; Levanidova, 1968, 266; Tshernova, 1972, 614; Okazaki, 1984, 20; Tshernova et al., 1986, 137; Yoon and Bae, 1988a, 170. Synonymized by Ishiwata, 2003: 337.

*Ephemerella (Cincticostella) imanishii* Allen, 1971, 517 (based on *Ephemerella nax* sensu Imanishi, 1940). Synonymized by Tshernova, 1972, 614.

*Ephemerea imanishiii*: Tshernova, 1972, 614.

*Ephemerella (Cincticostella) tshernovae*: Bajkova, 1979a, 16; Gose, 1980, 288; 1980, 368; 1985, 26; Kluge, 1997b, 211.

*Ephemerella (Cincticostella) orientalis*: Bajkova, 1979a, 16.

*Cincticostella orientalis*: Ishiwata, 1987: 29; Xie et al., 2009, 53; Jacobus and McCafferty, 2008, 239.

*Cincticostella tshernovae*: Tiunova, 1984, 49; Tiunova and Belov, 1984, 75; Ishiwata, 1987, 29; Yamasaki, 1987, 115; Yoon and Bae, 1988b, 30; 1988a, 173; Hatta and Ishiwata, 1990, 167; Bae et al., 1994, 35; Ishiwata, 1997, 293; 1997, 13; Bae, 1997, 409; Bae and Yoon, 1997, 45; Bae and Liu, 1999, 4; Bae et al., 2000, 394; Ishiwata, 2001, 60; 2002, 8; Quan et al., 2002, 245.

*Cincticostella (Cincticostella) orientalis*: Ishiwata, 2003, 332.

*Cincticostella tshernovae*: Yu, 1998, 436 (first record from China).

**Distribution:** China (West and North), Japan, Korea and Russia.

#### 90. *Cincticostella szechuanensis* Xie et al., 2009

*Cincticostella szechuanensis* Xie, Jia, Chen, Jacobus and Zhou, 2009, 59, figs. 14a,b, 15, 16, nymph. Type: Nymph, China (Sichuan).

**Distribution:** China (Sichuan).

#### Genus *Drunella* Needham, 1905

##### 91. *Drunella aculea* Allen, 1971

*Ephemerella basalis* na. Imanishi, 1940, 196, fig. 7 (nymph). Type: Nymph, Korea (renamed as *Ephemerella (Drunella) aculea* by Allen, 1971, 522, figs. 29, 37, 43).

*Ephemerella basalis* (nec. *Ephemerella basalis* Imanishi, 1937b): Tshernova, 1952, 271, fig. 72. Synonymized by Allen, 1971, 522.

*Ephemerella (Drunella) aculea* Tshernova et al., 1986, 136.

*Drunella aculea*: Yu, 1998, 435 (first record from China); Bae and Liu, 1999, 4; Quan et al., 2002, 246; Jacobus and McCafferty, 2008, 210.

**Distribution:** China (north), Russia, Korea.

##### 92. *Drunella cryptomeria* (Imanishi, 1937)

*Ephemerella cryptomeria* Imanishi, 1937b, 328, fig. 6 (male). Types: Male, Kyoto, Japan.

*Ephemerella* nM Imanishi, 1940, 198, fig. 10. Synonymized by Jacobus and McCafferty, 2004, 130 (synonymized with *Ephemerella longipes* by Tshernova, 1952, 274).

*Ephemerella lepnevae* (Tshernova, 1949, 152): Bae and Liu, 1999, 4; Quan et al., 2002, 246; Synonymized by Jacobus and McCafferty, 2004, 130.

*Ephemerella longipes* Tshernova, 1952: 274. Synonymized by Jacobus and McCafferty, 2004, 130 (synonymized with *D. lepnevae* by Tshernova et al., 1986, 139).

*Ephemerella bicornis* (Gose, 1980, 286). Synonymized by Ishiwata, 2001, 60.

*Ephemerella yoshinoensis* Gose, 1963b, 142 (incorrectly synonymized with *D. cryptomeria* by Gose, 1980, 286, 367 and Tshernova et al., 1986, 138).

*Drunella fusongensis* Su and Gui, 1995, 451; Quan et al., 2002, 246. Synonymized by Jacobus and McCafferty, 2004, 130 (synonymized with *D. lepnevae* by Kluge, 2004, 305).

*Ephemerella (Drunella) criptomera*: Bae and Soldán, 1997, 147, incorrect spelling.

*Drunella cryptomeria*: Zhou et al., 1998b, 222 (first record from China); Yu, 1998, 435; Quan et al., 2002, 246; Jacobus and McCafferty, 2008, 210.

*Drunella lepnevae*: Yu, 1998, 435.

*Drunella criptomera* [sic]: Bae and Liu, 1999, 4; Lee et al. 2001, incorrect spelling.

**Distribution:** Most of China, Russian, Japan, Korea.

##### 93. *Drunella ishiyamana* Matsumura, 1931

*Drunella ishiyamana* Matsumura, 1931, 1470 (male). Type: Male, Japan.

*Ephemerella* nG Imanishi, 1940, 195, fig. 8 (synonymized with *Ephemerella latipes* by Tshernova, 1952,

273; synonymized with *Ephemerella yoshinoensis* by Gose, 1980, 286).

*Ephemerella latipes* Tshernova, 1952, 273. Synonymized by Jacobus and McCafferty, 2004, 131 (synonymized with *D. cryptomeria* by Tiunova and Belov, 1984, 76).

*Ephemerella ishiyama*: Edmunds, 1959, 546, incorrect spelling.

*Ephemerella yoshinoensis*: Gose, 1963b, 142 (synonymized with *D. cryptomeria* by Gose, 1980, 286, 367 and Tshernova et al., 1986, 138; synonymized with *D. ishiyamana* by Ishiwata, 2001, 61).

*Drunella ishiyamana*: Jacobus and McCafferty, 2004c, 131 (first record from China); Jacobus and McCafferty, 2008, 210.

**Distribution:** China (Henan), Japan, Vietnam.

#### 94. *Drunella solida* (Bajkova, 1980)

*Ephemerella (Drunella) solida* Bajkova, 1980a, 796, figs. 1–10 (nymph). Type: Nymph, Russia.

*Ephemerella trispina* na Imanishi, 1940, 193, fig. 9 (nymph). synonymized by Bae et al., 1998, 92.

*Ephemerella (Drunella) solida*: Tshernova et al., 1986, 140; Kluge, 1997a, 210; Bae et al., 1998, 92.

*Drunella solida* Tiunova, 1988, 5; Jacobus and McCafferty, 2008, 219; Yu, 1998, 435 (first record from China); Bae and Liu, 1999, 4; Quan et al., 2002, 247.

**Distribution:** China (western and northern), Russia, Japan, Korea.

#### 95. *Drunella triacantha* (Tshernova, 1949)

*Ephemerella triacantha* Tshernova, 1949, 151, figs. 41–47 (nymph). Type: Nymph, Russia.

*Ephemerella trispina* naa Imanishi, 1940, 194 (renamed as *Ephemerella (Drunella) trispipina ezoensis* [sic.] Gose, 1980, 287. Synonymized by Bae et al., 1998, 92.

*Ephemerella (Drunella) triacantha*: Edmunds, 1959, 546; Tshernova et al., 1986, 139; Bae et al., 1998, 92; Kluge, 1997a, 210.

*Drunella triacantha* Ishiwata et al., 2000 (see Ishiwata, 2001, 61); Ishiwata, 2001, 61.

*Ephemerella tenax* Tshernova, 1952, 273, figs. 75–76. Synonymized by Kluge, 1995, 43.

*Ephemerella (Drunella) trispipina ezoensis* [sic.]: Gose,

1980, 287. Synonymized by Ishiwata et al., 2000.

*Ephemerella (Drunella) trispina* (nec. *Ephemerella trispina* Uéno, 1928); Yoon and Kim, 1981, 37.

*Drunella triacantha* Bae and Liu, 1999, 4; Yoon and Bae, 1988a, 166; Quan et al., 2002, 247; Jacobus and McCafferty, 2008, 219; Yu, 1998, 435 (first record from China).

**Distribution:** China (west and north), Russia, Korea, Japan.

#### 96. *Drunella trispina* (Uéno, 1928)

*Ephemerella trispina* Uéno, 1928, 45, figs. 11a–11n (nymph). Type: Nymph, Japan.

*Drunella (Tribrochella) trispina*: Allen, 1980, 80.

*Ephemerella (Drunella) trispina*: Gose, 1980: 287, 367; Tshernova et al., 1986, 140.

*Drunella trispina* Yu, 1998, 435 (first record from China); Ishiwata, 2001, 61; Jacobus and McCafferty, 2008, 219.

**Distribution:** China (northeast), Japan, Russia and Korea.

#### 97. *Drunella submontana* (Brodsky, 1930)

*Ephemerella submontana* Brodsky, 1930b, 683, figs. 1–4 (male subimago, female). Type: male subimago, Middle Asia (transferred by Allen, 1974, 1227.)

*Ephemerella sven-hedini* Ulmer, 1936b, 2. Synonymized by Jacobus and McCafferty, 2004, 135 (first record from China).

*Ephemerella traveræ* (Allen and Edmunds, 1963c, 20). Synonymized by Kluge, 2004, 305.

*Ephemerella* sp. Uéno, 1966, 322, fig. 15 (nymph) (re-named as *Ephemerella (Drunella) borakensis* by Allen, 1971b, 525, figs., 36, 42). Synonymized by Allen, 1974, 1227.

*Ephemerella (Drunella) submontana*: Allen and Edmunds, 1963c, 18.

*Ephemerella nasiri* (Ali, 1971, 360, figs. 13–26) (transferred to *Crinitella* by Hubbard and Peters, 1978, 13, transferred to *Drunella* by Jacobus and McCafferty, 2003, 49, synonymized by Kluge, 2004, 305).

*Ephemerella (Drunella) kabulensis* (Allen, 1973, 163, figs. 6–8). Synonymized by Kluge, 1997b, 209.

*Ephemerella seven-hedini*: Gui, 1985, 89, incorrect spelling.

*Ephemerella (Ephemerella) sven-hedini*: You and Gui,

1995, 134, incorrect spelling.

*Ephemerella sven-hedini*: Ulmer, 1936a, 213.

*Ephemerella svenhedini*: Jacobus and McCafferty, 2004c, 135, incorrect spelling.

*Drunella submontana*: Jacobus and McCafferty, 2008, 219.

**Distribution:** China (western), Afghanistan, Pakistan.

#### Genus *Ephacerella* Paclt, 1994

##### 98. *Ephacerella longicaudata* (Uéno, 1928)

*Ephemerella longicaudata* Uéno, 1928, 42, fig. 8 (nymph). Type: nymph, from Japan.

*Ephemerella (Acerella) longicaudata*: You and Gui, 1995, 133, fig. 142 (male, female); Tshernova et al., 1986: 140.

*Ephacerella longicaudata* Paclt, 1994, 283; Quan et al., 2002, 247.

**Distribution:** North-East of China, Japan, Russia, Korea.

#### Genus *Ephemerella* Walsh, 1863

##### 99. *Ephemerella aurivilli* (Bengtsson, 1909)

*Ephemerella* sp. n. Eaton, 1903, 35 (renamed as *Ephemerella aroni* by Eaton, 1908, 149).

*Chitonophora aurivillii* Bengtsson, 1908, 243 (adult). Type: Adult, Sweden.

*Chitonophora aurivilli*: Bengtsson, 1909, 8; Bengtsson, 1913, 292; Lestage, 1917, 362; Ulmer, 1920, 119; Lestage, 1925, 297; Bengtsson, 1930a, 3, 5; Bengtsson, 1930, 10; Brekke, 1938, 66; Tiensuu, 1939, 121; Tshernova, 1941, 215; Tshernova, 1949, 156 (incorrectly synonymized to *Ephemerella aroni* by Walley, 1930, 17 but reversed the synonymy by Bengtsson, 1930, 3).

*Ephemerella (Chitonophora) notata* Eaton, 1887, 305. Synonymized by Jacob, 1974a, 5.

*Ephemerella (Chitonophora) aronii* Eaton, 1908, 149. Synonymized by Jacob, 1974a, 5.

*Ephemerella aroni*: Eaton, 1908, 149 (transferred to *Chitonophora* by Bengtsson, 1909, 9 but transferred back to *Ephemerella* by Walley, 1930, 17); Aro, 1910, 29; McDunnough, 1930, 55 (= *norda*); Ide, 1930, 211; Kimmins, 1960, 303. Synonymized by Bengtsson, 1930, 3.

*Chitonophora aroni*: Ulmer, 1914, 98; Esben-Peterson, 1916, 12; Lestage, 1917, 363; Ulmer, 1920, 120;

Lestage, 1925, 297; Ulmer, 1943, 340.

*Chitonophora* sp? Lestage, 1917, 363; Lestage, 1925, 297.

*Ephemerella norda* McDunnough, 1924b, 223. Synonymized by Walley, 1930, 17.

*Ephemerella concinnata* Traver, 1934, 219; 1935, 586. Synonymized by Burks, 1953, 69.

*Chitonophora aurivilliusi*: Lestage, 1930b, 204. Emended name.

*Ephemerella aurivillii* McDunnough, 1931b, 197; McDunnough, 1932, 79; Ide, 1935, 43; Burks, 1953, 69; 1965, 275; Bajkova, 1972, 185 (imago).

*Ephemerella (Ephemerella) nN* Imanishi, 1940, 203, fig. 12. Renamed as *Ephemerella taeniata* by Tshernova, 1952, 279, figs. 95–98; Gose, 1980, 366.

*Ephemerella (Ephemerella) taeniata* Gose, 1980, 366. Synonymized by Bajkova, 1972, 185.

*Ephemerella (Ephemerella) maxima* Allen, 1971, 526. Synonymized by Ishiwata, 2001, 62.

*Ephemerella (Cincticostella) ezoensis* Gose, 1980, 288. Synonymized by Ishiwata, 2001, 62.

*Ephemerella aurivillii*: Bae and Liu, 1999, 4; Yu, 1998, 436; Quan et al., 2002, 247.

*Ephemerella (Ephemerella) aurivillii*: Tshernova et al., 1986, 138; Jacobus and McCafferty, 2008, 227.

*Ephemerella (Ephemerella) antuensis* Su and You, 1989, 181, figs. 1–27 (male, female, subimago, nymph). Types: Male, female, nymph, Autu County, Jilin (synonymized as *Serratella ignita* by Kluge in 2004, 312 by mistake). **New synonym**

**Remarks:** Su and You (1989) reported the *Ephemerella (Ephemerella) antuensis* from northeast China. Considering the location and morphology, this species should be the synonym of the *Ephemerella aurivilli*. But the former was errorly synonymized as *Serratella ignita* by Kluge (2004).

**Distribution:** Oriental, Holarctic.

##### 100. *Ephemerella atagosana* Imanishi, 1937

*Ephemerella atagosana* Imanishi, 1937, 326 (adult). Type: Male, Japan.

*Ephemerella (Cincticoistella) atagosana*: Gose, 1980, 368.

*Ephemerella (Ephemerella) atagosana*: Tshernova et al., 1986, 138.

*Ephemerella nbx* Imanishi, 1940, 201, fig. 13 (nymph).

Type: Nymph, China. Renamed as *Ephemerella* (*Ephemerella*) *denticula* by Allen, 1971, 525, fig. 44, nymph, Japan.

*Ephemerella* nb Imanishi, 1940, 199 (nymph, China). renamed as *Ephemerella* (*Ephemerella*) *denticula* by Gose, 1980, 366.

*Ephemerella dentata* Bajkova, 1967, 331, fig. 6 (nymph). Synonymized by Tshernova et al., 1986, 138.

*Ephemerella* (*Ephemerella*) *denticula* Allen, 1971, 525. Synonymized by Ishiwata, 2001, 62.

*Ephemerella denticula*: Bae, 1997, 408; Yu, 1998, 436; Bae and Liu, 1999, 5; Quan et al., 2002, 248.

*Ephemerella* (*Ephemerella*) *keijoensis* Allen, 1971, 526, fig. 45 (nymph). Type: Nymph, Korea. Synonymized as *Ephemerella* (*Ephemerella*) *dentata* by Bae and Kluge, 1998, 92.

*Ephemerella keijoensis*: Yu, 1998, 436.

*Ephemerella keijoensis* [sic]: Ishiwata, 2001, 62.

*Ephemerella* (*Hosoba*) *atagosana*: Jacobus and McCafferty, 2008, 227.

**Distribution:** China (northeast), Japan, Korea, Russia.

#### 101. *Ephemerella kozhovi* Bajkova, 1967

*Ephemerella kozhovi* Bajkova, 1967, 327, figs. 1–2 (nymph and male). Type: Male, Russia.

*Ephemerella nba* Imanishi, 1940, 200, fig. 14 (nymph, Korea). Associated to *Ephemerella notofascia* by Yoon and Bae, 1988b, 34.

*Ephemerella kozhovi*: Kluge, 1995, 40; Quan et al., 2002, 248; Bae and Liu, 1999, 5;

*Ephemerella* (*Ephemerella*) *kozhovi*: Tshernova et al., 1986, 138; Kluge, 1997, 212.

*Ephemerella notofascia* Yoon and Bae, 1988b, 34; Yu, 1998, 436 (first record from China). Synonymized by Bae and Kluge, 1998, 92.

*Ephemerella* (*Zonadia*) *kozhovi*: Jacobus and McCafferty, 2008, 229.

**Distribution:** China (northeast), Korea, Russia.

#### Genus *Hyrtanella* Allen and Edmunds, 1976

#### 102. *Hyrtanella grandipennis* (Zhou, Su and Gui, 2000)

*Torleya grandipennis* Zhou, Su and Gui, 2000, 312, figs. 1–5 (male). Type: Male, Hunan Province, China. Transferred by Jacobus and McCafferty, 2008, 243.

*Torleya grandipennis*: Jacobus, Zhou and McCafferty,

2004, 154, figs. 1–4, 10, 14 (nymph).

*Hyrtanella grandipennis*: Jacobus and McCafferty, 2008, 243, generic combination.

**Distribution:** Southern China, Thailand, Vietnam.

#### Genus *Notacanthella* Jacobus and McCafferty, 2008

#### 103. *Notacanthella quadrata* Kluge and Zhou, 2004

*Ephemerella quadrata* Kluge and Zhou (in Kluge, Zhou, Jacobus and McCafferty, 2004), 2004, 148, figs. 1–9 (nymph). Type: Nymph, Thailand, China.

*Notacanthella quadrata*: Jacobus and McCafferty, 2008, 236, generic combination.

**Distribution:** China (Yunnan), Thailand.

#### Genus *Serratella* Edmunds, 1959

#### 104. *Serratella brevicauda* Jacobus, Zhou and McCafferty, 2009

*Serratella brevicauda* Jacobus, Zhou and McCafferty, 2009, 53, figs. 1–3 (nymph). Type: Nymph, Yunnan, China.

**Distribution:** China (Yunnan).

#### 105. *Serratella fusongensis* Su and You, 1988

*Ephemerella* (*Ephemerella*) *fusongensis* Su and You, 1988, 64, fig. 10–14 (male). Types: Male, Fushong County, Jilin (transferred to *Serratella* by Jacobus and McCafferty, 2008, 241.)

*Ephemerella* (*Ephemerella*) *fusongensis*: You and Gui, 1995, 136, fig. 146 (male).

*Ephemerella fusongensis*: Quan et al., 2002, 248.

*Serratella fusongensis*: Jacobus and McCafferty, 2008, 241, generic combination.

**Distribution:** China (Jilin).

#### 106. *Serratella ignita* (Poda, 1761)

*Ephemerella ignita* Poda, 1761, 97, imago. Type: Imago, Europe?.

*Ephemerella ignita* Eaton, 1871, 98; Rostock, 1877, 85.

*Baetis obscura* Stephens, 1835, 65 (Synonymized by Eaton, 1887, 126)

*Ephemerella erythrocephala*: Walker, 1853, 544; Hagen, 1863, 21. Synonymized by Eaton, 1887, 126.

*Ephemerella erythrocephala* [sic]: Pictet, 1844, 222. Synonymized by Eaton, 1887, 126.

*Ephemerella apicalis* Stephens, 1835, 59; Pictet, 1844, 236; Walker, 1853, 544. Synonymized by Eaton, 1887,

126.

*Ephemerella rufescens* Stephens, 1835, 59. Synonymized by Eaton, 1887, 126.

*Ephemerella fusca* Stephens, 1835, 58. Synonymized by Eaton, 1887, 126.

*Ephemerella roseus* Stephens, 1835, 59. Synonymized by Eaton, 1887, 126.

*Potamanthus roseus*: Pictet, 1844, 236; Walker, 1853, 545. Synonymized by Eaton, 1887, 126.

*Potamanthus aeneus* Pictet, 1844, 229; Walker, 1853, 545. Synonymized by Eaton, 1887, 126.

*Ephemerella aenea*: Eaton, 1871, 99; Meyer-Dur, 1874, 316. Synonymized by Eaton, 1887, 126.

*Potamanthus dilectus* Pictet, 1844, 236. Synonymized by Eaton, 1887, 126.

*Potamanthus dilutus* Stephens, 1835, 58; Walker, 1853, 545; Hagen, 1863, 19. Synonymized by Eaton, 1887, 126.

*Ephemerella gibba* Eaton, 1871, 99; Meyer-Dur, 1874, 316; Rostock, 1877, 85. Synonymized by Eaton, 1887, 126.

*Ephemerella lactata* Bengtsson, 1909, 6. Synonymized by Jacob, 1974a, 5.

*Ephemerella torrentium* Bengtsson, 1917, 178. Synonymized by Jacob, 1974a, 5.

*Drunella karasuensis* Kustareva, 1976, 58. Synonymized by Kluge, 1995, 40.

*Ephemerella sibirica* Tshernova, 1952, 278. Synonymized by Bajkova, 1972, 181, figs. 7a, b–16.

*Ephemerella (Ephemerella) antuensis* Su and You, 1989, 181; You and Gui, 1995, 136, fig. 145 (male, female) (synonymized by Kluge, 2004, 312 by mistake)

*Ephemerella antuensis*: Quan et al., 2002, 247.

*Serratella ignita*: Tiunova, 1984, 47, generic combination; Jacobus and McCafferty, 2008, 241.

**Distribution:** Holarctic.

#### 107. *Serratella longipennis* Zhou et al., 1997

*Serratella longipennis* Zhou et al., 1997, 269, figs. 6–9 (male, female). Types: Male, female, Bai-Yun-Shan, Henan.

*Serratella longipennis*: Zhou et al., 1998b, 221; Jacobus and McCafferty, 2008, 241.

**Distribution:** China (Henan and northern).

#### 108. *Serratella setigera* (Bajkova, 1967)

*Ephemerella setigera* Bajkova 1967, 333, figs. 7–8 (nymph). Type: Nymph, Russia

*Ephemerella setigera*: Kluge, 1995, 42.

*Ephemerella (Serratella) setigera*: Tshernova et al., 1986, 138.

*Serratella setigera*: Yu, 1998, 436; Quan et al., 2002, 249; Ishiwata, 2001, 63; Jacobus and McCafferty, 2008, 242.

**Distribution:** China (northeast), Japan, Russia, Korea.

#### 109. *Serratella zapekinae* Bajkova, 1967

*Ephemerella naz* Imanishi, 1940, 206, fig. 16 (nymph, China). Renamed as *Ephemerella zapekinae* by Bajkova, 1967, 329, figs. 3–5, nymph and imago.

*Ephemerella zapekinae* Kluge, 1995, 44.

*Ephemerella (Serratella) zapekinae*: Tshernova et al., 1986, 138.

*Serratella zapekinae*: Zhou et al., 1997, 125, fig. 5; Bae, 1997, 408; Yu, 1998, 436; Quan et al., 2002, 249; Jacobus and McCafferty, 2008, 242.

**Distribution:** Most of China, Russia, Korea.

#### 110. *Serratella xiasimaensis* (You, 1987) (incertae sedis)

*Cinygma xiasimaensis* You, 1987, 31, figs. 53–58, male. Types: Male, Tibet.

*Ephemerella (Serratella) xiasimaensis*: You, 1987, 31, figs. 53–58, male. Types: Male, Tibet.

*Serratella xiasimaensis*. **New combination**

**Remarks:** This species is assigned to this genus, tentatively. The original description and figures are not very good. The forceps have four (not three as in *Serratella*) segments.

**Distribution:** China (Tibet).

#### Genus *Spinorea* Jacobus and McCafferty, 2008

#### 111. *Spinorea glebosa* (Kang and Yang, 1995)

*Acerella glebosa* Kang and Yang, 1995, 96, figs. 1, 8 (nymph, egg). Types: Nymph, Sinwuchaio, Haituan, Taitung County, Taiwan.

*Spinorea glebosa*: Jacobus and McCafferty, 2008, 237, generic combination

**Distribution:** China (Taiwan and southern mainland).

#### 112. *Spinorea montana* (Kang and Yang, 1995)

*Acerella montana* Kang and Yang, 1995, 98, figs. 2, 9, 10



(nymph, egg). Types: Nymph, Wuling Farm, Hoping, Taichung, Taiwan.

*Spinorea montana*: Jacobus and McCafferty, 2008, 237, generic combination.

**Distribution:** China (Taiwan).

#### Genus *Teloganopsis* Ulmer, 1940

##### 113. *Teloganopsis jinghongensis* Xu et al., 1984

*Ephemerella* (*Serratella*) *jinghongensis* Xu, You and Hsu, 1984, 413, figs. 1–11 (male, female, male subimago, egg). Types: Male, female, Jinghong, Yunnan.

*Ephemerella* T2 Dudgeon, 1982, 225; Hubbard, 1986, 249 (named as *Serratella albostriata* by Tong and Dudgeon, 2000c, 198.)

*Serratella* T2 Dudgeon, 1990, 225 (named as *Serratella albostriata* by Tong and Dudgeon, 2000c, 198).

*Uracanthella* sp. Dudgeon, 1999, 270.

*Ephemerella jianghongensis* [sic]: You and Gui, 1995, 130 (misspelling).

*Serratella hainanensis* She, Gui and You, 1995, 77. Synonymized by Zhou, Jacobus and McCafferty, 2006, 237.

*Serratella albostriata* Tong and Dudgeon, 2000c, 198. Synonymized by Zhou, Jacobus and McCafferty, 2006, 237.

*Ephemerella* (*Serratella*) *jinghongensis*: Gui, 1985, 89; Zhou et al., 1997, 125, fig. 2.

*Teloganopsis jinghongensis*: Jacobus and McCafferty, 2008, 241, generic combination.

**Distribution:** China (South mainland).

##### 114. *Teloganopsis changbaishanensis* Su and You, 1988

*Ephemerella* (*Ephemerella*) *changbaishanensis* Su and You, 1988, 63, fig. 1–9 (male, subimago, egg). Types: Male, Changbaishan, Jilin.

*Ephemerella* (*Ephemerella*) *changbaishanensis*: You and Gui, 1995, 135, fig. 144 (male, female subimago).

*Ephemerella changbaishanensis*: Quan et al., 2002, 248.

*Teloganopsis changbaishanensis*: Jacobus and McCafferty, 2008, 240, generic combination.

**Remarks:** this species is very probably a junior synonym of *Uracanthella punctisetae* (= *Serratella rufa*).

**Distribution:** China (Jilin).

#### Genus *Torleya* Lestage, 1917

##### 115. *Torleya nepalica* (Allen and Edmunds, 1963)

*Ephemerella* (*Torleya*) *nepalica* Allen and Edmunds, 1963c, 20, figs. 20–23 (nymph). Type: Nymph, Nepal.

*Torleya nepalica* Allen, 1980, 76

*Ephemerella wahensis* Ali, 1971, 359, figs. 1–9 (transferred to *Ephemerella* (*Crinitella*) by Hubbard and Peters, 1978, 13; synonymized by Jacobus, Zhou and McCafferty, 2004, 168)

*Crinitella wahensis*: Allen, 1980, 81.

*Torleya glareosa* Kang and Yang, 1995, 107. Synonymized by Jacobus and McCafferty, 2004, 168 (first record from China).

*Serratella tumiforceps* Zhou and Su, 1997, 42. Synonymized by Jacobus and McCafferty, 2004, 168.

*Torleya arenosa* Tong and Dudgeon, 2000c, 201. Synonymized by Jacobus and McCafferty, 2004, 168.

*Torleya nepalica*: Jacobus and McCafferty, 2008, 244.

**Distribution:** China (most parts), Asia.

##### 116. *Torleya lutosa* Kang and Yang, 1995

*Torleya lutosa* Kang and Yang, 1995, 109, fig. 7, 22–25 (nymph, egg). Types: Nymph, Wufeng, Hsinchu County, Taiwan.

*Torleya lutosa*: Jacobus and McCafferty, 2008, 244.

**Distribution:** China (Taiwan).

##### 117. *Torleya longforceps* (Gui et al., 1999)

*Serratella longforceps* Gui et al., 1999, 342, figs. 11–26 (male). Types: Male, Sangang, Fujian.

*Torleya longforceps*: Jacobus and McCafferty, 2003, 49; 2008, 244, generic combination.

**Distribution:** China (Fujian).

##### 118. *Torleya coheri* (Allen and Edmunds, 1963) (first record from China)

*Ephemerella* (*Crinitella*) *coheri* Allen and Edmunds, 1963c, 17, figs. 1, 13–19 (nymph). Type: Nymph, Nepal. Transferred by Jacobus and McCafferty, 2008, 244.

*Crinitella permkami* Wang and Sites, 1999, 73. Synonymized by Jacobus and McCafferty, 2003, 49.

*Torleya coheri*: Jacobus and McCafferty, 2003d, 49; 2008, 244, generic combination.

**Distribution:** China (Western), Nepal.

### Genus *Uracanthella* Belov, 1979

#### 119. *Uracanthella punctisetae* (Matsumura, 1931) =*Uracanthella rufa* (Imanishi, 1937)

*Durnella punctisetae* Matsumura, 1931, 1471, mlae.

Type: Male, Japan. Transferred by Ishiwata, 2001, 63.

*Ephemerella rufa* Imanishi, 1937, 327; Imanishi, 1940, 208. Synonymized by Ishiwata, 2001, 63.

*Ephemerella* (*Serratella*) *rufa*: Gose, 1980, 366.

*Serratella rufa*: Uchida, 1986, 10.

*Ephemerella* (*Uracanthella*) *rufa*: Tshernova et al., 1986, 138.

*Uracanthella rufa*: Hatta and Ishiwata, 1990, 173.

*Ephemerella yixingensis* Wu and Gui, 1993, 72, fig. 1–12 (male, female). Synonymized by Zhou et al., 1997, 125.

*Serratella rufa*: Zhou et al., 1998b, 222; Zhou et al., 1997, 125, fig. 3.

*Uracanthella rufa*: Yu, 1998, 436; Tong and Dudgeon, 2000, 204.

*Uracanthella* sp. Dudgeon, 1999, 270, fig. 4. 55.

*Ephemerella lenoki* Tshernova, 1952, 275. Synonymized by Tshernova et al., 1986, 138.

*Ephemerella markevitshi* Belov, 1979, 577. Synonymized by Tshernova et al., 1986, 138.

*Ephemerella* (*Serratella*) *rufa*: Gose, 1980, 366; Yoon and Kim, 1981, 39.

*Ephemerella* L3 Dudgeon, 1984, 210; Hubbard, 1986, 250. Named by Tong and Dudgeon, 2000c, 204.

*Ephemerella* (*Uracanthella*) *rufa*: Tshernova et al., 1986, 138.

*Serratella rufa*: Ishiwata, 1987, 29; Yoon and Bae, 1988b, 31; Zhou et al., 1997, 125.

*Serratella* L2 Dudgeon, 1990, 225. Named by Tong and Dudgeon, 2000c, 204.

*Uracanthella rufa*: Bae et al., 1994, 37; Quan et al., 2002, 249.

*Teloganopsis punctisetae*: Jacobus and McCafferty, 2008, 241, generic combination.

**Distribution:** Most of China, oriental, Russia, Korea, Japan.

## Ephemeridae

### Genus *Eatonigenia* Ulmer, 1940

#### 120. *Eatonigenia chaperi* Navás, 1935

*Hexagenia chaperi* Navás, 1935, 99. Types: Adult, Java

and Borneo.

*Eatonigenia chaperi* Ulmer, 1940, 479; McCafferty, 1973, 55, figs. 1–7, 9, 13, 15, 24 (male, female, nymph); You and Gui, 1995, 91, fig. 93 (male, female); Zhang et al., 1995, 74; She et al., 1995, 80; Zhang, 1988, 68, fig. 1–6 (male, female, subimago), first record from China.

**Distribution:** China (Hainan), Indonesia.

### Genus *Ephemerella* Linnaeus, 1758

#### 121. *Ephemerella remensa* Eaton, 1892

*Ephemerella remensa* Eaton, 1892, 410, female and male.

Type: Male, India.

*Ephemerella remensa* Ulmer, 1925, 97, first record from China (Taiwan, probably wrong according to Kang Yang, 1994); Lestage, 1927, 96, 100; Uéno, 1931, 212.

**Distribution:** China (Taiwan).

#### 122. *Ephemerella axillaris* Navás, 1930

*Ephemerella axillaris* Navás, 1930, 138, fig. 46, female.

Types: Female, China (Houy-Tcheou=Huzhou).

*Ephemerella axillaris*: Wu, 1935, 247; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 146, fig. 9–10 (adult); Gui, 1985, 93; You and Gui, 1995, 112, fig. 119 (male); Zhang et al., 1995, 74.

**Distribution:** China (Zhejiang).

#### 123. *Ephemerella formosana* Ulmer, 1919

*Ephemerella formosana* Ulmer, 1919–1920, 6, fig. 5. (male, female, subimago). Types: Male, female, subimago, Taiwan.

*Ephemerella formosana*: Ulmer, 1925, 92 (Kwangtung); Uéno, 1931a, 191; 1931b, 212; Wu, 1935, 247; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 147, fig. 11 (male, female); Uéno, 1938, 97; 1969, 233.; Gui, 1985, 93; Kang and Yang, 1994, 394, fig. 2 (nymph); You and Gui, 1995, 96, fig. 98 (male, female); Zhang et al., 1995, 74.

**Distribution:** China (Guangdong=Kwangtung and Taiwan), Japan (Ryukyu Islands).

#### 124. *Ephemerella hainanensis* Zhang et al., 1995

*Ephemerella hainanensis* Zhang et al., 1995, 71, 75, fig. 4 (male, female, subimago). Types: Male, female, subimago, most of Hainan.

*Ephemera hainanensis*: You and Gui, 1995, 99, fig. 102 (male, female); She et al., 1995, 80.

**Distribution:** China (Hainan).

**125. *Ephemera hongjiangensis* Zhang et al., 1995**

*Ephemera hongjiangensis* Zhang et al., 1995, 71, 75, fig. 5 (male, female, subimago). Types: Male, female, subimago, Hongjiang, Hunan.

*Ephemera hongjiangensis*: You and Gui, 1995, 98, fig. 101 (male, female).

**Distribution:** China (Hunan).

**126. *Ephemera hsui* Zhang et al., 1995**

*Ephemera hsui* Zhang et al., 1995, 72, 75, fig. 6 (male, female, subimago). Types: Male, female, subimago, Dayong and Zhang-Jia-Jie, Hunan.

*Ephemera hsui*: You and Gui, 1995, 104, fig. 107 (male, female); Zhou et al., 1998, 221.

**Distribution:** most China.

**127. *Ephemera japonica* McLachlan, 1875**

*Ephemera japonica* McLachlan, 1875, 169 (adult). Types: Male, Japan.

*Ephemera japonica* Eaton, 1883, 4; Ulmer, 1912, 369 (first record from Chinese Taiwan); Ulmer, 1925, 94; Lestage, 1927, 99, 100; Uéno, 1931a, 212; Matsumura, 1933, 64; Gui, 1985, 96; You and Gui, 1995, 113, fig. 121 (male); Zhang et al., 1995, 75; Tshernova et al., 1986, 105.

**Distribution:** China (Taiwan), Japan, Russia.

**128. *Ephemera jianfengensis* Zhang et al., 1995**

*Ephemera jianfengensis* Zhang et al., 1995, 69, 75, fig. 2 (male, female, subimago). Types: Male, female, subimago, Ledong, Hainan.

*Ephemera jianfengensis*: You and Gui, 1995, 102, fig. 105 (male, female); She et al., 1995, 80.

**Distribution:** China (Hainan).

**129. *Ephemera kirinensis* Hsu, 1931**

*Ephemera kirinensis* Hsu, 1931, 40, fig. 4–6 (male, female subimago). Types: North Hill, Kiangnan Garden, Kirin.

*Ephemera kirinensis*: Wu, 1935, 247; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 287, fig. 8, 12–13 (male, female); Gui, 1985, 94; You and Gui, 1995, 107, fig.

112 (male, female); Bae, 1997, 408; Zhang et al., 1995, 75; Quan et al., 2002, 249.

**Distribution:** China (Jinlin=Kirin).

**130. *Ephemera lota* Navás, 1934**

*Ephemera lota* Navás, 1934, 6, fig. 45 (adult). Types: Adult, Shanghai (Lobou).

*Ephemera lota*: Navás, 1936, 117; Wu, 1935, 248; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 289, fig. 15 (female subimago); Gui, 1985, 94; Zhang et al., 1995, 75.

**Distribution:** China (Anhui, Shanghai, Jiangsu and Zhejiang).

**131. *Ephemera maoyangensis* Zhang et al., 1995**

*Ephemera maoyangensis* Zhang et al., 1995, 68, 75, fig. 1 (male, female, subimago). Types: Male, female, subimago, Maoyang and Qiongzong, Hainan.

*Ephemera maoyangensis*: You and Gui, 1995, 100, fig. 104 (male, female); She et al., 1995, 80.

**Distribution:** China (Hainan).

**132. *Ephemera media* Ulmer, 1936**

*Ephemera media* Ulmer, 1935–1936, 204, 212, fig. 1 (male, female, subimago). Types: Male, female, subimago, Lofaushan, Kanton; Lotosteiche, Kanton; Peiping.

*Ephemera media*: Hsu, 1936–1938, 290, fig. 16 (male, female, subimago); Gui, 1985, 94; You and Gui, 1995, 94, fig. 95 (male, female); Zhang et al., 1995, 75.

**Distribution:** China (Beijing and Guangdong).

**133. *Ephemera orientalis* McLachlan, 1875**

*Ephemera orientalis* McLachlan, 1875, 168 (male). Types: Male, Japan.

*Ephemera orientalis*: Imanishi, 1940, Tshernova, 1973, 326; Demoulin, 1965b, 215, fig. 1 (male); Tshernova et al., 1986, 106; You and Gui, 1995, 108, fig. 113 (male); Zhang et al., 1995, 75; Quan et al., 2002, 250.

*Ephemera amurensis* Navás, 1913, 414; Ulmer, 1925, 98; Tshernova, 1952, 234. Synonymized by Tshernova, 1973, 326.

*Ephemera lineata*: Ulmer, 1925, 86 (not *Ephemera lineata* Eaton, 1870, 1; Eaton, 1871, 71, Eaton, 1883, 63; Klapálek, 1909, 9) (synonymized as *Ephemera*

*amurensis* by Tshernova, 1952, 234); Ulmer, 1935–1936, 212 (first record from China); Wu, 1935, 247; Hsu, 1937, 288, fig. 14 (male, female, subimago); Imanish, 1940, 176 (nymph); Uéno, 1941, 16, 18; Gui, 1985, 94; You and Gui, 1995, 110, fig. 115 (male, female subimago); Zhang et al., 1995, 75.

*Ephemera modesta* Brodsky, 1930, 31. Synonymized by Tshernova, 1952, 234.

**Distribution:** China (Beijing, Jiangsu, Hunan, Jiangxi, Helongjiang), Palearctic.

**134. *Ephemera pictipennis* Ulmer, 1924**

*Ephemera pictipennis* Ulmer, 1924, 28, fig. 1–3 (male).

Types: Male, Shanghai, Kuling.

*Ephemera pictipennis*: Ulmer, 1925, 93; Wu, 1935, 248; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 292, fig. 17–19 (male); Gui, 1985, 95; You and Gui, 1995, 106, fig. 110 (male); Zhang et al., 1995, 75.

*Ephemera nigroptera* Zhou et al., 1998, 139. **New synonym**

**Distribution:** China (Shanghai, Zhejiang and Guangxi).

**135. *Ephemera pictiventris* McLachlan, 1894**

*Ephemera pictiventris* McLachlan, 1894, 428 (female, female subimago). Types: Female, female subimago, Ta-chien-lu, Siao-Lou, Sichuang.

*Ephemera pictiventris*: Ulmer, 1925, 93; Ulmer, 1929, 162, figs. 1–4; Wu, 1935, 248; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 293, fig. 20–23 (male, female, female subimago); Gui, 1985, 95; You and Gui, 1995, 105, fig. 109 (male, female); Zhang et al., 1995, 75.

**Distribution:** West and middle China.

**136. *Ephemera pieli* Navás, 1934**

*Ephemera pieli* Navás, 1934a, 5, fig. 44 (male, subimago). Types: Male subimago, Loubou.

*Ephemera pieli*: Navás, 1935, 99; Wu, 1935, 248; Ulmer, 1935–1936, 212; Hsu, 1936–1938, 295, fig. 24 (male subimago); Gui, 1985, 95; You and Gui, 1995, 111, fig. 118 (male subimago); Zhang et al., 1995, 75.

**Distribution:** China (Shanghai and Jiangsu=Kiangsu).

**137. *Ephemera pulcherrima* Eaton, 1892**

*Ephemera pulcherrima* Eaton, 1892a, 185 (female). Type:

Female, Tenasserim Valley, Burma.

*Ephemera pulcherrima*: Ulmer, 1925, 86, fig. 80–81 (male, key) (first record from China); Letage, 1927, 99, 100 (key); Wu, 1935, 248; Ulmer, 1935–1936, 204, 212; Hsu, 1936a, 233, fig. 1 (female); Hsu, 1937, 433, figs. 25–26 (male, female, key); Kimmins, 1960, 308; 1971, 319; Gui, 1985, 95; You and Gui, 1995, 97, fig. 99 (male, female); Zhang et al., 1995, 75; Gui et al., 1999, 338, figs. 11–21 (male).

*Ephemera (Ephemera) pulcherrima*: Hubbard, 1986, 249.

**Distribution:** China (Hong Kong, Fujian and Guangdong), Butma, India

**138. *Ephemera purpurata* Ulmer, 1919**

*Ephemera purpurata* Ulmer, 1919, 8, fig. 6, 7 (male, subimago). Types: Male, subimago, Kouy-toheou.

*Ephemera purpurata*: Ulmer, 1925, 93; Wu, 1935, 248; Ulmer, 1935–1936, 213; Hsu, 1936–1938, 435, fig. 27–8 (male); Uéno, 1969, 234, figs. 59, 60; Gui, 1985, 95; You and Gui, 1995, 107, fig. 111 (male); Zhang et al., 1995, 75.

**Distribution:** China (Guizhou?).

**139. *Ephemera rufomaculata* Zhou and Zheng, 2003**

*Ephemera rufomaculata* Zhou and Zheng, 2003c, 666, figs. 1–5, adults and nymphs. Types: Male, Yunnan.

**Distribution:** China (Yunnan).

**140. *Ephemera sachalinensis* Matsumura, 1911**

*Ephemera sachalinensis* Matsumura, 1911, 6, female. Types: Female, Russia (Sachalin).

*Ephemera sachalinensis* Tshernova, 1973, 329 (Amur Basin; may be first record from China); Zhang et al., 1995, 75; You and Gui, 1995, 112, fig. 120 (male, female) (formally first record from China); Quan et al., 2002, 250.

**Distribution:** northeastern China, Korea, Russia.

**141. *Ephemera sauteri* Ulmer, 1912**

*Ephemera sauteri* Ulmer, 1912, 369 (male, femlae, subimago). Types: Kosempo, Taiwan.

*Ephemera sauteri*: Ulmer, 1925, 92, fig. 85; Uéno, 1931a, 191; 1931b, 212; Wu, 1935, 248; Ulmer, 1935–1936, 213; Hsu, 1936–1938, 436, fig. 29 (male, female); Uéno, 1969, 237; Gui, 1985, 95; Kang and Yang, 1994, 396, fig. 3 (nymph); You and Gui, 1995, 111,

fig. 117 (male, female); Zhang et al., 1995, 75.

**Distribution:** China (Guangdong and Taiwan).

**142. *Ephemera separigata* Bae, 1995**

*Ephemera separigata* Bae, 1995, 160, figs. 1–2 (all stages). Type: male, Korea.

*Ephemera strigata* Yoon and Bae, 1985, 98 (in part) (renamed by Bae, 1995, 160).

*Ephemera separigata*: Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 250, figs. 23 (nymph).

**Distribution:** China (Jilin), Korea.

**143. *Ephemera serica* Eaton, 1871**

*Ephemera serica* Eaton, 1871, 75, pl. 4 fig. 12–12a (male, female). Type: N. China

*Ephemera serica*: McLachlan, 1875, 169; Eaton, 1883, 73 (male, female); Ulmer, 1925, 89, fig. 82–83 (male, female, key); Navás, 1930, 15, 138; Wu, 1935, 248; Ulmer, 1935–1936, 213; Hsu, 1937, 438, fig. 30–31 (male, female, key); Kimmins, 1960, 309, fig. 53 (male) [designation of lectotype]; Kimmins, 1971, 320; Gui, 1985, 96; You and Gui, 1995, 95, fig. 97 (male, female); Zhang et al., 1995, 75.

*Ephemera (Ephemera) serica*: Hubbard, 1986, 249.

*Ephemera zhangjiajiensis* You and Gui, 1995, 100, fig. 103 (male, female); Su and Zhou, 1998, 28; Gui et al., 1999, 339, fig. 11–22 (male); Zhang, Gui and You, 1995, 73. Synonymized by Zhou and Zheng, 2003c, 665.

**Distribution:** most part of China, Vietnam

**144. *Ephemera shengmi* Hsu, 1937**

*Ephemera shengmi* Hsu, 1937, 440, fig. 32–33 (male). Types: Male, Sheng Mi, Kiangsi.

*Ephemera shengmi*: Gui, 1985, 94; You and Gui, 1995, 98, fig. 100 (male); Zhang et al., 1995, 75; Tshernova et al., 1986, 106.

**Distribution:** China (Jiangxi), Russia.

**145. *Ephemera spilosa* Navás, 1936**

*Ephemera spilosa* Navás, 1936, 117, fig. 77 (male, female). Types: Male, female, Kuling.

*Ephemera spilosa*: Hsu, 1937–1938, 53, fig. 34 (male, female); Gui, 1985, 95; Zhang et al., 1995, 75.

**Distribution:** China (Jiangxi).

**146. *Ephemera strigata* Eaton, 1892**

*Ephemera strigata* Eaton, 1892c, 302 (adult). Types: Adult, Japan.

*Ephemera strigata*: Tshernova, 1973, 332, figs. 23–25 (mentioned Amur river, may be the first record from China); Tshernova et al., 1986, 105; You and Gui, 1995, 110, fig. 116 (male); Zhang et al., 1995, 75; Quan et al., 2002, 250; Bae and Liu, 1999, 5.

**Distribution:** Northeastern China, Japan, Korea, Mongolia, Russia.

**147. *Ephemera supposita* Eaton, 1883**

*Ephemera supposita* Eaton, 1883, 72, Pl. VIII, fig. 12c (male subimago, female). Types: Male subimago, female, Ceylon and India.

*Ephemera supposita* Eaton, 1892b, 409; Ulmer, 1912, 369 (first record from China); Ulmer, 1925, 96; Lestage, 1927, 97, 100; Zhang et al., 1995, 75.

*Ephemera sapposita* [sic.]: Uéno, 1931, 212; Gui, 1985, 96.

**Distribution:** China (Taiwan), Southeast Asia.

**148. *Ephemera wanquanensis* Zhang et al., 1995**

*Ephemera wanquanensis* Zhang et al., 1995, 70, 75, fig. 3 (male, female, subimago). Types: Male, female, subimago, Qionghai and Lingshui, Hainan.

*Ephemera wanquanensis*: You and Gui, 1995, 103, fig. 106 (male, female); She et al., 1995, 80.

**Distribution:** China (Hainan).

**149. *Ephemera wuchowensis* Hsu, 1937**

*Ephemera wuchowensis* Hsu, 1937–1938, 54, fig. 35–37 (male and female subimago). Types: Subimago, Wuchow, Kwangsi.

*Ephemera wuchowensis*: Gui, 1985, 94; You and Gui, 1995, 108, fig. 114 (male subimago, female subimago); Zhang et al., 1995, 75.

*Ephemera hunanensis* Zhang, Gui and You, 1995, 74. synonymized by Zhou and Zheng, 2003c, 665; You and Gui, 1995, 104, fig. 108 (male, female).

**Distribution:** southern China.

**150. *Ephemera yaosani* Hsu, 1937**

*Ephemera yaosani* Hsu, 1937, 55, fig. 39 (male and female subimago). Types: Subimago, Yaosan, Kwangsi.

*Ephemera yaosani*: Gui, 1985, 95; You and Gui, 1995,

95, fig. 96 (male subimago); Zhang et al., 1995, 75.  
**Distribution:** China (Guangxi=Kwangxi and Anhui).

### Heptageniidae

#### Genus *Afronurus* Lestage, 1924

##### 151. *Afronurus chihpenensis* Kang and Yang, 1994

*Afronurus chihpenensis* Kang and Yang, 1994c, 21, fig. 7, 18 (nymph). Types: Chihpen, Peinan, Taitung County, Taiwan.

**Distribution:** China (Taiwan).

##### 152. *Afronurus floreus* Kang and Yang, 1994

*Afronurus floreus* Kang and Yang, 1994c, 17, fig. 6 (nymph). Types: Nymph, Chingchuan, Wufeng, Hsienchu County, Taiwan.

**Distribution:** China (Taiwan), Japan.

##### 153. *Afronurus hyalinus* (Ulmer, 1912)

*Ecdyonurus hyalinus* Ulmer, 1912, 369, 372, fig. 4, 5, 6 7 (male, female, subimago). Types: Male, female, nymph, Taihorin, Kosempo, Taihorinsho, Kosempo, Taiwan.

*Ecdyonurus hyalinus*: Uéno, 1931b, 213; Navás, 1936, 123, fig. 83 (female); Gui, 1985, 87; Ishiwata, 2001, 72.

*Ecdyonurus yoshidae*: Her and Hsu, 1977, 1–49 (misidentification).

*Afronurus hyalinus*: Kang and Yang, 1994, 16, fig. 5, 17 (nymph, egg) Generic combination

**Distribution:** China (Jiangsu and Taiwan), Japan.

##### 154. *Afronurus kouandengensis* You, 1987

*Afronurus kouandengensis* You, 1987, 30, fig. 24–28 (male subimago). Types: Male subimago, Kou-An-Deng, Tibet.

**Distribution:** China (Tibet).

##### 155. *Afronurus linzhiensis* You, 1987

*Afronurus linzhiensis* You, 1987, 30, fig. 29–33 (male, female subimago). Types: Linzhi, Tibet.

**Distribution:** China (Tibet).

##### 156. *Afronurus nanhuensis* Kang and Yang, 1994

*Afronurus nanhuensis* Kang and Yang, 1994, 23, fig. 8 (nymph). Types: Nymph, Nanhutashan, Tatung, Ilan

County, Taiwan.

**Distribution:** China (Taiwan).

##### 157. *Afronurus sangangensis* You et al., 1982

*Afronurus sangangensis* You, Su and Hsu, 1982, 61, fig. 1–17 (male). Types: Male, femlae, Sangang, Fujian Prov.

*Afronurus sangangensis*: Gui, 1985, 83.

*Rhithrogeniella sangangensis*: You and Gui, 1995, 66, fig. 68 (male and female), incorrect transference.

**Distribution:** China (Fujian).

##### 158. *Afronurus xiasimaensis* You, 1987

*Afronurus xiasimaensis* You, 1987, 30, 38–42 (male subimago). Types: Male subimago, Yadong, Tibet.

**Distribution:** China (Tibet).

##### 159. *Afronurus xizangensis* You, 1987

*Afronurus xizangensis* You, 1987, 31, fig. 48–52 (male). Types: Male, Chuona, Tibet.

**Distribution:** China (Tibet).

##### 160. *Afronurus yadongensis* You, 1987

*Afronurus yadongensis* You, 1987, 30, fig. 34–37 (male subimago). Types: Male subimago, Yadong, Tibet.

**Distribution:** China (Tibet).

##### 161. *Afronurus yadongxiasimaensis* You, 1987

*Afronurus yadongxiasimaensis* You, 1987, 31, fig. 43–47 (male subimago). Types: Male subimago, Yadong, Tibet.

*Afronurus yadongsiasimaensis*: You and Gui, 1995, 47, fig. 43 (male)

**Distribution:** China (Tibet).

#### Genus *Anepeorus* McDunnugh, 1925

##### 162. *Anepeorus hummeli* Ulmer, 1936

*Anepeorus hummeli* Ulmer, 1936b, 4, fig. 13, female. Type: Female, China (Kansu and Szechuan).

*Anepeorus hummeli*: Ulmer, 1936a, 215; Gui, 1985, 86.

**Distribution:** China (Gansu=Kansu, Sichuan=Szechuan).

#### Genus *Cinygma* Eaton, 1885

##### 163. *Cinygma rubescent* You, 1987

*Cinygma rubescent* You, 1987, 29, fig. 6–10 (male).

Types: Male, Chuona, Tibet.

*Cinygma rubescent*: You and Gui, 1995, 48, fig. 46 (male).

**Distribution:** China (Tibet).

**164. *Cinygma xiasimaensis* You, 1987**

*Cinygma xiasimaensis* You, 1987, 29, figs. 1–5 (male).

Types: Male, Yadong, Tibet.

*Cinygma xiasimaensis*: You and Gui, 1995, 48, fig. 45 (male).

**Distribution:** China (Tibet).

**Genus *Cinygmina* Kimmins, 1937**

**165. *Cinygmina furcata* Zhou and Zheng, 2003**

*Cinygmina furcata* Zhou and Zheng, 2003b, 755, figs. 1–6, adults. Type: Male, Tian-Mu-Shan, Zhejiang, China.

**Distribution:** China (Zhejiang).

**166. *Cinygmina hunanensis* Zhang and Cai, 1991**

*Cinygmina hunanensis* Zhang and Cai, 1991, 237, fig. 1–9 (male, male subimago). Types: Male, male subimago, Dayong, Hunan.

*Cinygmina hunanensis*: You and Gui, 1995, 54, fig. 53 (male); Su et al., 1995, 41; Gui et al., 1999, 331, fig. 11–11 (male); Zhou and Zheng, 2003b, 756, figs. 11, 15 (male).

**Distribution:** China (Hunan).

**167. *Cinygmina obliquistriata* You et al., 1981**

*Cinygmina obliquistriata* You, Wu, Gui and Hsu, 1981, 26, pl. 1, fig. 1–13 (male, femlae). Types: Male, female, Yixing, Jiangsu Prov.

*Cinygmina obliquistriata*: Wu, Chen, Cong, You, 1986, 65, fig. 12–22 (nymph); Gui, 1985, 86; Zhang and Cai, 1991, 237; You and Gui, 1995, 51, fig. 50 (male); Su et al., 1995, 41; Gui et al., 1999, 330, fig. 11–10 (male); Zhou and Zheng, 2003b, 756, figs. 9, 12, 16 (male and nymph).

**Distribution:** Southeast of China.

**168. *Cinygmina rubromaculata* You et al., 1981**

*Cinygmina rubromaculata* You, Wu, Gui and Hsu, 1981, 28, pl. 2, fig. 14–24 (male, female). Types: Male, female, Yixing, Jiangsu Prov.

*Cinygmina rubromaculata* Wu, Chen, Cong, You, 1986,

65, fig. 1–11 (nymph); Gui, 1985, 86; Zhang and Cai, 1991, 237; You and Gui, 1995, 52, fig. 51 (male); Zhou and Zheng, 2003b, 758, figs. 7, 13, 17 (male and nymph).

*Ecdyonurus rubromaculatus*: Tshernova et al., 1986, 114.

*Cinygmina hainaensis* She, Gui and You, 1995, 72, fig. 1 (male, female, male subimago). Types: Male, female, subimago, Hainan. Synonymized by Zhou and Zheng, 2003b, 758.

**Distribution:** Most of China, Russian far East.

**169. *Cinygmina yixingensis* Wu and You, 1986**

*Cinygmina yixingensis* Wu and You, 1986, 280, fig. 1–13 (male, female). Types: Male, femlae, Yixing, Jiangsu Prov.

*Cinygmina yixingensis*: Wu, Chen, Cong and You, 1986, 66, fig. 23–33 (nymph); Gui, 1985, 86; Zhang and Cai, 1991, 237; You and Gui, 1995, 53, fig. 52 (male); She, Gui and You, 1995, 79; Zhou and Zheng, 2003b, 758, figs. 10, 14, 18 (adults and nymph).

**Distribution:** China (Zhejiang, Jiangsu, Anhui, Hunan and Henan).

**Genus *Cinygmula* McDunnough, 1933**

**170. *Cinygmula yadonglinensis* You, 1987**

*Cinygmula yadonglinensis* You, 1987, 29, fig. 11–18 (male, female). Types: Male, female, Yadong, Tibet.

*Cinygmula yadonglinensis*: You and Gui, 1995, 50, fig. 48 (male)

**Distribution:** China (Tibet).

**171. *Cinygmula brunnea* Tiunova, 1990**

*Cinygmula brunnea* Tiunova, 1990, 814, figs. 1–24 (nymph and adults). Type: Male, Russia.

*Rhithrogena (Cinygmula) brunnea*: Kluge, 1997b, 204. Generic combination.

*Cinygmula brunnea* Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 250, fig. 25 (nymph).

**Distribution:** China (Jilin), Russia.

**172. *Cinygmula hirasana* (Imanishi, 1935)**

*Cinygmula hirasana* Imanishi, 1935, 214, fig. 1 (all stages). Type: Male, Japan.

*Ecdyurus* (sp. nov. ?) Uéno, 1928, 31, fig. 2 (renamed by Ishiwata, 2001, 71).

*Cinygmula hirasana*: Bajkova, 1974, 826; Tshernova and

Belov, 1982, 293; Bae et al., 1994, 39; Bae and Yoon, 1997, 47.

*Rhithrogena (Cinygmula) hirasana*: Kluge, 1997b, 204. Generic combination.

*Cinygma kurobensis* Imanishi, 1935, 215, figs. 2, 5 (synonymized by Imanishi, 1940, 240)

*Cinygmula hirasana*: Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 251, figs. 26, 46, 54, 73 (nymph).

**Distribution:** China (Heilongjiang, Jilin), Japan, Korea, Russia.

### 173. *Cinygmula kurenzovi* (Bajkova, 1965)

*Cinygma kurenzovi* Bajkova, 1965, 301 (imago). Type: Male, Russia (see Kluge, 1995, 23).

*Cinygma kurenzovi*: Bajkova, 1974, 821, figs. 31–42; Tshernova et al., 1986, 113; Bae and Soldán, 1997, 148; Bae and Yoon, 1997, 47.

*Cinygmula kurenzovi*: Tshernova et al., 1986, 113. Generic combination; Bae and S Soldán, 1997, 148; Bae and Yoon, 1997, 47; Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 251, fig. 27 (nymph).

*Rhithrogena (Cinygmula) kurenzovi* Kluge, 1987b, 204; 1988, 306.

**Distribution:** China (Heilongjiang and Neimenggu=inner Mongolia), Korea, Russia.

### 174. *Cinygmula levanidovi* Tshernova and Belov, 1982

*Cinygmula levanidovi* Tshernova and Belov, 1982, 289, fig. 62 (imago). Type: Imago, Russia.

*Rhithrogena (Cinygmula) levanidovi*: Kluge, 1997b, 204.

*Cinygmula levanidovi* Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 251, fig. 28 (nymph).

**Distribution:** China (Jilin), Russia.

## Genus *Componeuria* Eaton, 1881

### 175. *Componeuria taipokauensis* Tong and Dudgeon, 2003

*Componeuria taipokauensis* Tong and Dudgeon, 2003c, 469, figs. 1–16, male and nymph. Types: Male, Hong Kong.

**Distribution:** China (Hong Kong).

## Genus *Ecdyonurus* Eaton, 1868

### 176. *Ecdyonurus davidi* Navás, 1935

*Ecdyonurus davidi* Navás, 1935b, 14, fig. 53. Types:

Adult, Jiangxi.

*Ecdyonurus davidi*: Wu, 1935, 251; Ulmer, 1935–1936, 215; Gui, 1985, 87.

**Distribution:** China (Jiangxi).

### 177. *Ecdyonurus dracon* Kluge, 1983

*Ecdyonurus dracon* Kluge, 1983, 27, fig. 1 (all stages).

Types: Male, Russia.

*Ecdyonurus dracon*: Bae et al., 1994, 39; Bae and Yoon, 1997, 47; Quan et al., 2002, 252, figs. 29, 74, 89, 103, 130, 131, 150, 169, 179 (nymph), first record from China.

**Distribution:** China (Heilongjiang), Korea; Russia.

### 178. *Ecdyonurus galileae* Demoulin, 1973

*Ecdyonurus galileae* Demoulin, 1973, 14, fig. 8, 9, 10d.

Type: Male, Israel.

*Ecdyonurus galileae*: Sartori, 1992, 843; Su et al., 1995, 41, first record from China.

**Distribution:** China (Zhejiang), Europe.

### 179. *Ecdyonurus kibunensis* Imanishi, 1936

*Ecdyonurus kibunensis* Imanishi, 1936, 540, figs. 4–5, adults and nymph. Types: Male, Japan.

*Ecdyonurus kibunensis*: Imanishi, 1940, 253, fig. 42 (nymph), first record from China; Tshernova, 1952, 253. Generic combination; Bae et al., 1994, 39; Bae and Yoon, 1997, 47; Bae, 1997, 408; Bae and Liu, 1999, 5; Quan et al., 2002, 252, figs. 30, 47, 75, 151, 170 (nymph).

**Distribution:** Northeast of China, Korea, Russia, Japan, Mongolia.

### 180. *Ecdyonurus levis* (Navás, 1912)

*Epeorus levis* Navás, 1912, 415, fig. 1 (adults). Type: Male, Amur river, Russia.

*Ecdyonurus levis* Tshernova et al., 1986, 114. Generic combination.

*Cinygmula zachvatkini* Tshernova, 1952, 257 (synonymized by Tshernova et al., 1986, 114); Bajkova, 1974a, 820.

*Cinygma zachvatkini*: Tshernova, 1974a, 812;

*Ecdyonurus zachvatkini*: Kluge, 1983, 33.

*Cinygmula zachvatkini*: Braasch and Soldán, 1988, 24.

*Ecdyonurus levis*: Quan et al., 2002, 252, figs. 31, 132, 152, 171, 180 (nymph) (first record from China).



**Distribution:** China (Heilongjiang, Jilin), Korea, Russia.

**181. *Ecdyonurus pallescens* Navás, 1936**

*Ecdyonurus pallescens* Navás, 1936, 121, fig. 81 (male, female). Types: Male, female, Kuling.

*Ecdyonurus pallescens*: Gui, 1985, 87.

**Distribution:** China (Jiangxi).

**182. *Ecdyonurus pichoni* Navás, 1934**

*Ecdyonurus pichoni* Navás, 1934b, 13, fig. 52 (adult).

Types: Male (no location).

*Ecdyonurus pichoni* Navás, 1935, 100 (Chekiang); Wu, 1935, 251; Ulmer, 1935–1936, 215.

*Ecdyonurus pichouni* [sic]: Gui, 1985, 87.

**Distribution:** China (Jiangxi?, and Zhejiang).

**183. *Ecdyonurus radialis* Navás, 1936**

*Ecdyonurus radialis* Navás, 1936, 122, fig. 82 (female).

Types: Female, Kuling.

*Ecdyonurus radialis*: Gui, 1985, 87.

**Distribution:** China (Jiangxi).

**184. *Ecdyonurus yoshidae* Takahashi, 1924**

*Ecdyonurus yoshidae* Takahashi, 1924, 370, fig. 4; Types: Male, Japan.

*Ecdyonurus yoshidae*: Imanishi, 1940, 252 (nymph, first record from China).

*Cinygmima yoshidae*, Braasch and Soldán, 1988, 24. Generic combination.

*Ecdyurus japonicus* Uéno, 1928, 30, figs. 51–5m (synonymized by Bajkova, 1972, 207).

*Ecdyonurus yoshidae*: Yoon and Bae, 1984, 11; Yoon and Bae, 1988a, 134; Bae and Yoon, 1997, 47; Bae, 1997, 408.

*Ecdyonurus levis*: Ishiwata, 1997, 295 (misidentification, corrected by Ishiwata, 2001, 73).

**Distribution:** Northeast China, Northeast Asia.

**Genus *Electrogena* Zurwerra and Tomka, 1985**

**185. *Electrogena fracta* Kang and Yang, 1994**

*Electrogena fracta* Kang and Yang, 1994c, 15, fig. 4, 14 (nymph). Types: Nymph, Shanlinhsi, Luku, Nantou County, Taiwan.

*Ecdyonurus fracta*: Ishiwata, 2001, generic combination.

*Electrogena fracta*: Shieh et al., 2007, 614.

**Distribution:** China (Taiwan), Japan.

**Genus *Epeorus* Eaton, 1881**

**Subgenus *Epeorus* Eaton, 1881**

**186. *Epeorus assimilis* (Eaton, 1885)**

*Epeorus assimilis* Eaton, 1885, 239 (male, subimago).

Types: Male, subimago, France and Belgium, Baden.

*Epeorus assimilis*: Su et al., 1995, 41, first record from China.

Distribution: China (Zhejiang).

**187. *Epeorus curvatulus* Matsumura, 1931**

*Epeorus curvatulus* Matsumura, 1931, 1477, male, Japan.

*Epeorus curvatulus*: Matsumura, 1933, 97; Imanishi, 1934, 392, fig. 3 (male, female, nymph); Imanishi, 1940, 250, fig. 38 (nymph, first record from China); Bae, 1997, 408; Bae and Liu, 1999, 5; Quan et al., 2002, 253.

**Distribution:** China (northeastern), Northeastern Asia (Korea, Russia and Japan).

**188. *Epeorus erratus* Braasch, 1981**

*Epeorus erratus* Braasch, 1981a, 114, fig. 1–3 (male).

Type: Male, Taiharin, Taiwan.

*Epeorus psi* Ulmer, 1912, 369; Uéno, 1931b, 213; You and Gui, 1995, 57 fig. 56 (male) (misidentification, not *Epeorus psi* Eaton, 1885, 242).

*Epeorus (Iron) psi*: Gui, 1985, 85.

*Epeorus erratus*: You and Gui, 1995, 57, fig. 57 (male); Kang and Yang, 1994c, 7, fig. 1, 13 (nymph); Ishiwata, 2001, 73.

**Distribution:** China (Taiwan), Japan.

**189. *Epeorus herklotsi* (Hsu, 1936) New combination**

*Ecdyonurus herklotsi* Hsu, 1936, 233, figs. 2–4 (male).

Type: Male, Pokfulum [Pokfulam], Hong Kong.

*Ecdyonurus herklotsi*: Gui, 1985, 87; Hubbard, 1986, 250; You and Gui, 1995, 62, fig. 63 (male)

**Distribution:** China (Hong Kong).

**190. *Epeorus latifolium* Uéno, 1928**

*Epeorus latifolium* Uéno, 1928, 34, fig. 6, 6a–6o (nymph). Types: Nymph, Lake Shikotsu, Japan.

*Epeorus latifolium*: Imanishi, 1940, 248, fig. 36 (nymph, first record from China); Bae, 1997, 408; Quan et al., 2002, 253.

**Distribution:** China (northeastern); Northeastern Asia (Korea and Japan).

**191. *Epeorus melli* (Ulmer, 1925)**

*Thalerosphyrus melli* Ulmer, 1925, 101, fig. 89–93 (male, female). Types: Male, female, Kuangtung.

*Thalerosphyrus melli*: Wu, 1935, 252; Ulmer, 1935–1936, 215; Gui, 1985, 86; You and Gui, 1995, 45, fig. 41 (male).

*Epeorus melli*: Zhou, Wang and Xie, 2007, 49, figs. 1–29, nymph and adults.

**Distribution:** South China.

**192. *Epeorus ngi* (Hsu, 1936)**

*Heptagenia ngi* Hsu, 1936, 235, fig. 5–7 (male). Type: Male, Shaikiwan, Hong Kong

*Heptagenia ngi*: Hubbard, 1986, 250; Gui, 1985, 84; You and Gui, 1995, 41, fig. 36; Su and Zhou, 1998, 28.

*Epeorus ngi*: Gui et al., 1999, 332, fig. 11–12 (male).

**Distribution:** China (Hong Kong, Fujiang and Zhejiang).

**193. *Epeorus pinguoyuanensis* You, 1987**

*Epeorus pinguoyuanensis* You, 1987, 30, fig. 19–23 (male subimago). Types: Male subimago, Yadong, Tibet.

*Epeorus pinguoyuanensis*: You and Gui, 1995, 55, fig. 55 (male)

**Distribution:** China (Tibet).

**194. *Epeorus sagittatus* Tong and Dudgeon, 2003**

*Epeorus sagittatus* Tong and Dudgeon, 2003c, 471, figs. 17–26, male and nymph. Types: Male, Hong Kong.

**Distribution:** China (Hong Kong).

**Subgenus *Iron* Eaton, 1883**

**195. *Epeorus (Iron) aesculus* (Imanishi, 1934)**

*Epeorus aesculus* Imanishi, 1934, 384, fig. 1 (all stages). Types: Male, Japan.

*Iron aesculus*: Sinichenkova, 1978, 50 (adults, nymph).

*Iron grunini* Sinichenkova, 1982, 59. Synonymized by Kluge and Tiunova, 1989, 8.

*Iron leavidovae* Sinichenkova, 1982, 60 (adults, nymph). Synonymized by Kluge and Tiunova, 1989, 8.

*Epeorus (Iron) aesculus*: Kluge and Tiunova, 1989, 8

(adults, nymph).

*Iron aesculus*: Tshernova et al., 1986, 120 (first record from China).

*Iron maculatus* sensu Yoon and Bae, 1988a, 127 (not Tshernova, 1949, 148). Synonymized by Bae et al., 1994, 42.

*Epeorus rostratus* Su and Zhou, 1998 (nomen nudum).

**New synonym**

*Iron aesculus*: Bae and Liu, 1999, 5; Quan et al., 2002, 254, figs. 37, 49, 78, 93 (nymph).

**Distribution:** China (Jilin, Jiangsu and Zhejiang), Japan, Southeast of Asia, Russia, Korea.

**196. *Epeorus (Iron) dominans* (Navás, 1936)**

*Iron dominans* Navás, 1936, 123 (male, female). Types: Male, female, Kuling.

*Epeorus (Iron) dominans*: Gui, 1985, 85.

**Distribution:** China (Jiangxi).

**197. *Epeorus (Iron) famulans* (Navás, 1936)**

*Iron famulans* Navás, 1936, 124, fig. 84 (adult). Types: Adult, Kuling.

*Epeorus (Iron) famulans*: Gui, 1985, 85.

**Distribution:** China (Jiangxi).

**198. *Epeorus (Iron) minor* (Hsu, 1936)**

*Iron minor* Hsu, 1936a, 323, fig. 6–7 (male). Type: Male, Shang Jao, Jiangxi.

*Epeorus (Iron) minor*: Gui, 1985, 85; You and Gui, 1995, 59, fig. 59 (male)

**Distribution:** China (Jiangxi).

**199. *Epeorus (Iron) sinensis* (Ulmer, 1925)**

*Iron sinensis* Ulmer, 1925, 105, fig. 94 (male). Types: Male, Kuangtung.

*Iron sinensis*: Wu, 1935, 252; Ulmer, 1935–1936, 215.

*Epeorus (Iron) sinensis*: Hsu, 1936–1938, 131; Gui, 1985, 85; You and Gui, 1995, 59, fig. 60 (male).

**Distribution:** China (Guangdong).

**200. *Epeorus (Iron) dayongensis* Gui and Zhang, 1992**

*Epeorus (Iron) dayongensis* Gui and Zhang, 1992, 61, fig. 1–6 (male, male subimago). Types: Male, male subimago, Dayong, Hunan.

*Epeorus (Iron) dayongensis*: You and Gui, 1995, 60, fig. 61 (male).

**Distribution:** China (Hunan).

**201. *Epeorus pellucidus* (Brodsky, 1930)**

*Cinygma pellucida* Brodsky, 1930a, 35, fig. 8, male.

Types: Male, Russia.

*Epeorus pellucidus*: Zhou et al., 1998b, 221 (male, female) (first record from China); Bae and Liu, 1999, 5; Quan et al., 2002, 253.

**Distribution:** most part of China, Russian.

**Subgenus *Caucasiron* Kluge, 1997**

**202. *Epeorus (Caucasiron) extraordinarius* Chen, Wang and Zhou, 2010**

*Epeorus (Caucasiron) extraordinarius* Chen, Wang and Zhou, 2010, 62, figs. 1–39 (all life stages). Type: Male, China (Guizhou).

**Distribution:** South China.

**Genus *Heptagenia* Walsh, 1863**

**203. *Heptagenia chinensis* Ulmer, 1919**

*Heptagenia chinensis* Ulmer, 1919, 73, fig. 52–53 (male, female). Types. Male, female, Beijing.

*Heptagenia chinensis*: Ulmer, 1925, 110; Navás, 1934, 12; Wu, 1935, 252; Ulmer, 1935–1936, 215; Gui, 1985, 84; Tshernova et al., 1986, 119; You and Gui, 1995, 43, fig. 39 (male)

**Distribution:** China (northern), Russia, Japan.

**204. *Heptagenia costata* Navás, 1936**

*Heptagenia costata* Navás, 1936, 120, fig. 80 (female).

Types: Female, Kuling.

*Heptagenia costata*: Gui, 1985, 84; You and Gui, 1995, 43, fig. 38 (male)

**Distribution:** China (Jiangxi=Kiangsi).

**205. *Heptagenia davidica* Navás, 1934**

*Heptagenia davidica* Navás, 1934b, 12, fig. 51 (male).

Type: Male, Moupin, Guangxi.

*Heptagenia davidica*: Wu, 1935, 252; Ulmer, 1935–1936, 215; Gui, 1985, 84.

**Distribution:** China (Guangxi).

**206. *Heptagenia flava* Rostock, 1878**

*Heptagenia flava* Rostock, 1878, 90, adults. Type: Male, Europe.

*Heptagenia flava*: Eaton, 1885, 270 (subimago, male and

female).

*Heptagenia* na Imanishi, 1940, 256, fig. 46 (nymph, first record from China) (named by Bajkova, 1972, 225).

*Heptagenia arsenjevi* Tshernova, 1952. Synonymized by Bajkova, 1972, 225.

*Heptagenia (Heptagenia) flava* Kluge, 1988, 296.

*Heptagenia falva* [sic.]: Bae, 1997, 408; Quan et al., 2002, 253.

*Heptagenia flava*: Bae et al., 2000, 395; Ishiwata., 2001, 74.

**Distribution:** Northeast China, Japan

**207. *Heptagenia flavata* Navás, 1922**

*Heptagenia flavata* Navás, 1922, 61, fig. 3–4 (female).

Types: Female, Guangdong (Canton).

*Heptagenia flavata*: Ulmer, 1925, 110; Wu, 1935, 252; Ulmer, 1935–1936, 215; Gui, 1985, 84; Alber-Terseror and Peters, 1985, 222.

**Distribution:** China (Guangdong), Korea.

**208. *Heptagenia kihada* Matsumura, 1931**

*Heptagenia kihada* Matsumura, 1931a, 1478, Japan.

*Heptagenia (Kageronia) kihada*: Kluge, 1988, 293.

*Kageronia suzukiella* Matsumura, 1931a, 1479. Synonymized by Imanishi, 1935, 220.

*Heptagenia kihada*: Matsumura, 1933, 95; Bae et al., 1994, 41; Bae and Yoon, 1997, 48; Quan et al., 2002, 254, figs. 34, 90, 154, 172, 181, 202 (nymph) (first record from China).

**Distribution:** China (Heilongjiang), Japan, Russia, Mongolia, Korea.

**209. *Heptagenia kyotoensis* Gose, 1963**

*Heptagenia kyotoensis* Gose, 1963, 143, figs. 7–13 (adults). Type: Male, Japan.

*Heptagenia* sp. nb Imanishi, 1940, 257, fig. 47 (nymph, Korea). Synonymized by Gose, 1979, 51.

*Heptagenia* sp. nIV Hashimoto, 1955 (see Ishiwata, 2001, 75).

*Heptagenia kyotoensis*: Bae et al., 1994, 41; Bae and Yoon, 1997, 48; Ishiwata, 2001, 75; Quan et al., 2002, 254, figs. 35, 48, 77, 91, 105, 133, 155, 173, 182 (nymph) (first record from China).

**Distribution:** China (Heilongjiang), Korea, Japan.

**210. *Heptagenia limbata* Navás, 1936**

*Heptagenia limbata* Navás, 1936, 119 (male, female).

Types: Male, female, Kuling.

*Heptagenia limbata*: Gui, 1985, 84.

**Distribution:** China (Jiangxi).

**211. *Heptagenia minor* She, Gui and You, 1995**

*Heptagenia minor* She, Gui and You, 1995, 73, fig. 2 (male, female, male subimago). Types: Male, female, Qionghai and Shibi of Hainan.

*Heptagenia minor*: You and Gui, 1995, 41, fig. 37 (male); Zhou et al., 1998, 221; Su and Zhou, 1998b, 28; Gui et al. 1999, 329, fig. 11–9 (male).

**Distribution:** South and East of China.

**212. *Heptagenia sulphurea albicauda* (Müller, 1776)**

*Ephemera sulphurea* Müller, 1776, 142 (imago).

*Heptagenia sulphurea*: Eaton, 1883–1888. Generic combination.

*Heptagenia dalecarlica* Bengtsson, 1912b, 116. Synonymized by Kluge, 1987, 317.

*Heptagenia soldatovi* Tshernova, 1952. Synonymized by Bajkova, 1972, 224.

*Heptagenia* (*Heptagenia*) *sulphurea*: Kluge, 1987, 317.

*Heptagenia sulphurea albicauda* Kluge, 1987, 318, figs. 47, 51–53, 67–71 (nymph). Type: Nymph, Russia.

*Heptagenia sulphurea albicauda* Bae and Liu, 1999, 5 (first record from China); Quan et al., 2002, 254, fig. 36 (nymph).

**Distribution:** China (Jilin), Russia.

**Genus *Nixe* Flowers, 1980**

**213. *Nixe* (*Nixe*) *littorosus* Kang and Yang, 1994**

*Nixe* (*Nixe*) *littorosus* Kang and Yang, 1994, 23, fig. 9, 10, 19, 20 (nymph). Types: Nymph, Sinchungheng, Hsini, Nantou County, Taiwan.

**Distribution:** China (Taiwan).

**214. *Nixe* (*Nixe*) *mitificus* Kang and Yang, 1994**

*Nixe* (*Nixe*) *mitificus* Kang and Yang, 1994, 28, fig. 11, 21, 22 (nymph). Types: Kanchiao, Shuangchi, Taipei County, Taiwan.

**Distribution:** China (Taiwan).

**215. *Nixe* (*Nixe*) *obscurus* Kang and Yang, 1994**

*Nixe* (*Nixe*) *obscurus* Kang and Yang, 1994, 30, fig. 12, 23, 24 (nymph). Types: Nymph, Wufeng, Hsinchu

County, Taiwan.

**Distribution:** China (Taiwan).

**Genus *Paegniodes* Eaton, 1881**

**216. *Paegniodes cupulatus* (Eaton, 1871)**

*Heptagenia cupulata* Eaton, 1871, 138, pl. 6, fig. 14–14a (male, female). Type: Northern China.

*Paegniodes cupulatus* Eaton, 1881, 23; Eaton, 1885, 261, pl. 23 fig. 4, pl. 24 fig. 4 (male, female); Ulmer, 1925, 107, figs. 98–102 (male, female); Hsu, 1931, 39; Wu, 1935, 252; Hsu, 1936a, 236, fig. 8–13 (male, female); Ulmer, 1935–1936, 211, 215 (male); Kimmins, 1960, 283; Uéno, 1969, 228, fig. 26–36 (male); Tshernova, 1976, 343, fig. 41 (nymph); Gui, 1985, 84; Hubbard, 1986, 250; You and Gui, 1995, 86, fig. 88 (male, female); Su and Zhou, 1998, 28; Gui et al., 1999, 334, fig. 11–16 (male).

*Heptagenia cupulata*: Palmén, 1884, 74; Kimmins, 1971, 312

*Paegniodes fukienensis* Hsu, 1931, 39, fig. 1–3 (male); Wu, 1935, 252; Ulmer, 1935–1936, 215; Tshernova, 1976, 343; Gui, 1985, 84; Gui et al., 1999, 335, fig. 11–17 (male). Synonymized by Hsu, 1936a, 236.

**Distribution:** China (Hong Kong, Tibet, Zhejiang, Fujian, Guangdong).

**Genus *Parafronurus* Zhou and Braasch, 2003**

**217. *Parafronurus youi* Zhou and Braasch, 2003**

*Parafronurus youi* Zhou and Braasch, 2003, 148, figs. 1–20, adults and nymphs. Type: Male, Nanjing, China.

**Distribution:** China (Jiangsu and Zhejiang).

**Genus *Rhithrogena* Eaton, 1881**

**218. *Rhithrogena ampla* Kang and Yang, 1994**

*Rhithrogena ampla* Kang and Yang, 1994, 12, fig. 3, 16 (nymph). Types: Nymph, Tzuenchiao, Hsiulin, Hualin County, Taiwan.

**Distribution:** China (Taiwan).

**219. *Rhithrogena bajkovae* Sova, 1973**

*Rhithrogena bajkovae* Sova, 1973b, 24. Types: Adults, Russia.

*Rhithrogena bajkovae*: Zhou and Zheng, 2004, 82, figs. 1–2 (first record from China).

**Distribution:** Northeast China, Russia.

**220. *Rhithrogena lepnevae* Brodsky, 1930**

*Rhithrogena lepnevae* Brodsky, 1930a, 39. Types: Male, Russia.

*Rhithrogena lepnevae*: Zhou and Zheng, 2004, 82, Figs. 3–4 (first record from China).

**Distribution:** Northeast China, Russia.

**221. *Rhithrogena lutea* Zhou and Zheng, 2004**

*Rhithrogena lutea* Zhou and Zheng, 2004c, 83, fig. 14. Types: Male, Sichuan.

**Distribution:** China (Sichuan).

**222. *Rhithrogena orientalis* You, 1990**

*Rhithrogena orientalis* You, 1990, 60, pl. 2, fig. 6–10 (male). Types: Male, Sangang, Fujian Prov.

*Rhithrogena orientalis*: You and Gui, 1995, 64, fig. 65 (male); Gui et al. 1999, 333, fig. 11–13 (male); Zhou and Zheng, 2004, 82, figs. 5–6 (male).

*Rhithrogena sangangensis* You, 1990, 60. Synonymized by Zhou and Zheng, 2004, 83.

*Rhithrogeniella sangangensis*: Gui et al. 1999, 333, fig. 11–15 (male) (mis-spelling).

**Distribution:** China (Fujian).

**223. *Rhithrogena parva* (Ulmer, 1912)**

*Ecdyurus parvus* Ulmer, 1912, 374, fig. 8, 9, 10 (male, female). Types: Male, female, Taihorin, Taihorinsho, Taiwan.

*Rhithrogena formosicola* Matsumura, 1931, 1479 (Synonymized by Kang and Yang, 1994, 8).

*Rhithrogena vitrea* Walker var. *parva* Ulmer, 1920, 143; Uéno, 1931, 213; Gui, 1985, 87.

*Rhithrogena parva*: Ulmer, 1940, 574; Uéno, 1969, 222, 227, fig. 20–25 (female); Kang and Yang, 1994, 8, fig. 2, 15 (nymph); Ishiwata, 2001, 75.

**Distribution:** China (Taiwan), Japan (Ryukyu Islands).

**224. *Rhithrogena trispina* Zhou and Zheng, 2000**

*Rhithrogena trispina* Zhou and Zheng, 2000, 323, figs. 1–9, males. Types: Male, Zhejiang.

*Rhithrogena trispina*: Zhou and Zheng, 2004, 83, figs. 10–13.

**Distribution:** China (Zhejiang).

**225. *Rhithrogena wuyiensis* (Gui et al., 1999)**

*Paegniodes wuyiensis* Gui et al., 1999, 336, fig. 11–18 (male). Types: Male, Sangang, Fujian (Transferred by Zhou and Zheng, 2004, 83).

**Distribution:** China (Fujian).

**226. *Rhithrogena (Tumungula) unica* Zhou and Peters, 2004**

*Rhithrogena (Tumungula) unica* Zhou and Peters, 2004, 901, figs. 1–25, adults and nymph. Type: Male, Yunnan.

**Distribution:** China (Yunnan and Guizhou).

**Genus *Thalerosphyrus* Eaton, 1881**

**227. *Thalerosphyrus cingulatus* Navás, 1933**

*Thalerosphyrus cingulatus* Navás, 1933b, 18, fig. 33 (adult). Type: Adults, Chusan, Zhejiang.

*Thalerosphyrus cingulatus*: Wu, 1935, 252; Ulmer, 1935–1936, 215; Gui, 1985, 86.

**Distribution:** China (Zhejiang).

**Isonychidae**

**Genus *Isonychia* Eaton, 1871**

**228. *Isonychia formosana* (Ulmer, 1912)**

*Chirotonetes formosanus* Ulmer, 1912, 369, 371, fig. 1–3 (male, female). Types: Male, female, Taihorinsho, Taiwan.

*Isonychia formosana*: Uéno, 1931, 213, 215; Gui, 1985, 80; Kang and Yang, 1994, 1, figs. A–M (nymph); You and Gui, 1995, 24, fig. 19.

**Distribution:** China (Taiwan and Guangdong).

**229. *Isonychia (Isonychia) ignota* (Walker, 1853)**

*Baetis ignotus* Walker, 1853, 571 (type locality: unknown, probably western Europe; holotype in Natural History Museum, London; figured by Kimmins, 1960, 275).

*Isonychia ignota*: Eaton, 1871, 29.

*Chirotonetes ignotus*: Eaton, 1885, 205.

*Palingenia roeselii* Joly, 1872, 67.

*Jolia roeselii*: Eaton, 1881, 192.

*Isonychia ferruginea* Albarda, 1878, 128. Synonymized by Eaton, 1885, 205.

*Isonychia hainanensis*: She and You, 1988, 29, synonymized by Tiunova, Kluge and Ishiwata, 2004, 7

(nymph and adults, Figs. 1–11, 101–104) (probably wrong)

*Isonychia hainaensis*: You and Gui, 1995, 25, fig. 20 (male); She et al., 1995, 79.

**Distribution:** most China, Japan, Russia.

**230. *Isonychia guixiesis* Wu, Gui and Shi, 1992**

*Isonychia guixiesis* Wu, Gui and Shi, 1992, 78 (male).

Types: Male, Jiangxi province, China.

*Isonychia guixiesis*: You and Gui, 1995, 25, fig. 21 (male); Gui and Zhou, 1999, 126, figs. 7–22 (B–D).

*Isonychia sinensis* Wu et al., 1992, 79; You and Gui, 1995, 27, fig. 22 (male). **New synonym**

**Distribution:** China (Jiangxi).

**231. *Isonychia japonica* Ulmer, 1920**

*Chirotonetes japonicus* Ulmer, 1919–1920, 59, fig. 43 (male, female). Types: Male, female, Japan, Korea (Museum Berlin, Museum Brussel)

*Chirotonetes japonicus* Ulmer, 1925, 101 (first record from China); Wu, 1935, 251; Gui, 1985, 79.

*Chirotonetes* (?) *japonicus* [sic]: Ueno, 1928, 52 (nymph)

*Isonychia japonica*: Ulmer, 1935–1936, 215; Gui, 1985, 80; You and Gui, 1995, 22, fig. 17

*Isonychia japonica*: Uéno and Okamoto, 1932, 1956; Matsumura, 1933, 66; Imanishi, 1933, 67; Ulmer, 1936b, 4; Imanishi, 1940, 234; Quan et al., 2002, 255.

*Sparrea violacea* Matsumura, 1931a, 1475; Matsumura, 1931b, 200. Synonymized by Imanishi 1933, 67.

*Isonychia* (*Isonychia*) *japonica*: Ishiwata 2001a, 69; 2001b, 183; Tiunova, Kluge and Ishiwata, 2004, 28, all stages, figs. 77–90, 115–119 (doubt the distribution in China).

**Distribution:** Most China, Japan, Korea, Mongolia, Russia.

**232. *Isonychia kiangsinensis* Hsu, 1936**

*Isonychia kiangsinensis* Hsu, 1936b, 323, fig. 8–10 (male, male subimago). Types: Male, male subimago, Shang Jao, Sheng Mi.

*Isonychia kiangsinensis*: Gui, 1985, 80; You and Su, 1987b, 334, fig. 22–32 (nymph); You and Gui, 1995, 23; Su and Zhou, 1998, 28; Gui et al., 1999, 326, fig. 11–3.

**Distribution:** China (Jiangxi and Fujian).

**233. *Isonychia* (*Isonychia*) *sexpetala* Tiunova, Kluge and Ishiwata, 2004**

*Isonychia* (*Isonychia*) *sexpetala* Tiunova, Kluge and Ishiwata, 2004, 7, figs. 12–22, 105–107 (nymph and adults). Type: Male, Russia and China.

**Distribution:** northeast of China, Far East of Russian.

**Leptophlebiidae**

**Genus *Choroterpes* Eaton, 1881**

**Subgenus *Cryptopenella* Gillies, 1951**

**234. *Choroterpes* (*Cryptopenella*) *anhuiensis* Wu and You, 1992.**

*Choroterpes* (*Euthraulius*) *anhuiensis* Wu and You, 1992, 64, fig. 1–14 (male, female). Types: Male, female, Tangko, Anhui.

*Choroterpes* (*Euthraulius*) *anhuiensis*: You and Gui, 1995, 74, fig. 75 (male, female); Zhou et al., 1998, 221; Su et al., 1995, 42.

*Choroterpes* (*Cryptopenella*) *anhuiensis*, Zhou, 2006, 297.

**Distribution:** China (Auhui, Henan and Zhejiang).

**235. *Choroterpes* (*Cryptopenella*) *facialis* (Gillies, 1951)**

*Cryptopenella facialis* Gillies, 1951, 127, fig. 11–12, 14 (male, female, nymph). Type: Male, Hong Kong.

*Cryptopenella facialis* Peters and Edmunds, 1970, 202, fig. 46–47, 93–94, 122, 145, 336–345 (male, female, nymph); Kimmins, 1971, 313; Hubbard, 1986, 251; You and Gui, 1995, 79, fig. 80 (male, female).

*Choroterpes* (*Cryptopenella*) *facialis* Zhou, 2006, 298.

**Ditribution:** China (Hong Kong).

**236. *Choroterpes* (*Cryptopenella*) *tumebasalis* Zhou, 2006**

*Choroterpes* (*Cryptopenella*) *tumebasalis* Zhou, 2006, 296, figs. 1–14, 16, 19–24, adults and nymph. Type: Male, Yunnan.

**Distribution:** China (Yunnan).

Subgenus *Euthraulius* Barnard, 1932

**237. *Choroterpes* (*Euthraulius*) *altioculus* Kluge, 1984**

*Choroterpes trifurcata* Imanishi, 1940, 189 (nec. *Choroterpes trifurcata* Uéno, 1928, 40). Type: Nymph, Liaoning Province of China and Korea (mis-identification, renamed by Kluge, 1984a, 722).

*Choroterpes trifurcata*: Gose, 1963a, 140 (nec. *Choroterpes trifurcata* Uéno, 1928, 40). Misidentification, renamed by Kluge, 1984a, 722.

*Choroterpes (Euthraulius) altiocus* Kluge, 1984a, 722; Tshernova et al., 1986, 136; Bae et al., 1994, 43; Quan et al., 2002, 255;

**Distribution:** China (Liaoning and Neimenggu), Korea, Russia, Japan.

**238. *Choroterpes (Euthraulius) curviforceps* Wu and You, 1989**

*Choroterpes (Euthraulius) curviforceps* Wu and You, 1989, 93, fig. 16–30 (male, female). Types: Male, female, Yixing, Jiangsu Prov.

*Choroterpes curviforceps*: Wu et al., 1987, 81, fig. 11–20 (nymph); You and Gui, 1995, 73, fig. 74 (male, female); Su et al., 1995, 42.

**Distribution:** China (Jiangsu).

**239. *Choroterpes (Euthraulius) nanjingensis* You et al., 1979**

*Choroterpes (Euthraulius) nanjingensis*, You et al., 1979, 51, fig. 1–27 (male, female, subimago, nymph). Types: Male, female, nymph, Nanjing, Jiangsu Prov.

*Choroterpes (Euthraulius) nanjingensis*: You et al., 1980, 388; Gui, 1985, 88; You and Gui, 1995, 69, fig. 70 (male, female).

*Choroterpes nanjinensis*: You and Su., 1987b, 332, fig. 1–10 (nymph).

**Distribution:** China (Jiangsu).

**240. *Choroterpes (Euthraulius) trifurcata* Uéno, 1928**

*Choroterpes trifurcata* Uéno, 1928, 40, fig. 16, 116a–16j (nymph). Type: Nymph, Taihoku, Taiwan. Mis-identified as *Choroterpes (Euthraulius) altiocus* by Kluge, 1984a, 722.

*Choroterpes trifurcatus*: Kang and Yang, 1994d, 59, fig. 1, 10 (nymph, egg).

*Choroterpes (Euthraulius) trifurcata*: You and Gui, 1995, 70, fig. 17 (male, female, egg) (misspelling).

**Distribution:** China (Hong Kong and Taiwan).

**241. *Choroterpes (Euthraulius) yixingensis* Wu and You, 1989**

*Choroterpes (Euthraulius) yixingensis* Wu and You, 1989, 91, fig. 1–15 (male, female). Types: Male, femlae,

Yixing, Jiangsu Prov.

*Choroterpes (Euthraulius) yixingensis*: Wu et al., 1987, 81, fig. 1–10 (nymph). You and Gui, 1995, 72, fig. 73 (male, female)

**Distribution:** China (Jiangsu).

**Subgenus *Choroterpes* Eaton, 1881**

**242. *Choroterpes (Choroterpes) hainanensis* She, Gui and You, 1995**

*Choroterpes hainanensis* She, Gui and You, 1995, 74, fig. 3 (male, female, male subimago). Types: Male, female, subimago, serval place of Hainan.

*Choroterpes (Choroterpes) hainanensis*: You and Gui, 1995, 75, fig. 77 (male, female)

**Distribution:** China (Hainan).

**243. *Choroterpes (Choroterpes) petersi* Tong and Dudgeon, 2003**

*Choroterpes (Choroterpes) petersi* Tong and Dudgeon, 2003a, 71, figs. 1–12 (nymph and adults). Types: Male, Hong Kong.

**Distribution:** China (Hong Kong).

**244. *Choroterpes (Choroterpes) taiwanensis* Kang and Yang, 1994**

*Choroterpes taiwanensis* Kang and Yang, 1994d, 60, fig. 2, 11 (nymph, egg). Types: Kanchio, ShuangHsinchu Hsieni, Taibei County, Taiwan.

**Distribution:** China (Taiwan).

**Genus *Choroterpides* Ulmer, 1940**

**245. *Choroterpides hainanensis* She, Gui and You, 1995**

*Choroterpides hainanensis* She, Gui and You, 1995, 75, fig. 5 (male, male subimago). Types: Male, male subimago, Tongshi, Hainan.

*Choroterpides hainanensis*: You and Gui, 1995, 77, fig. 79 (male, female)

**Distribution:** China (Hainan).

**246. *Choroterpides nigella* Kang and Yang, 1994**

*Choroterpides nigella* Kang and Yang, 1994d, 63, fig. 3, 12 (nymph, egg). Types: Kuolai, Pinglin, Taipei, Taiwan.

*Choroterpides nigella*: Ishiwata, 2001, 56.

**Distribution:** China (Taiwan), Japan.

**Genus *Gilliesia* Peters and Edmunds, 1970**

**247. *Gilliesia pulchra* Zhou, 2004**

*Gilliesia pulchra* Zhou, 2004, 1, figs. 1–6, adults. Types: Male, Chongqing and Guizhou.

**Distribution:** China (Chongqing and Guizhou).

**Genus *Habrophlebiodes* Ulmer, 1920**

**248. *Habrophlebiodes gilliesi* Peters, 1963**

*Habrophlebiodes gilliesi* Peters, 1963, 41, fig. 1–11 (male, female). Type: Male, Fan Ling Near Kowloon, Hong Kong (Utah).

*Habrophlebiodes gilliesi*: Tsui and Peters, 1970, 89, fig. 1–13 (nymph); Peters and Edmunds, 1970, 187, fig. 19–21, 77, 112, 135, 323 (male, female); Dudgeon, 1982, 225; Gui, 1985, 88; Hubbard, 1986, 251; You and Gui, 1995, 82, fig. 84 (male, female); She et al., 1995, 80; Gui et al., 1999, 336, fig. 11–19 (male).

**Distribution:** South China.

**249. *Habrophlebiodes tenella* Kang and Yang, 1994**

*Habrophlebiodes tenella* Kang and Yang, 1994d, 72, fig. 7, 17 (nymph, egg). Types: Nymph, Dungshyger, Pinghsi, Taipei, Taiwan.

**Distribution:** China (Taiwan).

**250. *Habrophlebiodes zijinensis* You and Gui, 1995**

*Habrophlebiodes zijinensis* You and Gui, 1995, 83, fig. 85 (male, female). Types: Male, female, Nanjing. Mentioned and cited by mistake this species has been reported in 1993.

*Habrophlebiodes zijinensis* Gui, Zhang and Wu, 1996, 106 (adults, nymph); Su and Zhou, 1998, 28.

**Distribution:** China (Jiangsu and Zhejiang).

**Genus *Paraleptophlebia* Lestage, 1917**

**251. *Paraleptophlebia cincta* Retzius, 1783**

*Ephemera cincta* Retzius, 1783, 57. Type: Adult, Europe.  
*Ephemera nigra* Fourcroy, 1785, 352. Synonymized by Eaton, 1871, 87.

*Ephemera inanis* Gmelin, 1790, 2629. Synonymized by Eaton, 1871, 87.

*Ephemera albipennis* Fabricius, 1793; 70. Synonymized by Eaton, 1871, 87.

*Ephemera hyalinata* Zetterstedt, 1840, 1044. Synonymized by Eaton, 1871, 87.

*Cloe fuscata* Pictet, 1843–1845, 251. Synonymized by Eaton, 1871, 87.

*Leptophlebia cincta*: Eaton, 1871, 87; Tshernova et al., 1986, 136 (first record from China).

*Paraleptophlebia cincta* Lestage, 1917, 340; Zhou and Zheng, 2003a, 84, fig. 1–4 (male).

**Distribution:** China (Henan), most area of Europe including Russia.

**252. *Paraleptophlebia erratica* Kang and Yang, 1994**

*Paraleptophlebia erratica* Kang and Yang, 1994d, 76, fig. 9, 20 (nymph, egg). Types: Nymph, Shanping, Liukuei, Kaohsiung County, Taiwan.

**Distribution:** China (Taiwan).

**253. *Paraleptophlebia japonica* (Matsumura, 1931)**

*Baetis japonicus* Matsumura, 1931a, 1472, Japan.

*Paraleptophlebia chocolata*: Imanishi, 1937b, 330, fig. 7 (all stages). Synonymized by Ishiwata, 2001, 56.

*Paraleptophlebia chocoarata* [!]: Imanishi, 1940, 184;

*Leptophlebia* (*Neoleptophlebia*) *chocolata*: Kluge, 1997a, 234.

*Paraleptophlebia chocolata*: Quan et al., 2002, 255, figs. 39, 81, 107, 134, 135, 157, 188, 203 (nymph, first record from China).

**Distribution:** China (Heilongjiang), Korea, Russia, Mongolia, Japan.

**254. *Paraleptophlebia magica* Zhou and Zheng, 2003**

*Paraleptophlebia magica* Zhou and Zheng, 2003a, 85, figs. 5–11 (male). Type: Male, Shanxi province.

**Distribution:** China (Jiangsu, Zhejiang, Jiangxi, Fujian, Shanxi and Sichuan).

**255. *Paraleptophlebia spina* Kang and Yang, 1994**

*Paraleptophlebia spina* Kang and Yang, 1994d, 75, fig. 8, 19 (nymph, egg). Types: Nymph, Tienchih, Lenai, NTH, Taiwan.

**Distribution:** China (Taiwan).

**Genus *Indialis* Peter and Edmunds, 1970**

**256. *Indialis hainanensis* She, Gui and You, 1995**

*Indialis hainanensis* She, Gui and You, 1995, 76, fig. 5 (male, female, male subimago). Types: Male, female, male subimago, Tongshi of Hainan.

*Indialis hainanensis*: You and Gui, 1995, 84, fig. 87



(male, female).

**Distribution:** China (Hainan).

**Genus *Isca* Gillies, 1951**

**Subgenus *Isca* Gillies, 1951**

**257. *Isca (Isca) purpurea* Gillies, 1951**

*Isca purpurea* Gillies, 1951, 128, fig. 15–22 (male, female). Types: Male, female, Hong Kong, 15–20 mi inland from Kowloon.

*Isca (Isca) purpurea*: Peters and Edmunds, 1970, 215, fig. 71, 106, 330, 350–357 (male, nymph); Kimmins, 1971, 319; Hubbard and Peters, 1978, 24; Hubbard, 1986, 251.

**Distribution:** China (Hong Kong), India.

**Genus *Leptophlebia* Westwood, 1840**

**258. *Leptophlebia duplex* Navás, 1936**

*Leptophlebia duplex* Navás, 1936, 118, fig. 78 (female).

Types: Female, Kuling.

*Leptophlebia duplex*: Gui, 1985, 89.

**Distribution:** China (Jiangxi).

**259. *Leptophlebia simplex* Navás, 1936**

*Leptophlebia simplex* Navás, 1936, 119, fig. 79 (female).

Types: Female, Kuling.

*Leptophlebia simplex*: Gui, 1985, 88.

**Distribution:** China (Jiangxi).

**260. *Leptophlebia wui* Ulmer, 1936**

*Leptophlebia wui* Ulmer, 1935–1936, 206, 213, fig. 2–5 (male, female, subimago). Types: Male, female, subimago, Beijing.

*Leptophlebia wui*: Gui, 1985, 88; You and Gui, 1995, 80, fig. 82 (male, female);

**Distribution:** China (Beijing).

**Genus *Thraulius* Eaton, 1881**

**261. *Thraulius fatuus* Kang and Yang, 1994**

*Thraulius fatuus* Kang and Yang, 1994d, 64, fig. 4, 13 (nymph, egg). Types: Nymph, Taiping, TCH, Taiwan.

*Thraulius fatuus*: Ishiwata, 2001, 57.

**Distribution:** China (Taiwan), Japan.

**262. *Thraulius femoratus* Li et al., 2006**

*Thraulius femoratus* Li, Liu and Zhou, 2006a 641, figs. 1–30, adults and nymphs. Type: Male, Nanjing.

**Distribution:** China (Jiangsu).

**263. *Thraulius macilentus* Kang and Yang, 1994**

*Thraulius macilentus* Kang and Yang, 1994d, 67, fig. 5, 14 (nymph, egg). Types: Nymph, Dungshyhger, Pingshi, Taipei, Taiwan.

*Thraulius macilentus*: Ishiwata, 2001, 57.

**Distribution:** China (Taiwan), Japan..

**264. *Thraulius semicastanea* (Gillies, 1951)**

*Habrophlebiodes semicastanea* Gillies, 1951, 125, fig. 9, 10, 13 (male). Types: Male, India.

*Thraulius semicastanea* Peters and Edmunds, 1970, 203; Gui et al, 1999, 337, fig. 11–20 (male); She et al., 1995, 80 (first record from China).

**Distribution:** China (Hainan and Fujian).

**265. *Thraulius umbrosus* Kang and Yang, 1994**

*Thraulius umbrosus* Kang and Yang, 1994d, 68, fig. 6, 15, 16 (nymph, egg). Types: Nymph, Dona spring, Maulin, Kaohsiung County, Taiwan.

**Distribution:** China (Taiwan).

**Metretopodidae (first record from China)**

**Genus *Metretopus* Eaton, 1901**

**266. *Metretopus borealis* (Eaton, 1871)**

*Heptagenia borealis* Eaton, 1871, 137 (male). Type: Male, Finmark (transferred by Brekke, 1938, 69)

*Rhithrogena borealis*: Eaton, 1885, 255 (male).

*Metretopus norwegicus* [sic.] Eaton, 1901, 254 (adults); Bengtsson, 1909, 16 (nymph), synonymized by Brekke, 1938, 69.

**Distribution:** Holarctic, China (Inner Mongolia and Helongjiang).

**Neophemeridae**

**Genus *Neophemera* McDunnough, 1925b**

**267. *Neophemera projecta* Zhou and Zheng, 2000**

*Prosopistoma unicolor* Zhou and Zheng, 2000, 328, figs. 1–9, nymph. Type: Nymph, Yunnan and Sichuan.

**Distribution:** China (Henan, Yunnan and Sichuan).

**Genus *Potamanthellus* Lestage, 1930a**

**268. *Potamanthellus amabilis* (Eaton, 1892)**

*Rhoenanthus amabilis* Eaton, 1892, 188. (male). Types: Male, Vietnam [lectotype designed by Kimmins, 1960, 310].

*Potamanthellus horai* Lestage, 1930a, 120. Synonymized by Ulmer, 1932, 211.

*Rhoenanthus amabilis*: Ulmer, 1925, 100 (first record from China)

*Rhoenanthodes amabilis*: Lestage, 1930a, 136; Wu, 1935, 249; Hsu, 1936–1938, 137 (male).

*Potamanthellus amabilis*: Ulmer, 1932, 211; Ulmer, 1935–1936, 213; Gui, 1985, 92; You and Gui, 1995, 125, fig. 132; Bae and McCafferty, 1998, 40, fig. 12, 16, 22, 29, 32 (male, female, nymph).

*Neophemeropsis cuaraensis* Dang, 1967, 160. Synonymized by Bae and McCafferty, 1998, 41.

**Distribution:** Southern China, Oriental (Burma, Thailand and Vietnam).

**269. *Potamanthellus caenoides* (Ulmer, 1940)** (new record from China)

*Neophemeropsis caenoides* Ulmer, 1939–1940, 485, female (lectotype designed by Synonymized by Bae and McCafferty, 1998, 42).

*Potamanthellus caenoides*: Bae and McCafferty, 1998, 42. Generic combination.

**Distribution:** China (Yunan), Oriental.

**270. *Potamanthellus chinensis* Hsu, 1936**

*Potamanthellus chinensis* Hsu, 1936b, 321, fig. 4 (male). Types: Male, Shang Jao (Shangrao), Jiangxi Prov. And Beishan (Pei Shan), Kirin (Jilin) prov.

*Potamanthellus chinensis*: Hsu, 1936, 131; Gui, 1985, 92; You and Gui, 1995, 125, fig. 133 (male); Bae and McCafferty, 1998, 44, fig. 4, 8, 10, 14, 18, 19, 24, 28 (male, female, nymph); Bae, 1997, 408.

*Potamanthellus shaowuensis* Gui et al. 1999, 343, fig. 11–28 (male). **New synonym**

*Potamanthellus chinensis*: Bae and McCafferty, 1998, 44 (in part); Quan et al., 2002, 256.

*Potamanthellus edmundsi* Bae and McCafferty, 1998, 48.

**New synonym**

**Remarks:** Hsu (1936) described this species upon some Chinese south and northeast specimens. Bae and McCafferty (1998) believed that the southern materials represent the species *Potamanthellus edmundsi* but the northeast collections are this species. However, because

of the holotype is from southern China, here this species is validated but restricted to the specimens from North-eastern China, Korea and Russia.

**Distribution:** China (southern), Oriental.

**271. *Potamanthellus rarus* Tiunova and Levanidova, 1989**

*Neophemeropsis rarus* Tiunova and Levanidova, 1989, 242, fig. 1–11 (nymph). Type: Nymph, Russia.

*Potamanthellus rarus*: Tiunova, 1991, 136, figs. 1–12 (imago). Generic combination.

*Neophemera* KUa Yoon and Bae, 1988, 181 (named and misidentified as *Potamanthellus chinensis* by Bae and McCafferty, 1998, 44).

*Potamanthellus chinensis* (nec. *Potamanthellus chinensis* Hsu: 1936b, 321): Bae and McCafferty, 1998, 44 (in part, misidentification).

**Remarks:** This species was synonymized as *Potamanthellus chinensis* by Bae and McCafferty (1998). Here it is believed as representing partial materials of Hsu's types and deserves a valid name.

**Distribution:** China (northeastern), Russia, Korea.

## Oligoneuriidae

### Genus *Oligoneuriella* Ulmer, 1924

**272. *Oligoneuriella rhenana* (Imhoff, 1852)**

*Oligoneuria rhenana* Imhoff, 1852, 177 (male, female). Types: Male, female, Europe and Africa.

*Oligoneuriella rhenana* Ulmer, 1924, 31. Generic combination; Uéno, 1941, 19, fig. 4, 5 (male) (first record from China)

**Distribution:** China (Helongjiang), Asia, Europe and Africa.

## Palingeniidae

### Genus *Anagenesia* Eaton, 1883

**273. *Anagenesia paradoxa* Buldovskogo, 1935**

*Anagenesia paradoxa* Buldovskogo, 1935, 835, male. Type: Male, Russia.

*Anagenesia paradoxa*: Tshernova et al., 1986, 108 (first record from China).

**Distribution:** Northeast Asia.

### Genus *Chankagenesia* Buldovskij, 1935

**274. *Chankagenesia yangi* (Hsu, 1936)**

*Anagenesia yangi* Hsu, 1936b, 319, fig. 3–6 (male, female subimago). Types: Male, female, Poyang Lake, Hsieh Shan, Jiangxi.

*Anagenesia yangi*: Hsu, 1936–1938, 139, fig. 4–6 (male, female subimago); Gui, 1985, 93; You and Gui, 1995, 88, fig. 90 (male, female).

*Chankagenesia? yangi*: Demoulin, 1965a, 316 (Generic combination).

*Chankagenesia yangi*: Kluge, 2004, 255.

**Distribution:** China (Jiangxi).

## Polymitarciidae

### Genus *Ephoron* Williamson, 1802

(=*Polymitarciys* Eaton, synonymized by Spieth, 1940, 111; = *Eopolymitarciys* Tshernova, synonymized by Edmunds and Traver, 1954, 239)

#### 275. *Ephoron hainanensis* Gui and Zhang, 1997

*Ephoron hainanensis* Gui and Zhang, 1997, 50, figs., 1–9, male and female. Type, Male, Hainan Province.

**Distribution:** China (Hainan).

#### 276. *Ephoron nanchangi* Hsu, 1936

*Polymitarciys nanchangi* Hsu, 1936b, 322, fig. 5 (male).

Types: Male, Nanchang, Jiangxi.

*Polymitarciys nanchangi*: Hsu, 1937, 143, fig. 7 (male); Gui, 1985, 92.

*Ephoron nanchangi*: You and Gui, 1995, 90, fig. 92 (female)

**Distribution:** China (Jiangxi).

#### 277. *Ephoron virgo* (Oliver, 1791)

*Ephemera virgo* Oliver, 1791, 419 (female). Types: Female, Europe.

*Ephemera marocana* Fabricius, 1793, 69. Synonymized by Pictet, 1843–1845, 141.

*Ephemera lutea* Seetzen, 1794, 41. Synonymized by Eaton, 1883, 45.

*Ephemera albipennis* Voigt, 1840, 309. Synonymized by Eaton, 1883, 45.

*Palingenia horaria* Burmeister, 1839, 802. Synonymized by Pictet, 1843–1845, 141.

*Polymitarciys virgo* Pictet, 1843–1845, 141; Eaton, 1868, 84; Uéno, 1941, 16, fig. 1–2 (male, female subimago) (first record from China)

*Polymitarciys virgo* Gui, 1985, 92.

*Ephoron virgo* McDunnough, 1926. Generic combination; You and Gui, 1995, 90, fig. 91 (male, female); Quan et al., 2002, 256.

**Remarks:** The Chinese materials of *Ephoron virgo* (Oliver, 1791) from northeast is probable the real *Ephoron shigae*.

**Distribution:** Northeastern China, Holarctic.

#### 278. *Ephoron shigae* (Takahashi, 1924)

*Polymitarciys shigae* [sic]? Takahashi, 1924, 379, fig. 6 (male). Type: Undesignated, Japan.

*Polymitarciys shigae* [sic]: Tsuda, 1952, 229 (nymph).

*Polymitarciys shigae* [sic]: Uéno, 1931, 189 (male); Lestage, 1938, 390.

*Polymitarciys* sp. Uéno, 1930, 30. Named by Ishiwata, 1996, 555.

*Polymitarciys* sp. [sic] Uéno, 1931, 190. Named by Ishiwata, 1996, 555.

*Polymitarciys virgo*: Uéno, 1941, 16 (nec. Olivier, 1791, 419).

*Ephoron shigae*: Uéno, 1973, 525; Gose, 1980, 457; Yoon and Bae, 1988a, 97; Bae et al., 1994, 43; Bae and Yoon, 1997, 49; Ishiwata, 1996, 555; Quan et al., 2002, 256, figs. 41, 51, 98, 99, 136, 206 (nymph, first record from China).

**Distribution:** China (Northeast), Russia, Korea, Japan.

## Potamanthidae

### Genus *Rhoenanthus* Eaton, 1881

#### Subgenus *Potamanthindus* Bae and McCafferty, 1991

279. *Rhoenanthus (Potamanthindus) magnificus* Ulmer, 1920

*Rhoenanthus magnificus* Ulmer, 1919–1920, 11, fig. 9 (male, female, subimago). Types: Male, female, male subimago, Vietnam, China.

*Rhoenanthus magnificus*: Ulmer, 1925, 100; Wu, 1935, 249.

*Neopotamanthodes lanchi* Hsu, 1938, 221, fig. 44–45 (male, female); Gui, 1985, 91; You and Gui, 1995, 127, fig. 135 (male subimago, female). Synonymized by Bae and McCafferty, 1991, 22.

*Rhoenanthus (Potamanthindus) magnificus*: Bae and McCafferty, 1991, 22, fig. 2, 84, 102, 120 (male, fe-

male).

*Rhoenanthopsis magnificus*: Ulmer, 1935–1936, 213; You and Gui, 1995, 125, fig. 134 (male, female).

*Potamanthellus magnificus*: Gui, 1985, 92 (misspelling).

**Distribution:** South China, South Asia.

**280. *Rhoenanthus (Potamanthindus) youi* (Wu and You, 1986)**

*Neopotamanthus youi* Wu and You, 1986, 401, (male, female, subimago, nymph). Types: Male, female, Anhui Prov.

*Rhoenanthus (Potamanthindus) youi*: Bae and McCafferty, 1991, 28, fig. 2, 87, 106, 123, 137 (male, female, nymph).

*Rhoenanthus youi*: Quan et al., 2002, 257.

*Neopotamanthus youi*: Gui, 1985, 91; You and Gui, 1995, 117, fig. 124 (male, female).

**Distribution:** China (Anhui, Jilin, Shanxi, Hubei and Hunan).

**Genus *Potamanthus* Pictet, 1843**

**Subgenus *Patamanthus* Bae and McCafferty, 1991**

**281. *Potamanthus (Patamanthus) huoshanensis* Wu, 1987**

*Potamanthus (Patamanthus) huoshanensis* Wu, 1987b, 421, figs. (male, female). Types: Male, female, Anhui Prov.

*Potamanthus (Patamanthus) huoshanensis*: Bae and McCafferty, 1991, 49, fig. 15, 95, 113, 126, 139 (male, female, nymph); Ishiwata, 2001, 58.

*Potamanthus huoshanensis*: You and Gui, 1995, 116, fig. 123 (male, female).

**Distribution:** China (Anhui), Japan.

**282. *Potamanthus (Patamanthus) luteus oriens* (Linnaeus, 1767)**

*Ephemera luteus* Linnaeus, 1767, 906. Type: England.

*Isonychia* na. Imanishi, 1940, 235, fig. 31.

*Potamanthus* na Imanishi, 1940, 179, fig. 2 (nymph).

*Potamanthus naa* Imanishi, 1940, 181 (nymph).

*Potamanthus luteus*: Wu, 1987, 336 (female, first record from China).

*Potamanthus luteus*: You and Gui, 1995, 115, fig. 122 (male).

*Potamanthus (Patamanthus) luteus oriens*: Bae and McCafferty (subspecies established), 1991, 54, fig. 4,

125; Bae, 1997, 408.

*Potamanthus luteus oriens*: Quan et al., 2002, 257.

**Distribution:** China (Heilongjiang and Jilin), Palaearctic.

**Subgenus *Potamanthodes* Ulmer, 1920**

**283. *Potamanthus (Potamanthodes) formosus* Eaton, 1892**

*Potamanthus formosus* Eaton, 1892a, 186 (male, female). Types: Male, female, Burma.

*Potamanthodes formosus*, Ulmer, 1919–1920, 11, fig. 8 (first record from China); Navás, 1922, 59; Ulmer, 1925, 98, fig. 86–88; Lestage, 1930, 139; Uéno, 1931a, 212; Ulmer, 1935–1936, 206, 213; Wu, 1935, 248; Hsu, 1937–1938, 124 (male, female); 125; Uéno, 1969, 222, 232, fig. 45–52 (male, female); Gui, 1985, 91; You and Su, 1985, 63, fig. 30–33; She et al., 1995, 80.

*Potamanthus (Potamanthodes) formosus*: Bae and McCafferty, 1991, 61, fig. 5, 17, 25, 37, 43, 61, 99, 117, 130, 141, 144, 150 (male, female, nymph).

*Potamanthodes (Potamanthus) formosus*: You and Gui, 1995, 119, fig. 126 (male, female).

*Potamanthus iyonis* Matsumura, 1931, 1469. Synonymized by Bae and McCafferty, 1991, 62.

*Potamanthus (Potamanthodes) kamonis* Imanishi, 1940, 178. synonymized by Uéno, 1969, 232.

*Potamanthodes kamonis*: You, Wu, Gui and Hsu, 1982, 410.

**Distribution:** China (Anhui, Fujian, Taiwan, Guangdong, Yunnan and Hainan), Southern Asia, Japan, Korea.

**284. *Potamanthodes fujianensis* You et al., 1980**

*Potamanthodes fujianensis* You et al., 1980, 1, fig. 1–13 (male and female subimago). Type: Male, Fujian.

*Potamanthodes fujianensis*: You et al., 1982, 410, fig. 14 (male, female); Gui, 1985, 91; You and Su, 1985, 64; You and Su, 1987b, 333, fig. 11–21 (nymph); You and Gui, 1995, 123, fig. 131 (male subimago, female subimago); Gui et al., 1999, 339, fig. 11–23 (male).

*Potamanthus (Potamanthodes) longitibius* Bae and McCafferty, 1991, 67. **New synonym**

**Distribution:** South China.

**285. *Potamanthus (Potamanthodes) idiocerus* Bae and McCafferty, 1991**

*Potamanthus (Potamanthodes) idiocerus* Bae and McCafferty, 1991, 64, fig. 5, 145 (male, female, nymph). Types: Male, female, nymph, Taiwan.

?*Potamanthus* sp. Uéno, 1928, 25.

*Potamanthus formosus*: Uéno, 1969, 232 (male, female, misidentification).

*Potamanthus (Potamanthodes) idiocerus*: Kang and Yang, 1994b, 392, fig. 1 (nymph).

**Distribution:** China (Taiwan).

**286. *Potamanthus (Potamanthodes) kwangsiensis* (Hsu, 1937)**

*Potamanthodes kwangsiensis*: Hsu, 1937, 126 (male, female, male subimago). Types: Male, Jiangxi Prov.

*Potamanthodes kwangsiensis*: You, Wu, Gui and Hsu, 1980, 1, (male, female); You Wu, Gui and Hsu, 1982, 410 (male).

*Potamanthus (Potamanthodes) kwangsiensis*: Bae and McCafferty, 1991, 66, fig. 5, 131 (male, female) (in part)

*Potamanthodes kwangsiensis*: Gui, 1985, 91; You and Gui, 1995, 123, fig. 130 (male, female).

**Distribution:** China (Guangxi).

**287. *Potamanthus (Potamanthodes) macrophthalmus* (You, 1984)**

*Potamanthodes macrophthalmus* You, 1984, 102, fig., (male, female). Types: Male, female, Shaanxi Prov.

*Potamanthus (Potamanthodes) macrophthalmus*: Bae and McCafferty, 1991, 58, fig. 5, 97, 115, 128, 146 (male, female).

*Potamanthodes macrophthalmus*: You and Su, 1985, 61, fig. 1–15 (male, female, subimago); Gui, 1985, 91; You and Gui, 1995, 120, fig. 127 (male, female); Su and al., 1995, 42.

**Distribution:** China (Shaanxi and Sichuan).

**288. *Potamanthus nanchangi* (Hsu, 1936)** (subgenus incertae sedis)

*Potamanthodes nanchangi* Hsu, 1936, 322 (male, female). Types: Male, female, Jiangxi Prov.

*Neopotamanthodes nanchangi*: Hsu, 1937–1938, 223; Gui, 1985, 91; You and Gui, 1995, 127, fig. 136 (male)

*Potamanthus nanchangi*: Bae and McCafferty, 1991, 70.

**Distribution:** China (Jiangxi).

**289. *Potamanthus (Potamanthodes) sangangensis* (You, 1984)**

*Potamanthodes sangangensis* You, 1984, 105 (male, female). Types: Sangang, Fujian Prov.

*Potamanthus (Potamanthodes) sangangensis*: Bae and McCafferty, 1991, 68, fig. 5, 133 (male, female).

*Potamanthodes sangangensis*: You and Su, 1985, 62, fig. 16–29 (male, female, male subimago); Gui, 1985, 91; You and Gui, 1995, 120, fig. 128 (male, female); Gui et al. 1999, 340, fig. 11–24 (male).

**Distribution:** China (Fujian and Jiangxi).

**290. *Potamanthus (Potamanthodes) yunnanensis* (You et al., 1982)**

*Potamanthodes yunnanensis* You, Wu, Gui, and Hsu, 1982, 412 (male, female). Types: Male, female, Yunnan Prov.

*Potamanthus (Potamanthodes) yunnanensis*: Bae and McCafferty, 1991, 69, fig. 5, 132 (male, female).

*Potamanthodes yunnanensis*: Gui, 1985, 91; You and Su, 1985, 64; You and Gui, 1995, 121, fig. 129 (male, female).

**Distribution:** China (Yunnan).

**Prosopistomatidae**

**Genus *Prosopistoma* Latreille, 1833**

**291. *Prosopistoma annamense* Soldán and Braasch, 1984**

*Prosopistoma annamense* Soldán and Braasch, 1984, 372, figs. 2, 4, 6, 8, 10, 13, 14 (nymph). Type: Nymph, Vietnam.

*Prosopistoma* sp. Liu, Wang and Hu, 1984, 227 (first record from China)

*Prosopistoma annamense*: Zhou and Zheng, 2004, 4.

**Distribution:** China (Hunan), Vietnam.

**292. *Prosopistoma sinense* Tong and Dudgeon, 2000**

*Prosopistoma sinense* Tong and Dudgeon, 2000, 123, figs. 1–14 (nymph). Types: Nymph, Lam Tsuen River, Hong Kong.

**Distribution:** China (Hong Kong).

**293. *Prosopistoma trispinum* Zhou and Zheng, 2004**

*Prosopistoma trispinum* Zhou and Zheng, 2004, 4, figs.

1–3, 7, nymph. Types: Nymph, Yunnan.

**Distribution:** China (Yunnan).

**294. *Prosopistoma unicolor* Zhou and Zheng, 2004**

*Prosopistoma unicolor* Zhou and Zheng, 2004a, 6, figs.

4–6, 8, nymph. Types: Nymph, Yunnan.

**Distribution:** China (Yunnan).

**Siphonuridae**

**Genus *Siphonurus* Eaton, 1868**

**295. *Siphonurus binotatus* (Eaton, 1892)**

*Siphonurus binotatus* Eaton, 1892c, 302 (male). Type: Mlae, Japan.

*Siphonurus* (?) *alternatus* Uéno, 1928, 54, figs. 15a–15l (nymph), Japan, nec. *Siphonurus alternatus* (Say, 1824, 304) (misidentification, renamed by Uéno, 1931a, 207).

*Siphonurus binotatus*: Uéno, 1931, 205.

*Siphonurus maculosus* Takahashi, 1930, 114 (synonymized by Uéno, 1931a, 205 and Bajkova, 1979b, 313)

*Siphonisca grandiosa* Matsumura, 1931, 1475 (imago) (synonymized by Uéno, 1931a, 205 and Bajkova, 1979, 313)

*Siphonurus binotatus*: Imanishi, 1940, 232 (nymph, first record from China); *Siphonurus binotatus* Bae, 1997, 408; Quan et al., 2002, 257.

**Distribution:** Northeastern China, Russia, Japan.

**296. *Siphonurus chankae* Tshernova, 1952**

*Siphonurus chankae* Tshernova, 1952, 263, fig. 58. Type: Male, Russia.

*Siphonurus chankae*: Kluge, 1985, 13; Bajkova, 1979, 309; Bajkova, 1980, 53; Yoon and Bae, 1988, 104; Bae et al., 1994, 44; Bae and Yoon, 1997, 50; Tshernova et al., 1986, 126 (first record from China); Quan et al., 2002, 257, fig. 43 (nymph).

**Distribution:** China (Heilongjiang), Korea.

**297. *Siphonurus davidi* (Navás, 1932)**

*Siphonurus* ? *davidi* Navás, 1932, 929, fig. 46, male subimago. Type: Male subimago, China (Sichuan).

*Siphonurus*? *davidi*[sic]: Ulmer, 1935–1936, 215;

*Siphonurus davidi*: Wu, 1935, 251; Gui, 1985, 80.

*Siphonurus davidi*: Zhou and Peters, 2003, 346 (tentatively); Sartori and Peters, 2004, 2, figs. 1–7

(redescription on type and transfer).

**Distribution:** China (Sichuan).

**298. *Siphonurus immanis* Kluge, 1985**

*Siphonurus chankae* Bajkova, 1979, 310 (nec. *Siphonurus chankae* (Tshernova, 1952) (renamed as *Siphonurus immanis* by Kluge, 1985, 18, figs. 1–13, 18; 3–15–21; 4–3 (all stages). Type: Male, Russia.

*Siphonurus immanis* Quan et al., 2002, 258, figs. 44, 55, 96, 137, 149, 176 (nymph). (first record from China).

**Distribution:** China (Jilin), Russia.

**299. *Siphonurus palaearticus* (Tshernova, 1930)**

*Oniscigaster palaearticus* Tshernova, 1930, 217. Type: Female, Russia (transferred by Kluge, 1982, 114).

*Oniscigaster palaearticus*: Tshernova, 1952, 265; Bae and Soldán, 1997, 151; Bae and Andrikovics, 1997, 159; Bae and Yoon, 1997, 50.

*Siphonurus palaearticus* Wang et al., 2009, 196 (first record from China).

**Distribution:** China (Northeast), Russia, Korea.

**Siphuriscidae**

**Genus *Siphuriscus* Ulmer, 1920**

**300. *Siphuriscus chinensis* Ulmer, 1920**

*Siphuriscus chinensis* Ulmer, 1920, 62, fig. 44–45 (male, male subimago). Types: Male, subimago, Tsayin Mountains, Guangdong Prov.

*Siphuriscus chinensis*: Ulmer, 1925, 101; Wu, 1935, 251; Ulmer, 1935–1936, 215; Gui, 1985, 80; You and Gui, 1995, 22, fig. 17 (male); McCafferty and Wang, 1994, 211, fig. 1–3 (male); Zhou and Peters, 2003, 346 (nymph, adults and eggs).

**Distribution:** China (Guangdong, Zhejiang, Jiangxi, Guizhou and Guangxi).

**Teloganodidae**

**Genus *Dudgeodes* Sartori, Peters and Hubbard, 2008**

**301. *Dudgeodes lugens* (Navás, 1933)**

*Teloganodes lugens* Navás, 1933b, 17, fig. 32 (female). Types: Female, Chusan. Zhejiang Prov. Transferred by Sartori, Peters and Hubbard, 2008, 35.

*Teloganodes lugens*: Wu, 1935, 249; Ulmer, 1935–1936, 213; Hsu, 1936–1938, 131; Gui, 1985, 90

*Teloganodes tristis*: Tong and Dudgeon, 2000, 201, fig. 13–19 (nec. Hagen, 1858, 476 and Eaton, 1882, 208; Eaton, 1884, 135; Ulmer, 1940, 512; 1940, 627)

*Teloganodes* sp. Dudgeon, 1990, 225; 1999, 274, Fig. 4. 53 (named by Tong and Dudgeon, 2000, 201).

*Dudgeodes lugens* Sartori, Peters and Hubbard 2008, 35.

**Distribution:** China (Hong Kong, Yunnan and Guizhou).

## Vietnamellidae

### Genus *Vietnamella* Tshernova, 1972

#### 302. *Vietnamella dabiesshanensis* You and Su, 1987

*Vietnamella dabiesshanensis* You and Su, 1987, 176, fig. 1–27 (male, female, male subimago, nymph). Types: Male, female, nymph, Sangang, Fujin; Dabishan area, Anhui.

*Vietnamella dabiesshanensis*: Gui, 1985, 90; Su and Zhou, 1998, 28.

*Cincticostella* (*Vietnamella*) *dabiesshanensis*: You and Gui, 1995, 140, fig. 152 (male, female); Gui et al., 1999, 341, fig. 11–25 (male).

*Vietnamella qingyuanensis* Zhou and Su, 1995, 47, fig. 1–11 (nymph). **New synonym**

*Vietnamella guadunensis* Zhou and Su, 1995, 48, fig. 12–22 (nymph). **New synonym**

**Distribution:** China (south, especially in Fujin, Anhui, Zhejiang).

#### 303. *Vietnamella ornata* (Tshernova, 1972)

*Ephemerellina ornata* Tshernova, 1972, 613, figs. 6–7 (male subimago). Types: Male subimago, Yunnan Prov.

*Vietnamella ornata*: Wang and McCafferty, 1995, 194. Generic combination.

**Distribution:** China (Yunnan).

#### 304. *Vietnamella sinensis* (Hsu, 1936)

*Ephemerella sinensis* Hsu, 1936b, 325, fig. 12 (male). Type: Male, Shang Jao (Shangrao), Jiangxi Prov.

*Ephemerella sinensis*: Gui, 1985, 89.

*Ephemerellina sinensis*: Allen and Edmunds, 1963c, 15.

*Ephemerellina sinensis*: You and Gui, 1995, 138, fig. 148 (male). Generic combination.

*Vietnamella sinensis*: Wang and McCafferty, 1995, 194. Generic combination.

**Distribution:** China (Jiangxi and Fujian).

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