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Middle Miocene conoidean gastropods from western Ukraine (Paratethys): Integrative taxonomy, palaeoclimatogical and palaeobiogeographical implications

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The late Badenian (early Serravallian) conoideans from the Pidhirtsi Beds of western Ukraine (central Paratethys) have been investigated by means of a comprehensive and easy-to-perform morphometric approach, allowing the characterisation of eleven species, of which seven are new to science: *Mangelia angulicosta* sp. nov., *M. larga* sp. nov., *M. pseudorugulosa* sp. nov., *M. odovychenae* sp. nov., *Bela varovtsiana* sp. nov., *Bela*? *robusta* sp. nov., *Pyrgocythara turrispiralata* sp. nov. Additionally we also identified *Raphitoma* cf. *R. ringicula*, *Andonia* sp. aff. *A. transsylvanica* , *Teretia* cf. *T. turritelloides*, and *Haedropleura* sp. aff. *H. septangularis*. The relative high number of new species documented, relative to the total previously known from this stratigraphic interval, is interpreted as resulting mainly from combined methodological (dearth of taxonomic studies on Ukrainian conoideans) and environmental (high degree of habitat fragmentation in reef setting) factors. The conoideans documented herein add important information regarding palaeoclimaticalogical and palaeobiogeographical interpretations of the Serravallian Paratethys. The conoideans display strong affinity at the species level and complete overlap at the genus level with Neogene Proto-Mediterranean–Atlantic conoideans, thereby challenging the interpretation of late Badenian Paratethyan macrofaunal assemblage endemism. The lack of typical warm-water indicators (e.g., Conidae, Clavatulidae, or Pseudomelatomidae) within the studied material supports the interpretation that the fauna thrived during the late phase and/or soon after the Middle Miocene Climatic Transition (14.2–13.8 Ma).

Key words: Conoidea, Middle Miocene Climatic Transition, Serravallian, Central Paratethys, Ukraine.

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