

NUMBER 174, 5 pages

28 December 2025

BISHOP MUSEUM OCCASIONAL PAPERS

NOMENCLATURAL CORRECTIONS FOR AQUATIC
HETEROPTERA

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ISSN 0893-1348 (print)
ISSN 2376-3191 (online)
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Nomenclatural Corrections for Aquatic Heteroptera

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Abstract. The following nomenclatural changes are proposed for genera and species within the aquatic Heteroptera. In Hebridae *Hebrovelia* Cobben, 1982 is considered a junior synonym of *Timasielloides* Poisson, 1951 (currently a subgenus of *Hebrus* Curtis, 1833), **n. syn.**, and *Timasielloides* is elevated to full genus rank, resulting in the following new combinations: *T. baigomi* (Poisson, 1951), **n. comb.**, *T. bonganensis* (Cobben, 1982), **n. comb.**, *T. handoumi* (Poisson, 1951), **n. comb.**, *T. lokobei* (Poisson, 1951), **n. comb.**, *T. longicornis* (Linnavuori, 1981), **n. comb.**, *T. malawiensis* (Cobben, 1982), **n. comb.**, *T. niemer*i (Cobben, 1981), **n. comb.**, *T. nkoupi* (Poisson, 1951), **n. comb.**, and *T. pelengei* (Poisson, 1954), **n. comb.**; authorship of *Hebrus thymoma* is credited to Cobben & Linnavuori, 1981 in Linnavuori, 1981; and *Hebrus nkoupi* form *katangae* Poisson, 1964 is considered an unavailable infraspecific name. In Gerridae, species described in *Eurymetra* Esaki but transferred to *Cesametra* (unnecessary new name) by Koçak & Kemal, 2009 are reinstated in *Eurymetra*. In Veliidae, *Thirumalaia kaara* Matsushima, 2022 is transferred to *Microvelia* Westwood, 1834, resulting in the new combination *M. kaara* (Matsushima, 2022), **n. comb.** In Helotrepididae, *Helotrephes kalimantanensis* Zettel, 2000 is transferred to *Hydrotrepes* China, 1935, resulting in the new combination *Hydrotrepes kalimantanensis* (Zettel, 2000), **n. comb.**

The following nomenclatural corrections for various species of aquatic Heteroptera are provided in order to allow proper species listings in a pending online database for the group.

GERROMORPHA

Hebridae

Timasielloides Poisson, 1952 **new status**

Timasielloides Poisson, 1952: 31 (as subgenus of *Hebrus* Curtis: 1833). Type species *Hebrus* (*Timasielloides*) *lokobei* Poisson, 1951: 82, by original designation.

Hebrometra Cobben, 1982: 15. Type species *Hebrometra bongansensis* Cobben, 1982:16, by original designation. **New synonymy.**

Timasielloidea: Linnavuori (1981: 34). Incorrect subsequent spelling due to *lapsus*.

Discussion. Cobben (1982) in his work on Ethiopian Hebridae proposed the new genus *Hebrometra* to hold a set of Afrotropical hebrids with an elongate body form. He also made passing mention of the hebrid subgenera *Paratimasius*, *Timasielloides*, and *Paratimasellus* previously proposed by Poisson (1952, 1956), but basically dismissed these groups "...which on the basis of the descriptions seem too weak and not discontinuous enough to warrant subgeneric status" (Cobben, 1982: 3). Although the subgenus

diagnoses provided by Poisson are relatively terse, these groups still retain taxonomic validity, with designated type-species, and in the case of *Timasielloides* a list of previously described taxa transferred into the new subgenus was provided, and other new taxa were subsequently assigned there (Poisson, 1945). It also appears that Cobben was not able to directly examine specimens of any of Poisson's taxa, which were often based on unique holotypes or very short series, since he noted (Cobben, 1982: 10): "The type material in the private collection of Poisson being not available for study, I had to rely mostly on his original descriptions."

The characters used by Cobben (1982) to define *Hebrometra* were as follows: 1) an elongate body, with the length 2.1–2.5 times the maximum width; 2) the bucculae weakly developed; 3) an elongate male paramere shape, and; 4) a seta inserted on a tumescence in front of the eye. The first three characters are identical to those listed by Poisson (1952) in his description of *Timasielloides*. In particular, the weakly developed buccula is illustrated for *Hebrus (Timasielloides) nkoupi* (Poisson, 1952, Fig. 4B), and the elongate paramere illustrated by Poisson (1952, Fig. 9) for *Hebrus (Timasielloides) lokobei* is very similar to the paramere shapes illustrated by Cobben (1982) for *Hebrometra bongansensis*, *Hebrometra pelengei*, and *Hebrometra niemer*. The final diagnostic character for *Hebrometra*, involving the pre-ocular seta, is not mentioned by Poisson (1952).

Based on these comparisons, it is concluded that *Hebrometra* Cobben, 1982 is a junior synonym of *Timasielloides* Poisson, 1952, and the latter genus-group name is elevated to full genus rank (**new status**). The following are the resulting new combinations:

Timasielloides baigomi (Poisson, 1951b) **new combination**
Timasielloides bongansensis (Cobben, 1982) **new combination**
Timasielloides handoumi (Poisson, 1951b) **new combination**
Timasielloides lokobei (Poisson, 1951a) **new combination**
Timasielloides longicornis (Linnavuori, 1981) **new combination**
Timasielloides malawiensis (Cobben, 1982) **new combination**
Timasielloides niemer (Cobben, 1982) **new combination**
Timasielloides nkoupi (Poisson, 1951b) **new combination**
Timasielloides pelengei (Poisson, 1954) **new combination**

***Hebrus thymoma* Cobben & Linnavuori, 1981 Clarified date of description**

Hebrus thymoma Cobben & Linnavuori, 1981 in Linnavuori, 1981: 30, fig. 15E (type locality: Ivory Coast).

Hebrus thymoma: Cobben & Linnavuori, 1983: 83.

Discussion - The intended original description by Cobben & Linnavuori (1983: 83) was preceded by Linnavuori (1981: 30) who listed "*H. (s. str.) thymoma* Cobben & Linnavuori (in press)" and provided a brief diagnosis of the species included in the differential diagnosis of *H. kheiron*; illustrated the male hind leg (Pg. 27, Fig. 15E); and listed material examined from Grand Bassam, Ivory Coast. This treatment fulfils the requirement to establish *H. thymoma* as an available name with both Cobben & Linnavuori as authors responsible for the description, and all their studied specimens are considered as syntypes. The subsequent holotype designation by Cobben & Linnavuori (1983: 83) represents a valid lectotype designation under Article 74.5 of the Code (ICZN 1999) because the term "holotype" was used explicitly for one of the syntypes.

***Hebrus nkoupi* form *katangae* Poisson, 1964 Unavailable name**

Hebrus nkoupi form *katangae* Poisson, 1964: 116 (type-locality: Democratic Republic of the Congo)

Discussion – This is considered an unavailable infrasubspecific name according to Article 45.6.3 of the Code (ICZN 1999).

Gerridae***Cesametra* Koçak & Kemal, 2009 unnecessary new name**

Eurymetra Odhner, 1910: 58. *Nomen nudum* (Poche, 1925: 133).

Eurymetra Esaki, 1926: 129 (as subgenus of *Metrocoris*). Raised to full genus by Esaki (1928: 512).

Cesametra Koçak & Kemal, 2009: 4. **Unnecessary new name** for *Eurymetra* Esaki, 1926: 128.

Discussion. Koçak & Kemal (2009) concluded that the genus *Eurymetra* Esaki, 1926 in the Gerridae was a junior homonym of the trematode flatworm genus *Eurymetra* Odhner, 1910 in Platyhelminthes. They proposed the new genus *Cesametra* as a replacement name, and transferred all gerrid species previously held in *Eurymetra* into it. However, it had been previously determined by Poche (1925) that *Eurymetra* Odhner was a *nomen nudum*, therefore *Eurymetra* Esaki remained a valid genus. To rectify the nomenclature, the following binominal combinations are reinstated:

Eurymetra aethiops (Distant, 1903) **reinstated combination**

Eurymetra madagascariensis Poisson 1945 **reinstated combination**

Eurymetra natalensis (Distant, 1903) **reinstated combination**

Eurymetra magengolensis Hoberlandt, 1950 **reinstated combination**

Veliidae***Microvelia kaara* (Matsushima) new combination**

Thirumalaia kaara Matsushima, 2022: 340.

Discussion. Matsushima (2022) described a new member of the veliid subfamily Microveliinae from Japan, placing it in the previously monotypic genus *Thirumalaia* Zettel & Laciny, 2021, otherwise known only from Tamil Nadu, India. Although Matsushima's taxon, *Thirumalaia kaara*, bears some superficial similarities to *Thirumalaia*, most notably intersexual dimorphism in body shape, with males elongate and parallel sided, and females pear-shaped with a much broader abdomen, it lacks key character states diagnostic for *Thirumalaia*.

The characters defining *Thirumalaia* as discussed by Zettel & Laciny (2021) include: 1) a long grasping comb that extends for one-third the length of the male fore tibia; 2) symmetrical male parameres that are short and stout in shape, and; 3) antennae with segments III and IV subequal in length. By contrast, the Japanese taxon placed here by Matsushima (2022) has a short grasping comb extending only one-sixth the length of the male fore tibia; asymmetrical male parameres that are slender, elongate and curving; and a prolonged antennal segment IV of much greater length than segment III. In addition, the male proctiger in *Thirumalaia* is elongate, slightly expanded distally, and apically rounded, whereas in the Japanese taxon it is shorter, distally tapering, and apically angular. Based on these character state comparisons, placement of the Japanese species within *Thirumalaia* is not supported.

Since its initial generic assignment was clearly incorrect, *Thirumalaia kaara* is hereby transferred to *Microvelia* as that genus name is currently utilized. This also serves to preserve the monophyly of the currently monobasic *Thirumalaia*. This new combination is proposed with the full realization that such a generic placement is likely an interim solution, given that the genus *Microvelia* as currently constituted almost certainly represents a polyphyletic grouping of disparate taxa (Andersen & Weir, 2003). The type-species of the genus, *Microvelia pulchella* Westwood, 1834, was described from the Caribbean island of St. Vincent, is endemic to the Neotropical region, and exhibits a number of character states (short pronotum in wingless forms, absence of fore or middle tibial grasping combs) not seen in Paleotropical taxa, so it is unclear if any of the Paleotropical species currently held in *Microvelia* are truly congeneric with it. Although a large number of subgenera have been proposed within Paleotropical *Microvelia* over the past several decades, the monophyly of most of these has not been verified phylogenetically and such classification is therefore subject to future revision. As such, the precise assignment of *M. kaara* remains unresolved until such time as Paleotropical *Microvelia* as a whole can be properly subdivided into demonstrably monophyletic species groups or subgenera.

NEPOMORPHA

Helotrephidae

Hydrotrephes kalimantanensis Zettel **new combination**

Helotrephes kalimantanensis Zettel, 2000: 11.

This species was described by Zettel (2000) in the genus *Helotrephes*, but treated in his work on the Helotrephidae of Borneo within the section dealing with the *Hydrotrephes mirus* group. The characters listed in the species description are consistent with placement in *Hydrotrephes*, and in his discussion of this species he notes that it is closely related to *Hydrotrephes sarawakensis* Zettel, 2000, differing primarily in minor aspects of the male genitalia. It therefore appears that due to a *lapsus*, Zettel ascribed the incorrect genus name to this taxon, an error corrected here.

ACKNOWLEDGMENTS

The author thanks Dr. Neal Evenhuis of the Bishop Museum for reviewing the actions proposed in this paper and confirming that they properly comply with the current Code of Zoological Nomenclature, and Dr. Petr Kment of the National Museum of the Czech Republic, who identified certain necessary corrections and provided additional nomenclatural notes regarding Hebridae, which he has kindly allowed to be published here.

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