LOERENTHOPLOMA DANIELAE, A NEW CRAB (DECAPODA, BRACHYURA, RETROPLUMIDAE) FROM THE LOWER EOCENE OF NORTHWEST BELGIUM

BY

BARRY W. M. VAN BAKEL1,2,5, PEDRO ARTAL3,6, RENÉ H. B. FRAAIJE1,7, and JOHN W. M. JAGT4,8

1) Oertijdmuseum De Groene Poort, Bosscheweg 80, NL-5283 WB Boxtel, Netherlands
2) Nationaal Natuurhistorisch Museum (Naturalis), P.O. Box 9517, NL-2600 RA Leiden, Netherlands
3) Museo Geológico del Seminario de Barcelona, Diputación 231, E-08007 Barcelona, Spain
4) Natuurhistorisch Museum Maastricht, de Bosquetplein 6-7, NL-6211 KJ Maastricht, Netherlands

ABSTRACT

A new species of retroplumid crab, Loerenthopluma danielae, is described from the Egemkapel Clay Member (Tielt Formation; lower Eocene, Ypresian) at the Ampe sand and clay pit near Egem, northwest Belgium. It is characterized by prominent outer orbital spines, wide orbits and a narrow, spatulate rostrum.

RÉSUMÉ

Une nouvelle espèce de crabe, Loerenthopluma danielae, est décrit des argiles de Egemkapel (Formation de Tielt; Eocene inférieur, Yprésien), de la carrière d’argile et de sable d’Ampe près de Egem, au nord-ouest de la Belgique. Ce nouveau crabe est caractérisé par des épines orbitales externes proéminentes, des orbites larges et un rostre étroit et spatulé.

INTRODUCTION

Paleogene and Neogene crustaceans are fairly common in Belgium (see Van Bakel et al., 2006; Jagt et al., 2007). A number of new taxa have been described.

5) Corresponding author; e-mail: barryvanbakel@gmail.com
6) e-mail: partal@optimus.es
7) e-mail: info@oertijdmuseum.nl
8) e-mail: john.jagt@maastricht.nl
subsequently (Fraaije et al., 2007; Van Bakel et al., 2009a, b). The Ampe sand and clay pit near Egem (West-Vlaanderen province), where specimens are commonly collected as a “by-product” of screening and wet sieving of sediment for shark teeth, has yielded the richest crustacean fauna. So far, only a single species from this locality, *Upogebia lambrechtsi* Fraaije, Van Bakel, Jagt & Coole, 2007, has been described and formally named (Fraaije et al., 2007). Associated lobsters and crabs are *Hoploparia* sp., *Linuparus scyllariformis* (Bell, 1857), *Silvacarcinus laurae* Collins & Smith, 1993, *Glyphithyreus wetherelli* (Bell, 1858), *Raninoides gottschei* (Böhm, 1928), *Goniochele* n. sp., *Cyclocorystes* cf. *pulchellus* (Bell, 1858), and *Orthakrolophos* n. sp. A new genus and species of stomatopod is also represented. Here we describe a new retroplumid, *Loerenthopluma danielae* n. sp., based on a dozen well-preserved specimens.

Two extant and six fossil genera are currently recognized in the primitive eubrachyuran family Retroplumidae (cf. Beschin et al., 1996; Feldmann & Portell, 2007: 90; Ng et al., 2008: 181). The type genus, *Retropluma* Gill, 1894, first occurs in the early Eocene and continues to the present. Its fossil representatives appear to have preferred soft-bottom shelf settings (Artal et al., 2006: 65).

One of the Egem specimens retains a well-preserved ventral side with sternites, abdomen, and pereiopods; this was prepared using a technique applied and described as “negative preparation” by Collins & Jakobsen (2004: 67). The crab remains, inclusive of the cuticle, were removed with pneumatic tools and finally with a sharp needle. The remaining cavity was filled with silicone rubber, which resulted in a detailed cast. It is, thus, possible to examine fragile details such as the thin pereiopods, including the reduced P5, which normally are not preserved in fossils. Specimens were darkened with black water colour and subsequently coated with ammonium chloride prior to photography.

**SYSTEMATIC PART**

Abbreviations used to denote the repository of specimens referred to in the text are as follows: MAB, Oertijdmuseum De Groene Poort, Boxtel, Netherlands; MGSB, Museo Geológico del Seminario de Barcelona, Barcelona, Spain.