

## The West African enigma: Systematics, evolution, and palaeobiogeography of cardiid bivalve *Procardium*

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*Procardium* gen. nov. is proposed for a group of early Miocene to Recent large cardiids in the subfamily Cardiinae. The type species is *Cardium indicum*, the only living representative, previously assigned to the genus *Cardium*. It is a mainly West African species, with a very limited occurrence in the westernmost Mediterranean. *Procardium* gen. nov. and *Cardium* differ markedly with regard to shell characters and have distinct evolutionary and biogeographic histories. Six species, in the early Miocene to Pleistocene range, and one Recent species are assigned to the new genus: *Procardium magnei* sp. nov., *P. jansseni* sp. nov., *P. danubianum*, *P. kunstleri*, *P. avisanense*, *P. diluvianum*, and *P. indicum*. During the Miocene, *Procardium* gen. nov. had a wide distribution in Europe, including the Proto-Mediterranean Sea, Western and Central Paratethys and NE Atlantic, with a maximum diversity during the Langhian and Serravallian. Its palaeobiogeographic history was strongly controlled by climate. During the Langhian stage, warm conditions allowed the genus to reach its highest latitude, ca. 54° N, in the southern North Sea Basin. With cooling, its latitudinal range gradually retreated southward, becoming mainly Mediterranean in the Pliocene–Pleistocene, and West African at present.

**Key words:** Bivalvia, Cardiidae, systematics, Neogene, Quaternary, Africa, Europe.

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