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First palaeanodont (?pholidotan) mammal from the Eocene of Europe

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We report the discovery in the early Eocene French locality of Le Quesnoy (MP7, Neustrian) of the first palaeanodont from the Eocene of Europe, and the first metacheiromyid from outside of western North America. The species, known from a dentary and a few postcranial bones, belongs to the genus *Palaeanodon,* and it is one of several North American immigrant taxa that characterize the Paleocene-Eocene faunal turnover in Europe. *Palaeanodon* sp. from Le Quesnoy is close in size to *P. nievelti* from the early Wasatchian of North America. However, it shows noticeable primitive features such as a more prominent ventral keel on the metacarpal III and a probably elongated and bilobed pc4 (= p4), although this is inferred from the infilled alveolus. Additional original features are also noticed on the tentatively referred astragalus. These minor differences suggest that the Le Quesnoy form represents a new species, but the available material remains inadequate to name it. The morphology and the size of the metacarpal are actually closer to *P. parvulus* (Clarkforkian)--*P.nievelti* (Wasatchian) intermediates, suggesting a sister-group relationship with the latter (if *Palaeanodon* sp. from Le Quesnoy is not shown to belong to a distinct European lineage). This would indicate a dispersal at least as old as *P.nievielti* and a correlation of Le Quesnoy not later than early Wasatchian. The discovery of *Palaeanodon* in Le Quesnoy fits paleobiogeographically well with the hypothesis of a relationship of palaeanodonts to pholidotans, which have their earliest record in the middle Eocene of Europe (Messel).

Key words: Mammalia, Palaeanodonta, paleobiogeography, Neustrian, Eocene, Le Quesnoy, Europe.

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