

New records of decapod macrurans from the Cretaceous of Catalonia and the Province of Castellón (Spain)

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Abstract

The recent discovery of new macrurans from Font de la Plata (Vilanova de Meià, Lleida) and Torrelles de Foix (Barcelona) both Catalonia, and from the Valencia Region, Morella (Castellón) increases our knowledge of decapod crustaceans from the Lower and Upper Cretaceous of Spain. To infraorder Astacidea Latreille, 1802, are assigned *Hoploparia catalunica* n. sp. (Nephropidae Dana, 1852 *sensu* Tshudy and Babcock, 1997) and *Enoploclytia* sp. (Erymidae Van Straelen, 1924). The infraorder Achelata Scholz and Richter, 1995, is represented by *Linuparus* sp. (Palinuridae Latreille, 1802). The discovery of *H. catalunica* n. sp. adds to our knowledge of the genus because not only does it constitute the most complete species known to date from Europe, it also enlarges the palaeogeographic distribution of the genus, known to date only from Belgium, Germany, and Czech Republic. The report of *Enoploclytia* McCoy, 1849, also provides valuable data, enlarging the palaeogeographic distribution of this genus, known to date from France, Germany, Great Britain, and Belgium. Finally, the discovery of *Linuparus* White, 1847, is important because it is the first report of palinurids from Spain.

Key words: Crustacea, Decapoda, Lower and Upper Cretaceous, Spain

Resumen

Nuevos registros de crustáceos macruros en el Cretácico de Catalunya y la Provincia de Castellón (España). Recientes recuperaciones de macruros de Catalunya, en la Font de la Plata (Vilanova de Meià, Lleida), Torrelles de Foix (Barcelona) y de Valencia Provincia, Morella (Castellón) amplían el registro carcinológico del Cretácico inferior y superior de España. Los nuevos registros, asignables a la infraorden Astacidea Latreille, 1802, incluyen *Hoploparia catalunica* n. sp. (Nephropidae Dana, 1852 *sensu* Tshudy and Babcock, 1997) y *Enoploclytia* sp. (Erymidae Van Straelen, 1924). La infraorden Achelata Scholz and Richter, 1995, está representada por *Linuparus* sp. (Palinuridae Latreille, 1802). El estudio de *Hoploparia catalunica* n. sp., contribuye notablemente al conocimiento del género, no tan solo por ser la especie más completa reconocida hasta el momento en Europa, sino porque amplía su distribución paleogeográfica, conocida hasta ahora en Bélgica, Alemania, y República Checa. El hallazgo de *Enoploclytia* McCoy, 1849, amplía la distribución paleogeográfica del género, conocido hasta la fecha solo en Francia, Alemania, Inglaterra y Bélgica. Finalmente, el hallazgo de *Linuparus* White, 1847 es trascendente por cuanto es la primera cita de palinurídos en España.

Introduction and geological setting

The pre-Pyrenean mountains of the Sierra del Montsec present excellent outcrops of Cretaceous strata oriented East-West and exposed along 40 km. The first macruran, assigned to the genus *Hoploparia* McCoy, 1849, was collected from the locality Barranc de Finestrelles, a few kilometres north of the village of Àger (Lleida, Catalonia) and was deposited in the Museu de Geologia de Barcelona (MGB). This specimen (registration number 1413) was incomplete and poorly preserved and was illustrated in a catalogue of crustaceans (Gómez-Alba, 1989). A notably more complete specimen was recovered a few years ago at the same locality, and was registered in the Museu Geològic del

Seminari of Barcelona (MGSB 74518).

The levels containing decapod crustaceans are constant along many kilometres, with minor lateral changes, showing up as a characteristic flat relief at the base of a cliff, and are considered to be Santonian in age (Llompart, 1979; Caus et al., 1999). Sediments comprise widely distributed grey marls, interbedded by thin beds of marly limestones and limestones that locally can reach thickness between 10 and 20 cm. The associated fauna comprises abundant solitary corals, such as *Aulosmilia vidali*, *Aulosmilia bofilli*, *Cunnolites elliptica* and *Diploctenium*, common rudists, regular and irregular echinoids, some nautiloids and the foraminifer *Lacazina*. The sedimentary environment corresponds to an open but shallow-marine platform (Llompart, 1979).

Recent discoveries at the Font de la Plata (Vilanova de Meià, Lleida) provided numerous small remains from these marls, and a single specimen showing extraordinary completeness was recovered from an intercalated bed of hard limestones. The remains contained in marls are fragmentary and distorted, of a black colour and are slightly pyritised. The specimen recovered from the limestones is very complete, preserving complete chelae, and the associated fauna is less abundant. Both places, Font de la Plata and Barranc de Finestrelles, are situated 18 km apart, presenting a similar lithology, have the same associated fauna, and both have been specifically mentioned in the geological literature of the area (Cornella, 1977; Rosell and Llompart, 1988).

One macruran recently donated to the Museu Geològic del Seminari Conciliar of Barcelona, and assigned here to the genus *Enoploclytia*, was collected at Cal Bord, some kilometres south of the village of Torrelles de Foix (Barcelona, Catalonia). The layers which yielded this macruran are considered to be Aptian in age, according to the geological studies in the area and the associated fauna (Solé Sabarís, 1945). The beds consist of ochraceous marly limestones bearing more or less abundant fauna, mainly echinoderms (*Toxaster* sp.), some rudists, and orbitolinids. According to Solé Sabarís (1945), and the geological map of the area (IGME, 1973), the environmental conditions correspond to a platform marine facies.



Fig. 1. Geographic map with the fossiliferous localities. 1) Àger. 2) Font de la Plata. 3) Torrelles de Foix. 4) Morella.

The palinurid recorded in the present study was recovered from Pont de Taules, in the vicinity of the village of Morella (Castellón, Spain). The province of Castellón, just south of Tarragona (Catalonia, Spain), has provided numerous remains of *Mecochirus magnus* (McCoy, 1849), but this is the first record of a palinurid from Spain. The beds which yielded the new specimen comprise marls corresponding of the Forcall Formation (Canéröt et al., 1982), which has been extensively documented in numerous geological studies. It is considered as a marine deposit of Aptian age (Canéröt et al., 1982; Salas et al., 1995).

Previous records of Cretaceous macrurans from Spain

Macrurans from the Cretaceous of Spain are rare and limited today to five reports. Via Boada (1951) reported a fragmentary specimen from the Cretaceous of Montmell, ascribing it to *Hoploparia dentata* (Roemer, 1841). Via Boada (1951) and Solé and Via (1989) noted a single propodus from the Cretaceous (Aptian) of Castellet, ascribing it to *Hoploparia edwardsi* (Robineau-Desvoidy, 1849). Via Boada (1951) reported from the Upper Cretaceous (Santonian) of Montsec de Àger a single specimen of poor preservation, referring to it as *Hoploparia* cf. *H. pelseneeri* (Van Straelen, 1936). Later, Solé and Via (1989) mentioned four specimens from the Upper Cretaceous (noted in the text as beds overlying upper Berriasian–lower Valanginian sediments) of Montsec de Àger (Lleida, Barcelona) to this species. Via Boada (1975) described many specimens from the Lower Cretaceous (Aptian) of Josa (Teruel) and Alcalá of Chivert and Torreblanca (Castellón) quarries, ascribing them to *Mecochirus magnus* McCoy, 1849 (=*Meyerella magna*). Via Boada (1971) described *Oplophorus roselli* from Montsec, currently assigned to *Delclosia* Rabadà, 1993, from the Lower Cretaceous (lower Barremian) of Las Hoyas (Cuenca) (Rabadà, 1993; Garassino, 1997). Solé and Via (1989) ascribed one specimen from the Lower Cretaceous (Aptian) of Alcalà of Xivert to *Meyerella magna*; this specimen had previously been referred to as *Meyeria bolivari* by Van Straelen (1927). Finally, Garassino (1997) assigned over 800 complete and fragmentary specimens from the Lower Cretaceous (lower Barremian) of Las Hoyas (Cuenca) to *Austropotamobius llopisi* (Via Boada, 1971), previously placed in *Pseudastacus* by Via Boada (1971).

Materials

The studied sample includes ten complete and fragmentary specimens, housed in the Museu Geològic del Seminari Conciliar of Barcelona (MGSB) and the Museu de Geologia of Barcelona (MGB). The specimens are three-dimensionally preserved on the bedding planes. Their preparation was difficult as a result of the induration of the matrix in some specimens. The studied specimens are ascribed to *Hoploparia catalunica* n. sp. (eight specimens), *Enoploclytia* sp. (one specimen), and *Linuparus* sp. (one specimen).

Abbreviations

a1–a6, abdominal segments; mpx3, third maxilliped, P1–P5, first to

fifth pereiopods. Measurements are given in millimetres (mm).

Systematic palaeontology

Infraorder Astacidea Latreille, 1802

Superfamily Nephropoidea Dana, 1852

Family Nephropidae Dana, 1852 *sensu* Tshudy and Babcock, 1997

Genus *Hoploparia* McCoy, 1849

Type species: *Astacus longimanus* Sowerby, 1826, by subsequent designation of Rathbun (1926).

Included fossil species: *H. longimana* (Sowerby, 1826); *H. dentata* (Roemer, 1841); *H. gammaroides* McCoy, 1849; *H. edwardsi* (Robineau-Desvoidy, 1849); *H. beyrichi* (Schlüter, 1862); *H. neocomensis* de Trobolet, 1874; *H. schluteri* de Trobolet, 1874; *H. minima* de Trobolet, 1876; *H. klebsi* Noetling, 1885; *H. trigeri* A. Milne Edwards in Guiller, 1886; *H. benedeni* Pelseneer, 1886; *H. muncki* Pelseneer, 1886; *H. bosqueti* (Pelseneer, 1886); *H. biserialis* Fritsch and Kafka, 1887; *H. senonensis* Forir, 1887; *H. fraasi* (Böhm, 1891); *H. bennetti* Woodward, 1900; *H. gabbi* Pilsbry, 1901; *H. gladiator* Pilsbry, 1901; *H. stokesi* (Weller, 1903); *H. groenlandica* Ravn, 1903; *H. troboleti* Borriessiaak, 1904; *H. aspera* Harbort, 1905; *H. browni* Whitfield, 1907; *H. antarctica* Wilckens, 1907; *H. mesembria* Etheridge J., 1917; *H. corneti* Van Straelen, 1921; *H. tennesseensis* Rathbun, 1926; *H. mcnairyensis* Rathbun, 1929; *H. shastensis* (Rathbun, 1929); *H. eocenica* Lörenthey, 1929; *H. georgeana* Rathbun, 1935; *H. tarrantensis* Rathbun, 1935; *H. dentonensis* Rathbun, 1935; *H. blossomana* Rathbun, 1935; *H. johnsoni* Rathbun, 1935; *H. pelseneeri* (Van Straelen, 1936); *H. alpinus* Van Straelen, 1936; *H. columbiana* Beurlen, 1938; *H. hemprichi* (Mertin, 1941); *H. travisensis* (Stenzel, 1945); *H. collignoni* (Van Straelen, 1949); *H. intermedia* Secretan, 1964; *H. sculpta* Secretan, 1964; *H. pusilla* Secretan, 1964; *H. buntingi* (Feldmann and Holland, 1971); *H. riddlensis* Feldmann, 1974; *H. bearpawensis* Feldmann, Bishop and Kamer, 1977; *H. wardi* Quayle, 1987; *H. victoriae* Quayle, 1987; *H. arbei* Aguirre-Urreta, 1989; *H. gazdzickii* Feldmann and Crame, 1998; *H. miyamotoi* Karasawa, 1998; *H. kamuy* Karasawa and Hayakawa, 2000; *H. tshudyi* Schweitzer and Feldmann, 2001; *H. horrida* Schweitzer, Feldmann, Fam, Hessian, Hetrick, Nyborg and Ross, 2003; *H. albertensis* Tshudy, Donaldson, Collom, Feldmann and Schweitzer, 2005; *H. kamimurai* Kato and Karasawa, 2006; *H. uzbekensis* Feldmann, Schweitzer, Redman, Morris and Ward, 2007; *H. natsumiae* Karasawa, Ohara, and Kato, 2008.

Hoploparia catalunica n. sp.

(Figs. 2–3; Pl. 1, Figs. 1–2)

1951 *Homarus* (*Hoploparia*) cfr. *pelseneeri* in Via Boada, p. 162, Text-figs. 5.6a, Pl. 1, figs. 5, 6, 6a.

1989 *Hoploparia pelseneeri* (Van Straelen, 1936); Solé and Via, p. 25.

Diagnosis: Carapace over twice as long as high; short, thin rostrum without dorsal and ventral teeth; postcervical groove extending to hepatic groove, joining inferior groove; cervical groove extending to antennal groove; gastro-orbital groove absent; well-developed

antennal ridge; well-developed postantennal spine; gastric region with supraorbital ridge; intermediate, branchial, and lateral ridges absent; chela and articles of P1 without dorsal and ventral spines; abdominal terga and pleura smooth.

Etymology: the trivial name alludes to Catalonia (Spain) where the studied specimens were discovered.

Materials: Holotype (MGSB 74519); Paratypes (MGSB 74518, 60045). Eight fragmentary and articulated specimens in dorsal view, 50–70 mm long. MGSB 60044, 60045, 60046, 60047, 60048 (numerous fragmentary remains), 74518, 74519; MGB 1413.

Even though the type locality is Àger, the studied specimens come from different localities in Catalonia, as follows: Àger (Lleida), MGSB 74519, MGB 1413; Font de la Plata (Vilanova de Meià, Lleida), MGSB 60044–60048, 74518.

Geological age: Upper Cretaceous (Santonian).

Type locality: Àger (Lleida, Catalonia).

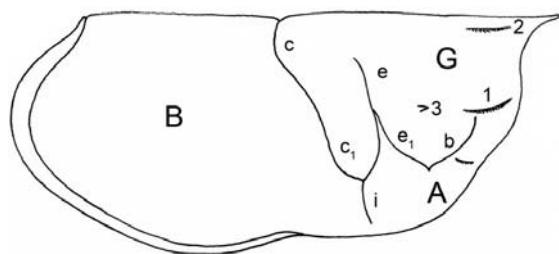


Fig. 2. *Hoploparia catalunica* n. sp., carapace. 1) antennal ridge. 2) supraorbital ridge. 3) postantennal spine. e-e1) cervical groove. b1) hepatic groove. i) lower groove. b) antennal groove. c-c1) postcervical groove. G) gastric region. A) antennal region. B) branchial region.

Description: Large astacid with exoskeleton strongly tuberculate in antennal, hepatic, pterigostomial, and branchial regions of carapace.

Carapace. Carapace over twice as long as high. Short, thin rostrum without dorsal and ventral teeth. Well-developed antennal ridge beginning on anterior margin with distal spine, extending distally and ventrally. Well-developed postantennal spine directed forwards. Smooth gastric region with supraorbital ridge. Orbit not deeply incised. Gastro-orbital groove absent. Cervical groove beginning at anterior margin, shallow initially, deepest at ventral curve, then extending dorsally in slightly sinuous, deeper segment, terminating at upper part of carapace. Cervical groove joined at slightly deep arched antennal groove terminating close to antennal ridge. Deep, arched hepatic groove extending from cervical groove to postcervical groove. Deep postcervical groove, slightly sinuous along dorsal surface, joining at hepatic groove. Gastric and cardiac regions smooth. Antennal, hepatic, pterigostomial, and branchial regions strongly tuberculate. Marginal rim very well developed on posterior margin.

Abdomen. Segment a1 small with arcuate, convex tergum. Segment a2 with rectangular tergum, groove parallel to and near proximal and distal margins, extending onto short pleuron, inflated centrally. Segments a3–5 with rectangular terga, groove parallel to and near distal margin, extending onto short pleuron, inflated centrally. Segment a6 smaller than segments a2–5, with the same shape, lacking groove, tergum very short

and narrow. All segments smooth. Telson with straight proximal margin with rounded distal extremity, entire surface smooth.

Cephalic appendages. Not preserved.

Thoracic appendages. mpx3 short and spineless. P1 approximately twice of carapace length. Manus of cutter claw elongate with smooth upper and lower margins. Movable finger longer than fixed finger, curved distally. Smooth occlusal surface. Thin, elongate merus and carpus of P1 with smooth upper and lower margins.

Abdominal appendages. Not preserved.

Discussion: As reported by Feldmann et al. (2007), *Hoploparia* has characterised by possession of cephalic ridges and spines, developed to varying degrees, a well-developed rostrum with or without dorsal and ventral spines, a cervical groove extending about half the distance to the dorsal surface, a postcervical groove extending from the dorsal surface to curve around and merge with the cervical groove, a well-developed hepatic groove, branchial region with granules, scabrous ornament, or ridges, uropodal exopod with diaeresis, and chelae clearly differentiated into crushers and cutters. Most of these morphological characters are visible on the studied specimens that are ascribed to this genus. Feldmann et al. (2007) gave a check list of forty-eight fossil species known then belonging to this genus. Among these species, *H. hakelensis* (Fraas, 1878), is now considered as belonging to *Homarus* Weber, 1795 (Garassino, 1994). Moreover, those authors did not include twelve species, described by de Trobolet (1874), Noetling (1885), Pelseneer (1886 b, c), Whitfield (1907), Lörenthey (1929), Rathbun (1935), Quayle (1987), Schweitzer et al. (2003), Tshudy et al. (2005), and Kato and Karasawa (2006).

Eight species of *Hoploparia* are known from the Upper Cretaceous of Europe (see below). Among these, *H. senonensis* and *H. schluteri* are not comparable with the present new species on account of their very poor state of preservation.

Hoploparia beyrichi was described on the basis of a single incomplete specimen from Germany, lacking the frontal part of the carapace, pereiopods, and pleopods (Schlüter, 1862). In this species antennal, supraorbital, and postorbital spines are present, and the postcervical groove does not join the cervical groove. *Hoploparia catalunica* n. sp.

differs from it in that the postcervical groove joins the cervical groove by the hepatic groove, the antennal groove is well developed, there is a strong postantennal spine, and supraorbital and antennal ridges are well developed.

Hoploparia fraasi was erected on a single incomplete stout chela from Germany, lacking the movable finger (Böhm, 1891). *Hoploparia catalunica* n. sp. differs from this species in that the chela of P1 is very elongate and thin with edentate occlusal margins.

Hoploparia muncki was described on a sole incomplete specimen from Belgium, lacking the frontal part of the carapace and pereiopods (Pelseneer, 1886a). Even though this species preserves almost the complete carapace, it is difficult to establish correlation among the grooves and determine the presence of spines and ridges. So comparison with the new species is very difficult. Only the presence of ridges on the telson appears to distinguish this species from *H. catalunica* n. sp. in which the telson is smooth.

Hoploparia hemprichi was described on 142 complete and incomplete specimens from Germany (Mertin, 1941). This species shows a very elongate and thin rostrum with proximal ventral teeth, two suprarorbital ridges, postantennal spine, antennal ridge, branchiocardiac groove, short postcervical groove which does not join with cervical groove, antennal groove and P1 remarkably robust with strong heterochely. *H. catalunica* n. sp. differs from the German species in that the rostrum is short and edentate, in the presence of one supraorbital ridge, absence of branchiocardiac groove, postcervical groove which joins the cervical one by the hepatic groove, and P1 remarkably elongate with homochely.

Hoploparia biserialis was described on a few incomplete specimens from the Czech Republic (Fritsch and Kafka, 1887). This species has a very elongate, thin rostrum without dorsal and ventral teeth, two/three supraorbital ridges, postcervical groove which joins the cervical and antennal grooves, elongate chela of P1, and uropods with median ridges. *Hoploparia catalunica* n. sp. differs from this species in that the rostrum is short and edentate, only one suprarorbital ridge is present, and uropods lacks median ridges.

The Spanish specimens from the Cretaceous ascribed by Via Boada

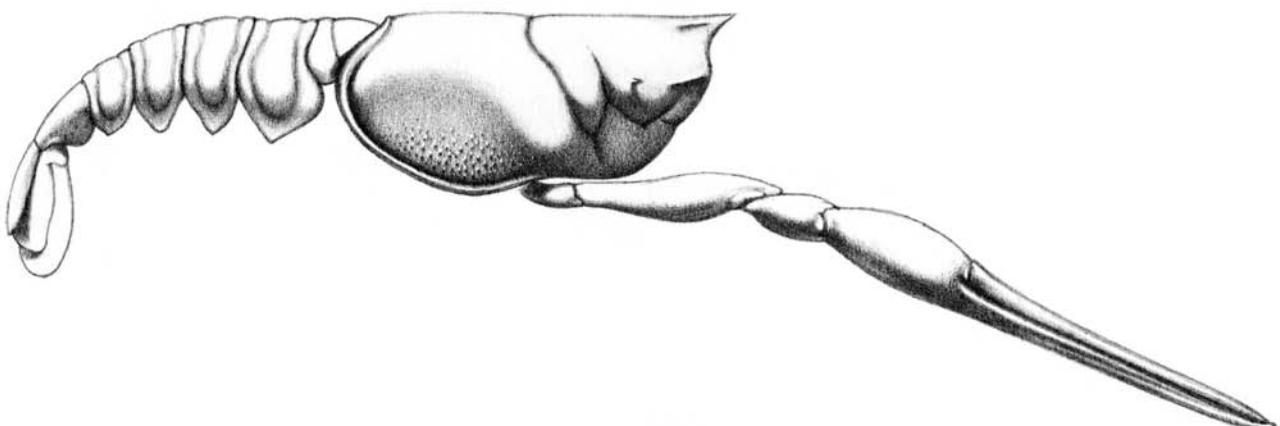


Fig. 3. *Hoploparia catalunica* n. sp. incomplete reconstruction.

**Plate 1**

1, 2. *Hoploparia catalunica* n. sp. 1, MGSB 74519, holotype. $\times 1.5$. 2, MGSB 74518, paratype. $\times 1.2$. 3. *Enoploclytia* sp. MGSB 74525, chela in upper view. $\times 1.3$.
4. *Linuparus* sp. MGSB 24922, sternal plate. $\times 0.7$.

(1951) and Solé and Via (1989) to *H. dentata* and *H. edwardsi* are much too incomplete and fragmentary to allow a comparison with the studied specimens.

Via Boada (1951) and Solé and Via (1989) reported the presence of *H. pelseneeri* in the Upper Cretaceous of Spain. However, the re-examination of specimen MGB1413 on a cast produced by Via Boada (MGSB 29795), previously ascribed to *H. pelseneeri*, shows the diagnostic characters of the present species and has now allowed to identify the carapace of *H. catalunica* n. sp.

Hoploparia catalunica n. sp. represents the most complete species of this genus known to date from Europe.

Family Erymidae Van Straelen, 1924

Genus *Enoploclytia* McCoy, 1849

Type species: *Astacus leachii* Mantell, 1822, by monotypy.

Enoploclytia sp.

(Fig. 4; Pl. 1, Fig. 3)

Geological age: Lower Cretaceous (Aptian).

Locality: Torrelles de Foix (Barcelona, Catalonia).

Material: One complete chela, 75 mm long. MGSB 74525.

Discussion: The well-preserved chela allows recognition of the strong, bulbous propodus with elongate fixed and movable fingers slightly curved distally and with a row of robust teeth on both occlusal margins. These characters of chela are typical of *Enoploclytia*. At present, *Enoploclytia* is known from the Triassic to the Paleocene in central and northern Europe (Schlüter, 1862, 1879; Fritsch and Kafka, 1887; Glaessner, 1933; Van Straelen, 1936; Mertin, 1941; Förster, 1966; Jagt and Fraaije, 2002), Great Britain (Mantell, 1833; McCoy, 1849; Woods, 1930), Niger (Joleaud and Hsu, 1935), Madagascar (Secretan, 1964), North America (Rathbun, 1935; Stenzel, 1945; Beikirch and Feldmann, 1980; Miller and Ash, 1988), South America (Aguirre Urreta, 1989; Vega, 2005; Vega et al., 2007), and Australia (Woods, 1957; Hill et al., 1968). ?*Enoploclytia selmaensis* (Rathbun, 1935) is also reported as a dubious record from the Eocene of North America (Feldmann, 1981). Even though it is impossible to give a detailed description of the Spanish specimen, its discovery enlarges the geographic distribution of the genus in Europe.

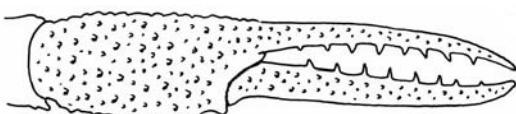


Fig. 4. *Enoploclytia* sp., chela reconstruction.

Infraorder Achelata Scholz and Richter, 1995

Superfamily Palinuroidea Latreille, 1802

Family Palinuridae Latreille, 1802

Genus *Linuparus* White, 1847

Type species: *Palinurus trigonus* von Siebold, 1824, by monotypy.

Linuparus sp.

(Fig. 5; Pl. 1, Fig. 4)

Geological age: Lower Cretaceous (Aptian).

Locality: Morella (Castellón, Valencia).

Material: One incomplete specimen in ventral view. Sternal plate: 32 mm long. MGSB 24922.

Discussion: A single specimen incomplete, lacking the carapace, abdomen, and tail fan. The sternal plate is well preserved. The central plate has a triangular shape, having well-marked transverse grooves, corresponding to the apodemes on the basis of the pereiopods. The five ambulatory pereiopods are incomplete. Short mandibles and maxillipedes are preserved in the anterior part. A very well-marked orifice is located centrally in the posterior part of the sternal plate. This kind of sternal plate is typical of the Palinuridae.

Usually, the sternal plate of the palinurids are rarely preserved in the fossil record. In fact, we have only four genera, *Linuparus* White, 1847, *Astacodes* Bell, 1863, *Archaeocarabus* McCoy, 1849, and *Scyllarides* Gill, 1898, among palinurids that preserve sternal plates in the fossil record (Stenzel, 1945; Alencaster, 1977; Feldmann and McPherson, 1980; Quayle, 1987; Feldmann et al., 1993, 2007). However, the ascription of one sternal plate to *Astacodes* by Alencaster (1977; 76, text-fig. 3) is doubtful because even though the author reported one incomplete specimen from the Cretaceous of Mexico, ascribing it to *Astacodes* for some morphological characters of the carapace, she affirmed that the sternal plate of the same specimen had morphological affinities with species of *Linuparus* described by Stenzel (1945). So *Archaeocarabus bowerbanki* McCoy 1849 (Quayle, 1987; Pl. 65, fig. 8), *Linuparus scyllariformis* (Bell, 1858) (Quayle, 1987; Pl. 66, fig. 6), *L. canadensis* (Whiteaves, 1885) (Mertin, 1941; Text-

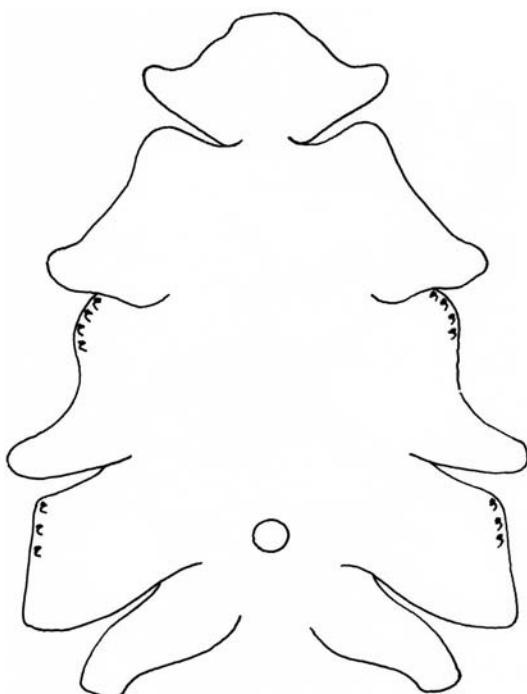


Fig. 5. *Linuparus* sp., reconstruction of sternal plate.

fig. 20.h), *L. eocenicus* Woods, 1925 (Quayle, 1987; Pl. 66, fig. 2), *L. laevicephalus* Mertin, 1941 (Mertin, 1941; Pl. 6, fig. 8), *L. dülmensis* var. n. *griepenkerli* Mertin, 1941 (Mertin, 1941; Pl. 7, fig. 6), *L. watkinsi* Stenzel, 1945 (Stenzel, 1945; Pl. 34, fig. 7), *L. grimmeri* Stenzel, 1945 (Stenzel, 1945; Pl. 35, fig. 5), *L. vancouverensis* (Whiteaves, 1895) (Feldmann and McPherson, 1980; Pl. 4, fig. 2), *L. macellarii* Tshudy and Feldmann, 1988 (Feldmann et al., 1993; Text-fig. 14.4), *L. korura* Feldmann and Bearlin, 1988 (Feldmann and Bearlin, 1988; Text-figs. 2, 3), *L. dzheirantuiensis* Feldmann et al., 2007 (Feldmann et al., 2007; Text-fig. 5.4), *Scyllarides tuberculatus* (König, 1825) (Quayle, 1987; Pl. 67, fig. 1), are the documented fossil species in which the sternal plate is preserved. The sternal plate of the studied specimen shows morphological affinities with that of species of *Linuparus*, by having a narrow, triangular central plate and very well-marked orifice located centrally in the posterior part of the sternal plate. It is for this reason that we ascribe it to this genus, leaving uncertain its specific attribution for lack of diagnostic characters of the carapace. Even though the studied specimen is incomplete, it represents the first record of Palinuridae from the Cretaceous of Catalonia.

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