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Middle Miocene gastropods from the southwestern margin of the Central Paratethys, Croatia: Museum collection's insight

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The most numerous and diversified Middle Miocene gastropod collection from Northern Croatia, housed at the Croatian Natural History Museum (CNHM), comes from the Zaprešić Brijeg locality near Zagreb. The gastropod-bearing horizon of the Middle Miocene (Langhian, Badenian) age is today no longer visible on the surface, not only in this area but also in other parts of Northern Croatia. The description of the Zaprešić Brijeg locality and fossil collecting methods can be found in the museum archives and published papers. According to these data, gastropods were collected from "sandstones" during the first half of the 20th century (Gorjanović-Kramberger 1894; Šuklje 1929). Among more than 11000 stored gastropod shells from this locality 45 belong to marine, 2 to marine/brackish and 2 to brackish gastropod families. Some families comprise only one or a few representatives, while other are much more common, such as Potamididae (4459 shells), Nassariidae (2428 shells), Clavatulidae (1813 shells), Turritellidae (1253 shells), and Cerithiidae (508 shells). In previously published papers on the Zaprešić Brijeg gastropod fauna (e.g., Gorjanović-Kramberger 1894; Šuklje 1929; Pavlovsky 1957, 1960) the focus was mostly on the taxonomical aspect. While examining the collection, we observed numerous drilling predation marks in a shape of drill holes on marine gastropod shells and provided numerical analysis of predation marks on some common families (Bošnjak et al., submitted). The aim of this study is to continue the division of gastropod families by their palaeoecology (infauna, epifauna) and feeding type (carnivores, suspension feeders, detritivores and grazers), in order to better understand the palaeoenvironmental conditions during the Middle Miocene (Badenian, Langhian) in this area. Non-marine gastropod taxa indicate the freshwater influx and the vicinity of hinterland. Such a rich museum collection can provide further insight into the palaeoecology of the southwestern margin of the Central Paratethys, even though the original fossiliferous horizon is no more available in the field.

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