

Recurrent constructional pattern of the crustacean burrow *Sinusichnus sinuosus* from the Paleogene and Neogene of Spain

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New occurrences of *Sinusichnus sinuosus* described in the Cenozoic of Spain evidence the almost continuous fossil record of this ichnospecies from the Upper Cretaceous to the Lower Pliocene. Morphological and size features of these highly regular sinusoidal burrows have been analyzed, showing a very recurrent constructional pattern through time. Such features are also constant along the ontogeny of the producer. The large number of similarities that this ichnogenus shares with fodinichnial burrow systems, such as *Thalassinoides*, *Ophiomorpha*, or *Spongeliomorpha*, point to a crustacean authorship. Since this sinusoidal architecture is also common among some graphoglyptids, other behavioral strategies are discussed. The ichnogenus *Sinusichnus* occurs commonly in shallow marine environments, in particular to deltaic depositional settings.

Key words: Decapoda, *Sinusichnus sinuosus*, Bioturbation, Eocene, Miocene, Pliocene.

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