

# Designation of *Cardium multispinosum* G.B. Sowerby II, 1839, as a nomen protectum and its senior synonym *Cardium leve* Anton, 1838, as a nomen oblitum (Bivalvia, Cardiidae)

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It is shown that *Cardium leve* Anton, 1838, should not be regarded as a junior homonym of *Cardium laeve* Gray, 1838. Following ICZN Art. 23.9.1, *Cardium leve* is herewith designated as a nomen oblitum, and *Cardium multispinosum* G.B. Sowerby II, 1839, as a nomen protectum.

Key words: Bivalvia, Cardiidae, *Vepricardium*, *Cardium leve*, taxonomy

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Anton (1838: 11) introduced *Cardium leve* based on two specimens originating from China. Recent research succeeded to trace one of these shells in the malacological collection of the Zoological Museum Dresden (Museum für Tierkunde, Moll 7484), which was selected as lectotype (Huber & Schniebs, 2009). The species is a senior subjective synonym of a common and well-known Indo-West Pacific species, i.e. *Cardium multispinosum* G.B. Sowerby II, 1839 (year of publication established by Petit, 2009), nowadays assigned to *Vepricardium* Iredale, 1929.

Huber & Schniebs (2009) considered *Cardium leve* Anton, 1838, to be not preoccupied by *Cardium laeve* Gray, 1838. This view needs further explanation, also in the light of the fact that Gray's (1838) paper, published in the first issue of the

first volume of the *Annals and Magazine of Natural History*, is dated 'March 1838' at the bottom of page 1 (date of publication 1 March 1838 according to Evenhuis, 2003), whereas Anton's preface (1838: ix) is dated 'den 3. August 1838'. Under ICZN Art. 58.1, 'use of *ae*, *oe*, or *e* (e.g. *caeruleus*, *coeruleus*, *ceruleus*)' are variant spellings deemed to be considered identical. However, in this case both spellings do not share the derivation and (!) meaning: *laeve* (derived from Latin *levis*; related to Greek *leios*) as used by Gray means 'smooth', whereas *leve* (derived from Latin *levis*; related to Greek *elaphros*) as used by Anton means 'leicht, dünnchalig' (light, thin shelled). Consequently, *leve* indeed cannot be regarded as a junior homonym of *laeve*.

Huber & Schniebs (2009: abstract) considered *Cardium leve* 'a valid earlier name' for *Vepricardium multispinosum* (G.B. Sowerby II, 1839), subsequently applied as such by Huber (2010). However, by their resurrection of this older name Huber & Schniebs (2009) violated ICZN Art. 23.9.1 that states that 'prevailing usage must be maintained when the following conditions are both met: 23.9.1.1. the senior synonym or homonym has not been used as valid name after 1899, and 23.9.1.2. the junior synonym of homonym has been used for a particular taxon, as its presumed valid name, in at least 25 works, published by at least 10 authors

in the immediately preceding 50 years and encompassing a span of not less than 10 years.'

ICZN Art. 23.9.6 makes clear that the 2009 and 2010 usages of *leve* cannot count toward Art. 23.9.1.1: '23.9.6. *The deliberate use of a name contrary to Article 23.9.1, or the mentioning of a name in a synonymy, or its mere listing in an abstracting publication, or in a nomenclator or other index or list of names must not be taken into account in determining usage under Articles 23.9.1.1 and 23.9.1.2*' (italics mine).

To my knowledge *Cardium leve* has been used only three times in the pre-2009 literature, viz. by Sherborn (1922-32), Schniebs (1998) and Hylleberg (2004: 636). However, usage in all these cases is not 'as its presumed valid name' (ICZN Art. 23.9.1.2). It should be noted that, contrary to what is stated by Huber & Schniebs (2009: 202), Sherborn only listed names that have appeared in print.

In the following selection of 30 works published between 1958-2008 the name *Vepricardium multispinosum* is used as its presumed valid name, thus fulfilling the conditions of Art. 23.9.1.2: Bernard et al. (1993); Fischer-Piette (1977); Habe (1964); Habe & Kosuge (1970); Higo et al. (1999, 2001); Hylleberg (2004); Hylleberg & Kilburn (2003); Lambiotte (1979); Lamprell & Whitehead (1992); Lee (1989); Ter Poorten (2007); Savazzi & Sälgeback (2004); Schneider (2002); Schneider & Carter (2001); Slack-Smith & Bryce (2004); Springsteen & Leobrera (1986); Swennen et al. (2001); Taguchi (1990); Tantanasiwong (1979); Taylor & Glover (2004); Thach (2005); Valentich-Scott (2003); Vidal (2000, 2001); Voskuil & Onverwagt (1988); Wells (2002, 2003); Wilson & Stevenson (1977), and Xu & Zhang (2008).

Accordingly (ICZN Art. 23.2 & Art. 23.9.1), *C. leve* Anton has to be considered a *nomen oblitum* and *C. multispinosum* G.B. Sowerby II a *nomen protectum*.

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