


Case 2558

Proptera Rafinesque, 1819 (Mollusca, Bivalvia): proposed conservation

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Abstract. The purpose of this application is to conserve the name Proptera Rafinesque, 1819, for a genus of North American freshwater mussels, by the suppression of the senior objective synonym Potamilus Rafinesque, 1818.

1. A fairly concise, historical review of Proptera and Potamilus has been presented by Clarke (1986). The genus Potamilus was described briefly with a list of 24 undescribed species, one of them named alatus, arranged in five unnamed subgenera (Rafinesque, 1818a, p. 355), all nomina nuda. Rafinesque stated that he had "... collected and described over 30 species, the whole of which appear to be new" and appended an abbreviation of his name, 'Raf.', at the end of the species list for each of the three presented genera (Potamilus, Pleurocera, and Ambilixis). Rafinesque later (1818b, p. 107) noted Potamilus as a new genus of fluviatile bivalves with 34 unnamed species and emended the gender of the name to feminine, as Potamila.

2. In 1819 Rafinesque (p. 420) briefly described Proptera as a subgenus of Unio, and in it listed three nomina nuda: 'alata, phaiedra, pallida, etc.'.

3. In 1820 Rafinesque noted his previous use of Potamilus as a catch-all genus, similar to his contemporaries' use of Unio, and abandoned it to be replaced by the 'system' he initially had outlined in 1819 and which he now presented. He also replaced Proptera with Metaperta (p. 299: he considered the former name to be inappropriate due to his earlier misinterpretation of the anterior-posterior orientation of the mussels), described M. megaperta (p. 300), included (p. 300) U. alatus Say, 1817 (unpaginated, pl. 4, fig. 2; not 1816: see Johnson, 1975) under Metaperta, and speculated that U. ochraceus Say, 1817 and U. cariosus Say, 1817 were in this genus. Metaperta megaperta is a junior subjective synonym of U. alatus (synonymy originally proposed by Conrad, 1834, p. 67; justification in Clarke, 1973, p. 101), and Metaperta is invalid as a junior objective synonym of Proptera.

4. Potamilus alatus Rafinesque, 1818 and U. (Proptera) alata Rafinesque, 1819 are not Say's species but are nomina nuda. Rafinesque did not explicitly refer Say's alatus to the genus-group under consideration until 1820 (p. 300), as Metaperta alata.

5. Herrmannsen (1847, p. 41) designated U. alatus Say as the type of Metaperta, thereby also establishing it as the type of Proptera (Article 67h). In 1969 (p. 24) Morrison stated: 'Potamilus alatus Say, 1817 (monotype of Potamilus in 1818)', thereby establishing alatus Say as the type of Potamilus. Morrison was the first person to include a species in Potamilus. This action has made Potamilus Rafinesque, 1818 and Proptera Rafinesque, 1819 objective synonyms.

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