

A REAPPRAISAL OF *NEOINOCERAMUS* VON IHERING (MOLLUSCA: BIVALVIA) AND ITS EVOLUTIONARY AND PALAEOBIOGEOGRAPHICAL RELATIONSHIPS

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In 1902 H. von Ihering recognized a distinctly peculiar kind of bivalve from Tertiary deposits of Patagonia, for which he proposed the new genus and species *Neoinoceramus ameghinoi*. This species is restricted to the lower part of the Chenque Formation, a unit exposed along the southern coast of the San Jorge Gulf and in the area around Comodoro Rivadavia, central Patagonia, Argentina. According to independent evidence, the reported age for the Chenque Formation may be bracketed within the late Oligocene-early Miocene interval. The original material, collected by Carlos Ameghino, was initially regarded by Ihering as a late derivative and close ally of the exclusively Mesozoic genus *Inoceramus* (a taxonomic relation still admitted with reservations in the "Treatise on Invertebrate Paleontology"). This was later challenged, leading Ihering and some subsequent authors to refer *Neoinoceramus* to the Limidae. The purpose of this contribution is to offer additional supporting evidence for this action and to reassess the evolutionary and biogeographical implications of this unusual genus. The most distinctive features of its type species are its large size, thick shell, the absence of radial ornamentation and the presence of strongly upturned commarginal lamellae. The general ornamentation pattern is shared with the Maastrichtian species *Ctenoides? vogeli* Dhondt, from near Maastricht, The Netherlands, which should thus be transferred to *Neoinoceramus*, where it fits more naturally than within any other limid genus. This being the case, the enigmatic genus most probably arose during the late Cretaceous in the Northern Hemisphere, from where it subsequently migrated southwards through an as yet unknown route, but possibly along the early, widening Atlantic via an "African passageway". An explanation is still wanting for the extended span of the fossil record that is devoid of material referable to this apparently Lazarus taxon. Since the last appearance of *N. vogeli* in the Maastrichtian, the genus seems to have vanished from the record until its next occurrence in the late Oligocene - early Miocene of Patagonia. Ihering's original idea, that *Neoinoceramus* represents an ancient lingering stock among the components of the Patagonian fauna, is thus confirmed, albeit on different grounds.