

On some family-group names recently introduced within Stromboidea Rafinesque, 1815 (Gastropoda, Caenogastropoda)

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KRONENBERG, G.C., 2021. On some family-group names recently introduced within Stromboidea Rafinesque, 1815 (Gastropoda, Caenogastropoda). — *Basteria* 85 (1): 18–20. Leiden. *Published 7 May 2021.*

ABSTRACT

The name Neostromboidea Maxwell, Dekkers, Rymer & Congdon, 2019 (spelling corrected to Neostromboidae by Maxwell (2019)) is not available under ICZN Article 11.7.1.1. Neostrombini Liverani, Dekkers & Maxwell, 2021 is a junior synonym of Canariini Dekkers, 2008. Eight other family-group names introduced by Maxwell and co-workers are briefly discussed.

Key words: Stromboidea, Canariini, *Neostrombus*, ICZN, principle of coordination

INTRODUCTION

Recently, S.J. Maxwell and co-workers (for references see below) introduced some family-group names (with the little-used rankings of epifamily and tribe) within the Stromboidea. It appears that not all of these names are available from the works in which they were originally described, or are even available at all. In this paper I provide correct authorship and dates, as well as synonymies for these names.

NEOSTROMBOIDAE

Maxwell et al. (2019) described a higher-level clade within the superfamily Stromboidea Rafinesque, 1815. This new clade was already recognized as such by Kronenberg (2013: 41) and is characterized by several morphological synapomorphies, particularly by the eyes being situated on peduncles, as well as by the cephalic tentacle also being located on the optical peduncle. These synapomorphies unite the families Strombidae Rafinesque, 1815; Rostellariidae Gabb, 1868, and Seraphsidae Gray, 1853 as separate from the families Aporrhaidae Gray, 1850 and Struthiolariidae Gabb, 1868, that have their eyes at the base of the cephalic tentacle. This latter condition is the plesiomorphic state for most other members

of the Littorinimorpha. For recognition of the Rostellariidae as a family see Kronenberg & Burger (2002) and for recognition of the Seraphsidae as a family see Jung (1974). Although not recognized by these authors, the family Xenophoridae Troschel, 1852 was already recognized as lying within the Stromboidea by Simone (2005) based on anatomical characters and subsequently confirmed by Irwin et al. (2021) based on molecular studies, so it is also part of the group that share this plesiomorphic condition.

Maxwell et al. (2019) gave the clade consisting of Strombidae, Rostellariidae and Seraphsidae, the name Neostromboidea. The suffix -oidea denotes a superfamily name whereas the suffixes, -idae denotes a family name; -inae denotes a subfamily name; -ini denotes a tribe; and -ina denotes a subtribe, and none of them can be used at any other family-group rank (ICZN, 1999: Article 29.2). Maxwell et al. (2019) introduced their new clade at the rank of epifamily, a little-used rank inserted between superfamily and family in the Linnean hierarchy. The suffix for epifamily names is not regulated by the Code, as well as other names in the family group (ICZN, 1999: Article 29.2). However, there is a tradition in Zoology to use the suffix -oidae for the rank of epifamily (e.g. Carter et al. 2011: 3). Inline with this tradition, Maxwell (2019) subsequently corrected the spelling of this clade to Neostromboidae.

However, both Maxwell et al. (2019) and Maxwell (2019) overlooked the fact that family-group names must be formed from the stem of an available generic name (ICZN, 1999: Article 11.7.1.1; Article 29). As no genus level name *Neostrombus* had been introduced before 2019, both Neostromboidea and Neostromboidae are unavailable from either Maxwell et al. (2019) or Maxwell (2019). Liverani et al. (2021: 28) introduced Neostrombini as a new tribe, based on the genus *Neostrombus* Liverani, Dekkers & Maxwell, 2021 (type species: *Strombus fusiformis* G.B. Sowerby II, 1842 by original designation), thus fulfilling the requirements of ICZN (1999) Code. Therefore, Neostrombini is an available name. Based on the principle of coordination (ICZN Article 36.1), these authors, i.e. Liverani et al., 2021, are also the authors of any family-group taxon derived from the genus *Neostrombus*. Therefore, the name of the epifamily Neostromboidae (but with a suffix other than -idea), if it were introduced, would

become an available name with authorship to be ascribed to Liverani, Dekkers & Maxwell, 2021 by default.

However, this same principle of coordination is also valid for the family name Strombidae. Therefore, any clade given a family-group rank that contains the genus *Strombus*, should have Rafinesque, 1815 as its author, and therefore this epifamily should be called Stromboidae Rafinesque, 1815.

CANARIINI

Dekkers (2008) divided the family Strombidae into two tribes, both introduced as new, viz. Strombini and Canariini. Although in all probability he considered himself to be the author of the name Strombini (Dekkers, 2008: 40), as he does not attribute Strombini to Rafinesque, 1815, Strombini should be allocated to Rafinesque, 1815 following the same principle of coordination as indicated above. It is clear that Canariini is derived from an available genus level name, viz. *Canarium* Schumacher, 1817, as also indicated by Dekkers (2008: 41) in his “ethymology” [sic!]. Although the journal “De Kreukel” is not widely known and no longer published, it met the requirements of publication by the iczn. Therefore, the family-group name Canariini (as a tribe) is available from Dekkers (2008).

As both tribes Neostrombini and Canariini include the genus *Canarium* (Liverani et al., 2021: 29), the earlier name Canariini takes priority. Thus Neostrombini Liverani, Dekkers & Maxwell, 2021 is a junior synonym of Canariini Dekkers, 2008.

OTHER FAMILY-GROUP TAXA

Maxwell and co-authors also introduced the following eight family-group taxa, in alphabetical order:

Aligerini Maxwell, Dekkers, Rymer & Congdon, 2020, a tribe based on the genus-level name *Aliger* Thiele, 1929, originally as a subgenus of *Strombus*. Aligerini is an available name.

Dolomenini Dekkers & Maxwell, 2020, a tribe based on the genus-level name *Dolomena* Wenz, 1940, originally as a subgenus of *Strombus*. Dolomenini is an available name.

Doxanderina Dekkers & Maxwell, 2020, a subtribe based on the genus-level name *Doxander* Wenz, 1940, originally as a subgenus of *Strombus*. Doxanderina is an available name.

Neoaligerinae, introduced by Maxwell & Rymer (2021: 47) is not available as it is not based on an available genus-level name. The genus *Strombus* is within this grouping (Maxwell & Rymer, 2021: 51, fig. 4), and therefore this subfamily-level name should be called Strombinae and attributed to Rafinesque, 1815.

Neostrombinae, a subfamily name introduced by Maxwell & Rymer (2021: 47) cannot have *Canarium* as its type genus (ICZN Article 36.2), but should have *Neostrombus* Liverani,

Dekkers & Maxwell, 2021 as its type genus. However, the genus *Canarium* is within this grouping (Maxwell & Rymer, 2021: 51, fig. 3) and therefore this subfamily-level name should be called Canariinae and attributed to Dekkers, 2008 (ICZN Article 36.1).

Persististrombini Maxwell, Dekkers, Rymer & Congdon, 2020, a tribe based on the genus-level name *Persististrombus* Kronenberg & Lee, 2007, originally as a genus in Strombidae. Persististrombini is an available name.

Strombina, introduced as a subtribe by Maxwell, Dekkers, Rymer & Congdon, 2020, is to be attributed to Rafinesque, 1815.

Tersusini Maxwell, Dekkers, Rymer & Congdon, 2020. This name with the rank of tribe appears only in the concluding section (Maxwell et al., 2020: 25). It is not clear what is intended, but as it is mentioned as being American, and more or less opposed to *Strombus*, I conclude that it is intended as being equal to Aligerina, although this latter name should be in use for a subtribe, as the suffix is -ina, that had been correctly applied by Maxwell et al. (2020: 18), just after the introduction of Aligerini. Whatever the case, Tersusini is not based on an available genus-level name, and therefore unavailable.

DISCUSSION AND CONCLUSION

To my knowledge, the name Neostrombini and other possible family-group derivatives, after being made available by Liverani et al. (2021), have been used only once (by Maxwell & Rymer, 2021), so one cannot argue that the name Neostrombini and its possible derivatives to denote family-group taxa within Stromboidea are in prevailing usage.

Therefore, taking into account the principle of coordination (ICZN, 1999: Article 36), it is clear that any family-group taxon that includes the genus *Strombus*, whether recognized as a superfamily, epifamily, family, subfamily, tribe, or subtribe, should be attributed to Rafinesque, 1815 as its author. Accordingly, any family-group taxon that includes the genus *Canarium*, but not the genus *Strombus*, whether recognized as superfamily, epifamily, family, subfamily, tribe, or subtribe, should be formed from the stem Canari- and have the appropriate suffix and attributed to Dekkers, 2008.

ACKNOWLEDGEMENTS

Ruud Bank reviewed a first draft of this paper. The final draft was reviewed by Philippe Bouchet.

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