

Evolution and classification of Mesozoic mathildoid gastropods

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Acta Palaeontologica Polonica 58 (4), 2013: 803-826 doi: <http://dx.doi.org/10.4202/app.2012.0052>

About 150 Mesozoic (mostly Early and Middle Jurassic) species of the heterobranch superfamily Mathildoidea are classified into four families and 27 genera. Most taxa are assigned to the families Mathildidae, Gordenellidae, and Tofanellidae while the Triassic family Anoptychiidae holds only a single genus and is restricted to the Late Triassic. *Mathilda janeti* is designated as type species for the genus *Promathildia*. Earlier designations are invalid because they refer to species which were not originally included in the genus *Promathildia*. As a consequence, *Promathildia* is transferred from Mathildidae to Gordenellidae. The generic assignment of numerous mathildoid species is changed. The suggested classification represents an arrangement which is based on shell characters; it is not based on a cladistic phylogenetic analysis. However, a great number of fossil taxa can only be classified based on shell characters. A high mathildoid diversity has been recognized from the Late Triassic Cassian Formation. Many of these taxa are unknown from the Jurassic and probably became extinct during the end-Triassic mass extinction event. However, at least five genera (probably eight) survived the end-Triassic mass extinction event. *Tricarilda*, *Jurilda*, and *Promathildia* are rather conservative, long ranging groups of high Jurassic species diversity. They probably gave rise to the modern Mathildidae. One new genus is described: *Angulathilda* gen. nov.

Key words: Gastropoda, Heterobranchia, Mathildoidea, classification, Triassic, Jurassic, end-Triassic mass extinction event.

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