

**Case 3460*****Liburnia* Stål, 1866 (Insecta, Hemiptera, DELPHACIDAE): proposed designation of *Embolophora monoceros* Stål, 1855 as the type species**

Charles R. Bartlett

*University of Delaware, Department of Entomology and Wildlife Ecology,  
250 Townsend Hall, 531 S. College Avenue, Newark, DE, 19717, U.S.A.  
(e-mail: Bartlett@udel.edu)*

**Abstract.** The purpose of this application, under Article 69 of the Code, is to fix the type species of the delphacid planthopper genus *Liburnia* Stål, 1866 as *Embolophora monoceros* Stål, 1855. *Liburnia* has had three type species designated, all of which are currently type species of other genera. Fixation of *Embolophora monoceros* Stål, 1855 as a type species for *Liburnia* will make *Liburnia* Stål, 1866 a junior objective synonym of *Embolophora* Stål, 1853, which is necessary to alleviate past confusion and prevent future reinterpretation of the genus.

**Keywords.** Nomenclature; taxonomy; DELPHACIDAE; *Liburnia*; *Embolophora*; *Embolophora monoceros*; delphacid planthopper; Afrotropical.

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1. Stål (1866, p. 179) described the delphacid planthopper genus *Liburnia*, listing as generic synonyms ‘*Delphax* Auctor.’ (i.e. a segregate of *Delphax* Latreille, 1803 (p. 166) (non Fabricius, 1798)) and ‘*Embolophora* Stål. Öfv. Vet. Ak. Förh. 1853. p. 265.’, a genus that was described with no species included and misspelled as ‘*Embolophpora*’. This was clearly an inadvertent error as the author provided etymology suggesting that the correct spelling should be *Embolophora*. In his subsequent publications, Stål (1855, 1866) used the correct spelling *Embolophora*. *Embolophora monoceros* Stål, 1855 became the type species by subsequent monotypy as the first validly included species. A type species of *Liburnia* was not explicitly designated in the original publication. The genus *Delphax* Latreille, 1803 is a junior homonym of *Delphax* Fabricius, 1798, while the name *Delphax* Klein in Walbaum, 1792 is not available by the ruling in Opinion 21 (see Opinions and Declarations, 1958, **1B**: pp. 51–52).

2. In the original description of *Liburnia*, Stål (1866) divided the included species into two groups. In the first (‘a. *Capite longissime protuberante*’), Stål (1866, p. 179) listed ‘*Embolophora* Stål. Öfv. Vet. Ak. Förh. 1853. p. 265.’ as a senior synonym, and gave ‘*L. Monoceros* Stål’, as the only included species with *Embolophora monoceros* Stål, 1855 (p. 92) in the synonymy list. The second group (‘aa. *Capite ante oculos vix vel paullo prominulo, thorace nonnihil angustiore*’) explicitly included *Delphax vitticollis* Stål, 1855, *Delphax lautipes* Stål, 1858, *Delphax maculigera* Stål, 1858 and *Cixius centralis* Signoret, 1860. Stål (1866, p. 180) also referred to ‘*L[iburnia]. smaragdulae* Stål’ [sic] (correct *smaragdula*) and ‘*L. pallentis*’ [sic], (correct *pallens*).

3. There have been three type species designations for *Liburnia*:

- (a) Distant (1906, p. 480) cited '*L. (Embolophora) monoceros*' as the 'type', commenting (1906, p. 481) that 'Stål, who founded *Liburnia* (*supra*) gave divisional characters which were obviously truly generic'. Kirkaldy (1901, p. 340; 1907, pp. 149–150) treated *Liburnia* as a junior synonym of *Embolophora*.
- (b) However, Van Duzee repeatedly (1909, p. 201; 1912, pp. 504–505; 1939, pp. 66–68) argued that Stål's intent was to provide a new name for *Delphax* Latreille, 1803 (non Fabricius, 1798); therefore he asserted that the type species of *Liburnia* should be the species designated by Latreille, namely *Fulgora pellucida* Fabricius, 1794 (p. 7) (Latreille, 1807, pp. 167–168), or *Fulgora striata* Fabricius, 1794 (Latreille, 1810, p. 434), a junior synonym of *Fulgora pellucida* Fabricius, 1794.
- (c) Muir (1915, p. 265) treated *Embolophora* as a separate genus from *Liburnia*, and initially followed Van Duzee's type designation of *Fulgora pellucida* (with *Delphax* auct. non Fabricius, 1798, *Delphacodes* Fieber, 1866 and *Delphacissa* Kirkaldy, 1906 as synonyms). Later, Muir (1917, pp. 332–333) designated *Delphax vitticollis* Stål, 1855 as type of Stål's *Liburnia* group, excluding *Embolophora*, and advocated (Muir, 1917, pp. 332–333, Muir & Giffard, 1924, pp. 18–19) that *Liburnia* Stål, 1866 be treated as a junior synonym of *Delphacodes* Fieber, 1866, a genus that was also described as a segregate of *Delphax* Latreille (non Fabricius, 1798). Muir (1926) subsequently transferred many species previously in *Liburnia* to *Delphacodes* Fieber, 1866, an interim arrangement that was at least implicitly followed by many subsequent workers but is no longer appropriate since *Delphacodes* Fieber, 1866 has been restricted by modern workers to include only a few Palaearctic species (e.g. Asche & Remane, 1983). The last taxon to be described or transferred into *Liburnia* was *L. sanctipauli* Jeannel, 1947.

4. Latreille's (1807, 1810) designations of the type species of *Delphax* Fabricius, even if potentially valid, were suppressed by the Commission (Melville, 1960; Opinion 602, BZN 18: 246–248, August 1961). Van Duzee's (1909, p. 201) later designation of *Fulgora pellucida* Fabricius, 1794 (currently the type species of *Javesella* Fennah, 1963) as type species of *Liburnia* is invalid as this species was not among those originally included by Stål (1866) in *Liburnia* (i.e. in violation of Article 67.2 of the Code).

5. *Embolophora* Stål, 1853 is currently treated as a valid genus (e.g. Fennah, 1958, 1969; Medler 1980; Asche 1983, 1985) in the subfamily STENOCRANINAE, with *Embolophora monoceros* Stål, 1855, the type species by subsequent monotypy. *Embolophora* was monotypic, except where treated as including *Liburnia* s.l., until the description of two new species by Asche (1983).

6. *Liburnia* Stål, 1866 has been treated in a variable fashion over time, with many species placed into, then subsequently removed from this genus. Most significantly, Metcalf (1943) treated it as a valid genus (with the type species *Delphax vitticollis* Stål, 1855), with *Sogata* Distant, 1906 as a junior synonym, including 57 valid names and over 300 invalid names, excluding misspellings and subspecies. At present there appear to be 21 species assigned to *Liburnia*, although *Embolophora monoceros*, *Delphax vitticollis* and *Fulgora pellucida* are not among them. Some modern workers have placed *Liburnia* as a junior synonym of *Embolophora* (e.g. China, 1939; Asche,

1983, 1985), a treatment that is here recommended as the one with minimal impact on established nomenclature, whereas any other treatment of *Liburnia* would disturb the nomenclature of *Javesella* Fennah, 1963, *Matutinus* Distant, 1917, or other established genera, without presenting a solution to the generic identity of the 21 species that reside in *Liburnia*.

6. There are two potentially valid type designations depending largely on the assertion of whether Stål (1855) intended subgenera or not. If it were accepted that Stål (1966) divided *Liburnia* into subgenera (i.e. subgenera *Embolophora* and *Liburnia*), then the type species must fall within the nominotypical subgenus (Article 69.1 of the Code), and Muir's (1917, p. 332) designation of *Delphax vitticollis* Stål, 1855 is the first valid type species designation. *Delphax vitticollis* Stål, 1855 is the type species of *Matutinus* Distant, 1917 (DELPHACINAE), a mostly Afrotropical genus of 26 valid species (Fennah, 1972). Alternatively, if it is accepted that subgenera were not intended, then *Embolophora monoceros* is the type species either through the type designation by Distant (1906, p. 480), or by monotypy, with Stål's (1866) original description of *Liburnia* as a junior synonym of his own genus *Embolophora*.

7. A decision to unequivocally establish the type species of *Liburnia* is sought because of the inherent uncertainties regarding Stål's original description and subsequent multiple interpretations. Similarly, suppression of alternative type designations is sought to prevent future possible reinterpretation of the genus and the consequent nomenclatural instability.

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

- (1) to use its plenary power to set aside all previous type species fixations for the nominal genus *Liburnia* Stål, 1866 and to designate *Embolophora monoceros* Stål, 1855 as the type species;
- (2) to place on the Official List of the Generic Names in Zoology the name *Embolophora* Stål, 1853 (gender: feminine), type species by subsequent monotypy *Embolophora monoceros* Stål, 1855;
- (3) to place on the Official List of Specific Names in Zoology the name *monoceros* Stål, 1855, as published in the binomen *Embolophora monoceros* (the type species of *Embolophora* Stål, 1855 and *Liburnia* Stål, 1866), as ruled in (1) above.
- (4) to place on the Official Index of Invalid and Rejected Generic Names in Zoology the name *Liburnia* Stål, 1866 (a junior objective synonym of *Embolophora monoceros* Stål, 1855 by designation of *Embolophora monoceros* Stål, 1855 as the type species in (1) above).

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