New retroplumid crabs (Crustacea, Brachyura, Retroplumidae Gill, 1894) from the Eocene of Huesca (Aragón, Spain)

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Abstract

Two new brachyurans assignable to the family Retroplumidae Gill, 1894, *Serrablopluma diminuta* **n. gen., n. sp.**, and *Gaudipluma bacamortensis* **n. gen., n. sp.**, from the Eocene of northern Spain (Huesca, Aragón), substantially enlarge our current knowledge of the morphological diversity of the family. The material, with well-preserved ventral surfaces, permits the erection of two new genera that can be referred to the family with confidence on the basis of the general carapace shape, narrow front, a reduced last pair of pereiopods and characteristic thoracic sternum (broad, trapezoidal sternites 3, 4, subrectangular sternites 5–7, sternite 8 conspicuously reduced and inclined). *Serrablopluma diminuta* **n. gen., n. sp.** co-occurs with two other retroplumids in the most diverse fossil assemblage of that family known to date.

Key words: Decapoda, Retroplumidae, *Serrablopluma*, *Gaudipluma*, new taxa

Introduction

Extinct members of the family Retroplumidae Gill, 1894, are comparatively common and diverse in Eocene sedimentary rocks in northern Spain, Eocene and Oligocene strata in northern Italy and Eocene levels in southern France (Via 1959, 1969, 1980; Beschin *et al*. 1996; Larghi 2003; Artal *et al*. 2006). Several fossil taxa from these areas have been assigned to *Retropluma* Gill, 1894, while one species each has been referred to both *Retrocypoda* Via, 1959, and *Loerenthopluma* Beschin, Busulini, De Angeli & Tessier, 1996. Another species of the latter genus has recently been described from the lower Eocene (Ypresian) of northwestern Belgium (Van Bakel *et al*. 2010). The genus *Loerentheya* Lőrenthey *in* Lőrenthey & Beurlen, 1929, from Hungary, which is morphologically close to *Loerenthopluma*, was also recovered from Eocene strata (Glaessner 1969: R531). The two new genera erected herein share important features with all of the above, but also present noteworthy novelties. The two new genera appear to be rather different from extra-European genera currently assigned to Retroplumidae such as *Archaeopus* Rathbun, 1908, and *Costacopluma* Collins & Morris, 1975. These genera constitute the oldest record of Retroplumidae (Beschin *et al*. 1996: 87-88).

One of the features that European genera have in common, inclusive of the two new ones proposed herein, is a carapace that is strongly dorso-ventrally compressed. *Costacopluma*, which is widely distributed both geographically and stratigraphically, with records from America and Africa (Beschin *et al*. 1996) has a more inflated carapace with a convex dorsal surface (Ossó-Morales *et al*. 2010: 220, fig. 7). The other extra-European genus, *Archaeopus*, displays a complex set of dorsal ridges (Rathbun 1908: 347), with swollen regions, *i.e.*, features that differ considerably from those of the two new genera described herein.

The two new forms demonstrate the morphological adaptability of the family, having plesiomorphic characters in common with other members, but also adding new features that merit discussion in the light of the evolutionary