

Case 3714 – Adelgidae Schouteden, 1909 (Insecta: Hemiptera: Aphidomorpha): proposed conservation by reversal of precedence with Pineini Nüsslin, 1909 and Chermaphidinae Hunter, 1901

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Abstract. The purpose of this application is to conserve usage of the name Adelgidae Schouteden, 1909 for a family of conifer-feeding insects, some species of which are important forestry pests. Although it has nomenclatural priority, Pineini Nüsslin, 1909 is alternately considered a subordinate taxon to or a synonym of Adelgidae. Meanwhile, Chermaphidinae Hunter, 1901, a disused name treated as a synonym of Adelgidae or Pineini, has nomenclatural priority over both. In accordance with Article 23.9.3, the present application requests a ruling under the plenary power described in Article 81.2.3 to conditionally suppress Chermaphid- and Pine- with respect to Adelg-.

Keywords. Nomenclature; taxonomy; Insecta; Hemiptera; Aphidomorpha; Sternorrhyncha; Adelginae; Chermaphidinae; Pineini; *Adelges*; *Chermaphis*; *Pineus*; adelgid; aphid.

1. Because *Chermes* Linnaeus, 1758 had been used for several distinct groups of insects (Favret et al., 2014), Maskell (1884: 292) established the genus *Chermaphis* (type species *Kermes pini* var. *laevis* Maskell, 1885 by subsequent designation by Eastop & Hille Ris Lambers, 1976) to apply to those *Chermes* species that were “kindred Aphididae”. *Chermes* continued to be used, however, until it was finally suppressed in Opinion 731 (ICZN, 1965). Instead of using the family-group name based on *Chermes*, Chermesidae Herrich-Schaeffer, 1854, Hunter (1901: 70) followed Maskell (1884) by applying the name Chermaphinae as a subfamily of Aphididae Latreille, 1802, with *Chermaphis* as type genus. *Chermaphis* is today considered a junior subjective synonym of *Pineus* Shimer, 1869 (Börner, 1952; Favret et al., 2015b). Favret et al. (2015b: 37) listed Chermaphid- as a junior synonym of Adelgidae Schouteden, 1909 (attributed to Annand, 1928), despite its having priority over both Adelgidae and Pineini Nüsslin in Börner, 1909. To my knowledge, since being established, Chermaphid- has been used as valid only twice (Sanborn, 1904; Bartholomew, 1908).

2. Nüsslin (in Börner, February 1909: 51; see also Nüsslin, 1910: 32) proposed Pineini as a tribe of Chermesidae Herrich-Schaeffer, 1854, with *Pineus* Shimer, 1869 as type genus (type species *Coccus pinicorticis* Fitch, 1885 by monotypy). *Pineus* remains a

valid genus today (Favret et al., 2015b). Pineini has never borne full family rank but it is used regularly as a subordinate group within Adelgidae Schouteden, 1909 (Heinze, 1962; Steffan, 1968; 1972; Ghosh, 1983; Binazzi, 1984; Heie & Wegierek, 2009; Osiadacz & Hałaj, 2010). In Accordance with Article 35.5, Pine- does not displace Adelg- when the two are considered valid. However, some authors consider Adelgidae to contain only two genera, *Adelges* Vallot, 1836 and *Pineus*: they treat Pineini as a synonym of Adelgidae, contravening the Principle of Priority (Favret et al., 2015b).

3. The name Adelgidae Schouteden, 1909 (p. 138), first used as Adelginen, has long been attributed to Annand (1928: 31) (Favret et al., 2015b). In his bibliography of the literature published on Rhynchota in 1908, Schouteden (1909) provided a brief summary of Carl Börner's works (1908a; 1908b; 1908c), replacing Börner's Chermiden with Adelginen. *Adelges* Vallot, 1836 is the type genus (type species *Adelges laricis* Vallot, 1836 by monotypy). Schouteden's (1909) work was published in the second delivery of the second issue of volume 75 of *Archiv für Naturgeschichte*, and hence certainly after February of the same year, when Nüsslin published Pineini (Börner, 1909). Both *Adelges* and Adelgidae are in use today, the family-group name having been used at the levels of superfamily, family, subfamily, and tribe (Binazzi, 1984; Heie & Wegierek, 2009). The name Adelgidae is used frequently: in a Web of Science® search, Adelgidae appeared in the titles of 161 publications in the last 50 years. Adelg- is the name of choice in publications covering a wide diversity of subject areas, including in general entomology textbooks (Heinze, 1962; Steffan, 1968; 1972; Carter, 1971; Ghosh, 1983; Binazzi, 1984; Bourgoïn et al, 2004, Johnson & Triplehorn, 2004; Havill & Foottit, 2007; Havill et al., 2007; Foottit et al., 2009; Heie & Wegierek, 2009; von Dohlen, 2009; Gullan & Cranston, 2010; Osiadacz & Hałaj, 2010; Žurovcová et al., 2010; Sano & Ozaki, 2012; von Dohlen et al., 2013; Favret et al., 2014; Favret et al., 2015a, b). In addition, Adelg- is part of the common name of several important species, including the hemlock woolly adelgid, *Adelges tsugae* Annand, 1924 and the balsam woolly adelgid, *Adelges piceae* (Ratzeburg, 1844). These and other species are the subjects of significant ongoing research, all of which uses the name Adelgidae (Fischer et al., 2015; Hickin & Preisser 2015; Fidgen et al., 2016; Limbu et al., 2016).

4. This Case is submitted in accordance with Article 23.9.3. Article 23.9.1 cannot be applied as all three family-group names were established (and have been cited as valid) after 1899. Article 35.5 cannot be applied when the names in question are treated as subjective synonyms, which they always are in the case of Chermaphid- and often are in the case of Pine- (Favret et al., 2015b). While this Case is being considered, the junior name is to be used, per Article 82.1, but eventual reversion to either senior name would destabilize research on the insects in question.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name Adelg- Schouteden, 1909, first published as Adelginen, precedence over the names Chermaphid- Hunter, 1901, first published as Chermaphinae, and Pine- Nüsslin in Börner, 1909, first published as Pineini, whenever it and either of the other two are considered to be synonyms;
- (2) to place on the Official List of Family-Group Names in Zoology, the following names:
 - (a) Chermaphidinae Hunter, 1901, published as Chermaphinae (type genus

- Chermaphis* Maskell, 1884), with the note that it is not to be given priority over *Adelginae* Schouteden, 1909 whenever they are considered to be synonyms as ruled in (1) above;
- (b) *Pineini* Nüsslin in Börner, 1909 (type genus *Pineus* Shimer, 1869), with the note that it is not to be given priority over *Adelginae* Schouteden, 1909 whenever they are considered to be synonyms as ruled in (1) above; and
- (3) to emend the entry on the Official List of Family-Group Names in Zoology for *Adelginae* (name number 392, type genus *Adelges* Vallot, 1836), changing its authorship to Schouteden, 1909, and adding the note that it is to be given precedence over *Chermaphidinae* Hunter, 1901 and *Pineini* Nüsslin in Börner, 1909 whenever it and either of the other two names are considered to be synonyms as ruled in (1) above.

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