

The Neogene Freshwater Crabs of Europe

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Freshwater crabs represent one of the most diverse groups of brachyuran crustaceans. Although several studies on recent material use palaeontological data to reconstruct their phylogeny and palaeobiogeography (e.g., DANIELS et al. 2006, KLAUS et al. 2006), the freshwater crab's record remains poorly known. Most of their fossil relatives come from Neogene sediments of the North-Alpine Foreland Basin and the rim of the Central Paratethys.

We recorded all taxonomic data of the fossil freshwater crabs of the European Neogene and recognize seven species that we assign to the genus *Potamon*: *Potamon quenstedti* (Engelswies, Langenenslingen; Karpatian), *Potamon speciosus* (Öhningen; Upper Badenian to Lower Sarmatian), *Potamon hungaricum* (Ždana; Lower Sarmatian), *Potamon proavitum* (Andritz/Graz, St. Stefan/Gratkorn; Upper Sarmatian), *Potamon* n. sp. (Höwenegg; Pannonian), *Potamon castellanense* (Castellina marittima; Upper Miocene), *Potamon antiquum* (Dunaalmás, Süttö, Mogyorós, Bajót; Upper Pliocene/Lower Quaternary).

Today, two families of freshwater crabs occur in the Mediterranean region: the Potamidae and the African Potamonautidae in the Nile valley. Several of the European fossil freshwater crabs were formerly assigned to the Potamonautidae (e.g., BOTT 1955). The only morphological character that could support this is the typical straight and sharp postfrontal crest of potamonautids. In contrast, all known fossil freshwater crabs of Europe show the potamid character state with a postfrontal crest forming two distinct lobes. This argues for a closer relationship with the Potamidae. Therefore we contradict former assumptions on a closer relationship with African or Southeast Asian freshwater crabs and argue for the fossil crabs to be part of the stem-group of the modern European potamids.

References

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