

**A new furry lobster (Achelata, Synaxidae)
and a forgotten crab (Brachyura, Homolidae)
from the Early Cretaceous of France**

Sylvain CHARBONNIER,
Alessandro GARASSINO &
Richard BROCHET



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diff.pub@mnhn.fr / <http://sciencepress.mnhn.fr>

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ISSN (imprimé / *print*) : 1280-9659/ ISSN (électronique / *electronic*) : 1638-9395

A new furry lobster (Achelata, Synaxidae) and a forgotten crab (Brachyura, Homolidae) from the Early Cretaceous of France

Sylvain CHARBONNIER

Centre de recherche en paléontologie — Paris (CR2P UMR 7207),
CNRS, MNHN, Sorbonne Université,
Muséum national d'Histoire naturelle,
case postale 38, 57 rue Cuvier, F-75231 Paris cedex 05 (France)
sylvain.charbonnier@mnhn.fr (corresponding author)

Alessandro GARASSINO

Department of Earth and Biological Sciences, Loma Linda University,
Loma Linda, 92350 CA (United States)
alearassino@gmail.com

Richard BROCHET

3 Allée Élisabeth Deroche, 51000 Châlons-en-Champagne (France)
r.lupus.64@hotmail.fr

Submitted on 22 November 2024 | accepted on 15 December 2024 | published on 13 November 2025

[urn:lsid:zoobank.org:pub:82DED0A8-B32C-4D4F-A378-20C8EEBE0AFD](https://zoobank.org/pub:82DED0A8-B32C-4D4F-A378-20C8EEBE0AFD)

Charbonnier S., Garassino A. & Brochet R. 2025. — A new furry lobster (Achelata, Synaxidae) and a forgotten crab (Brachyura, Homolidae) from the Early Cretaceous of France. *Geodiversitas* 47 (21): 739–747. <https://doi.org/10.5252/geodiversitas2025v47a21>. <http://geodiversitas.com/47/21>

ABSTRACT

A new species of furry lobster (Decapoda, Achelata, Synaxidae) from the Early Cretaceous (Aptian) of Cheminon (Marne, France) is herein described. *Cretapalibythus moniquae* n. gen., n. sp. is erected based on two main morphological characters: the unarmed, rimmed, rostral margins and one elongate, prominent, unarmed anterolateral spine. It represents the first record of a furry lobster from the Early Cretaceous, filling the gap between the Late Jurassic (Oxfordian of France) and the Late Cretaceous (Cenomanian of Lebanon) synaxids. A species of brachyuran crab – *Prosopon gignouxii* Van Straelen, 1928 (Decapoda, Brachyura, Homolidae) – from the Early Cretaceous (Hauterivian) of Loriol-sur-Drôme (Drôme, France) is reappraised based on the rediscovery of its holotype. After its original report, this species was completely forgotten, and disappeared from the literature. It is herein placed in the genus *Laeviprosopon* Glaessner, 1933, recently reassigned to the Homoloidea De Haan, 1839, and a systematic discussion is elaborated with *Laeviprosopon icaunensis* (Van Straelen, 1936), the second species known from the Early Cretaceous (Hauterivian) of France.

KEY WORDS

Crustacea,
Reptantia,
Achelata,
Brachyura,
France,
Early Cretaceous,
Aptian,
new genus,
new species,
new combination.

RÉSUMÉ

Une nouvelle langouste à fourrure (Achelata, Synaxidae) et un crabe oublié (Brachyura, Homolidae) du Crétacé inférieur de France.

Une nouvelle espèce de langouste à fourrure (Decapoda, Achelata, Synaxidae) du Crétacé inférieur (Aptien) de Cheminon (Marne, France) est ici décrite sous le nom *Cretapalibythus moniquae* n. gen., n. sp., à partir de deux caractères morphologiques principaux : des marges rostrales carénées et sans épines et une grande et longue épine antérolatérale non ornée. Elle représente la première mention d'une langouste à fourrure dans le Crétacé inférieur et comble le fossé entre les synaxidés du Jurassique supérieur (Oxfordien de France) et du Crétacé supérieur (Cénomaniens du Liban). Une espèce de crabe brachyure – *Prosopon gignouxii* Van Straelen, 1928 (Decapoda, Brachyura, Homolidae) – du Crétacé inférieur (Hauterivien) de Loriol-sur-Drôme (Drôme, France) est révisée à partir de la redécouverte de son holotype. Après sa publication originale, cette espèce a été complètement oubliée et a disparu de la littérature. Elle est ici placée dans le genre *Laeviprosopon* Glaessner, 1933, récemment assigné aux Homoloidea De Haan, 1839, et une discussion systématique est proposée avec *Laeviprosopon icaunensis* (Van Straelen, 1936), la seconde espèce connue dans le Crétacé inférieur (Hauterivien) de France.

MOTS CLÉS
Crustacea,
Reptantia,
Achelata,
Brachyura,
France,
Crétacé inférieur,
Aptien,
genre nouveau,
espèce nouvelle,
combinaison nouvelle.

INTRODUCTION

Early Cretaceous decapod crustaceans are relatively frequent in France and were studied since the middle of the nineteenth century with the pioneer work of Robineau-Desvoidy (1849). The exhaustive list of publications is long and out of the scope of the present study even if some milestone papers can be mentioned (Tribolet 1875, 1876; Van Straelen 1936; Devillez *et al.* 2016). We describe herein two different Early Cretaceous crustaceans: a synaxid lobster (Achelata: Synaxidae Spence Bate, 1881) and a brachyuran crab (Homoloidea: Homolidae De Haan, 1839) from the Paris Basin and the south-eastern France Basin respectively (Fig 1).

Synaxid lobsters, commonly referred to as furry lobsters or coral lobsters are relatively rare in the modern marine communities (three extant species) but they seem to have been more diverse in the past with representatives from the Late Jurassic to the Late Eocene (six species: Bachmayer 1959; De Angeli & Garassino 2014; Fraaije *et al.* 2020; Garassino & Pasini 2020; Fraaije *et al.* 2023). The new specimen described herein as a new genus and new species was recently collected in the Aptian clays from Cheminon (Marne department, Grand Est region, France). It represents the first record of a furry lobster from the Early Cretaceous, filling the gap between the Late Jurassic (Oxfordian of France and Poland, Tithonian of Czech Republic) and the Late Cretaceous (Cenomanian of Lebanon) representatives.

The new approach to the systematics of *Laeviprosopon* Glaessner, 1933 (Brachyura: Homolidae) and the discussion about the molting process of the early brachyurans proposed by Starzyk *et al.* (2023) was the starting point for the reappraisal of the forgotten species *Prosopon gignouxii* Van Straelen, 1928. It was originally described based on a single specimen collected by Maurice Gignoux (1881-1955), a renowned French geologist, specialist on the stratigraphy of the Alps (Jacob 1955; Moret 1956). The specimen was collected at Loriol-sur-Drôme (Drôme department, Rhône-Alpes-Auvergne region) where Early Cretaceous (Hauterivian)

marly limestones and marls alternations outcrop. We discuss herein the systematic placement of this forgotten species and its presence in bathyal sediments.

MATERIAL AND GEOLOGICAL SETTING (Fig. 1)

The holotype of the new furry lobster *Cretapalibythus moniquae* n. gen., n. sp. (MNHN.F.A95413, Brochet coll.) is housed in the palaeontological collection of the Muséum national d'Histoire naturelle, Paris, France. It corresponds to a three-dimensionally preserved isolated carapace encrusted by pyrite mainly in the frontal region. One of the co-authors (RB), who is an amateur palaeontologist and specialist of decapod crustaceans, collected it in a lower Aptian clays from an open-pit mining at Cheminon (Marne department, Grand Est region, France). Supplementary stratigraphical data about the early Aptian deposits of Marne are available in Stchépinsky *et al.* (1959) and Vernhet (2007). The Cheminon quarry is located in the eastern margin of the Paris Basin, which was occupied during the Aptian by a narrow epicontinental sea (strait) between different landmasses and connecting the Tethys Ocean located to the south-east to the Boreal realm toward the north-west (Masse *et al.* 2000; see Deconinck *et al.* 2021: fig. 1).

The holotype of *Prosopon gignouxii* Van Straelen, 1928 (UJF-ID1826, Gignoux coll.) is housed in the palaeontological collection at the Observatoire des Sciences de l'Univers de Grenoble, Université Grenoble Alpes, France. It corresponds to a three-dimensionally preserved corpse imbedded in a small block of a grey-blue marl, and visible in dorsal view. Its nearly complete carapace (except front and posterior margin) is in conjunction with partially preserved pereopods 2 to 4. It was collected during a field trip by Maurice Gignoux in the Hauterivian from Loriol-sur-Drôme (Drôme department, Rhône-Alpes-Auvergne region, France). Supplementary stratigraphical data about the Hauterivian deposits of Drôme are available in Chenevoy *et al.* (1977) and Gonzalez & Saint-Martin (2007). The Loriol-sur-Drôme outcrop is located in south-eastern France, which was

occupied during the Hauterivian by the Vocontian Trough, part of the south-eastern France Basin (Chenevoy *et al.* 1977; Ferry & Groshény 2013). The deep marine sedimentation was characterized by limestone-marl alternations affected by slumps, typical of the Vocontian Trough, which was limited by carbonate platforms (Ferry & Groshény 2013; see Ferry 2017: fig. 2).

The holotype of *Laeviprosopon icaunensis* (Van Straelen, 1936), herein considered for comparison, is housed at the Muséum d'Histoire naturelle d'Auxerre, France (MHN-Aux-2012.0-8). It corresponds to a much-damaged carapace collected in the vicinity of Auxerre (Yonne department, Bourgogne-Franche Comté region, France), without indication of a more precise outcrop. Van Straelen (1936: 26) noted that the specific epithet alludes to the Yonne river – *Icauna* in Latin – inside the valley where the outcrop where the specimen was collected is located. The specimen was originally attributed to the Neocomian by Van Straelen (1936), and its age was later precised as Hauterivian by Houdard (1938). The Auxerre area is located in the south-eastern margin of the Paris Basin, which was characterized during the Hauterivian by the shallow marine sediments of the Calcaires à Spatangues Formation (Rat *et al.* 1987; Walter 1996). After Benetti *et al.* (2013), this formation is a window on the little-known benthic communities that thrived in shallow marine environments in the Early Cretaceous of France. We add that the fossil richness of this formation has attracted the attention of palaeontologists since the middle of the nineteenth century (see synthesis by Corroy 1925). Other Cretaceous crustaceans from the Auxerre region were described mainly by Van Straelen (1928, 1936), and before him by A. Milne-Edwards (1865) and Robineau-Desvoidy (1849).

ABBREVIATIONS

Institutional abbreviations

MNHN	Muséum national d'Histoire naturelle, Paris;
F	MNHN, collection de Paléontologie;
MHN-Aux	Muséum d'Histoire naturelle d'Auxerre, France;
UJF-ID	Observatoire des Sciences de l'Univers de Grenoble, Université Grenoble Alpes, France.

Anatomical abbreviation

P1-P5 pereiopods 1 to 5.

SYSTEMATIC PALAEONTOLOGY

Order DECAPODA Latreille, 1802
 Infraorder ACHELATA Scholtz & Richter, 1995
 Family SYNAXIDAE Spence Bate, 1881

Genus *Cretapalibythus* n. gen.

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ETYMOLOGY. — The generic name is a combination of the Cretaceous period and the extant synaxid *Palibythus* Davie, 1990, that shows many morphological affinities with the new genus. The gender of the genus is masculine.

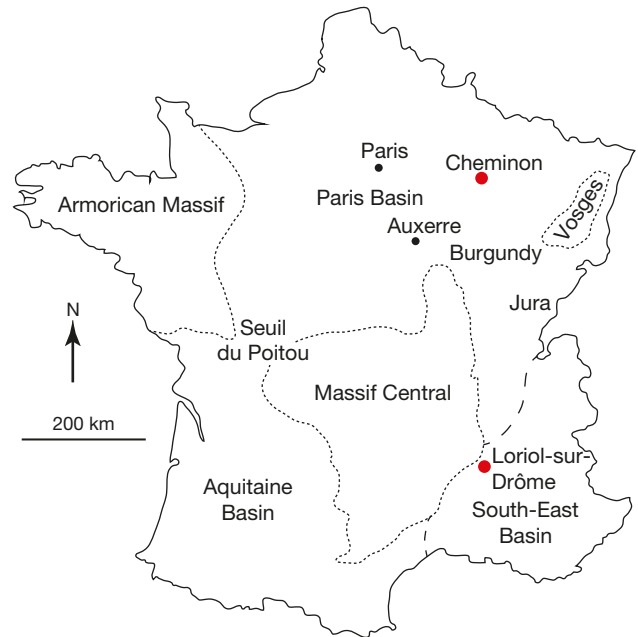


FIG. 1. — Map of France with the three main sedimentary basins and the locations of studied specimens.

TYPE SPECIES. — *Cretapalibythus moniquae* n. sp.

DIAGNOSIS. — Elongate, subrectangular carapace as wide as anteriorly and posteriorly; broad rostrum, wider than long, with pointed extremity; rostral lateral margins marked by a rimmed, unarmed carinae ending in a subacute spine; tuberculate post-rostral carinae; large concave post-orbital margin; one elongate, prominent, unarmed anterolateral spine; deep cervical groove; dorsal carapace covered with small pits uniformly arranged.

Cretapalibythus moniquae n. gen., n. sp.
 (Fig. 2)

[urn:lsid:zoobank.org:act:214C9F26-B7AC-44BC-B85B-FCBC86708965](https://doi.org/10.21203/rs.3.rs-1000000/v1)

DIAGNOSIS. — As for genus.

ETYMOLOGY. — The specific epithet honors Monique Brochet, mother of one of the authors.

TYPE MATERIAL. — **Holotype.** France • 1 specimen (carapace; adult); Grand-Est, Marne, Cheminon; Early Cretaceous, early Aptian; Richard Brochet leg.; MNHN.FA95413.

TYPE LOCALITY. — Cheminon, Marne, Grand-Est, France.

TYPE AGE. — Early Cretaceous (early Aptian).

DESCRIPTION

Carapace

Elongate, subrectangular carapace not narrowing anteriorly (total length: 17 mm; total width: 9 mm); broad rostrum, wider than long, slightly concave side to side, with pointed extremity; rostral lateral margins marked by a rimmed tuber-



FIG. 2. — Holotype MNHN.F.A95413 (Brochet coll.) of *Cretapalibythus moniquae* n. gen., n. sp. (Achelata, Synaxidae) from the Aptian of Cheminon, Marne, France: **A**, carapace in dorsal view; **B**, interpretative line drawing; **C**, close-up of left cephalic region; **D**, frontal view of carapace; **E**, left lateral view of carapace. Abbreviations: **als**, anterolateral spine; **cd**, cardiac region; **e,e**, cervical groove; **o**, orbit; **pm**, posterior margin; **py**, pyrite encrustation; **r**, rostrum; **rlm**, rostral lateral margin; **sprc**, submedian post-rostral carina; **ur**, urogastric region. Scale bars: 5 mm. Photographs: Richard Brochet.

culate carina ending in a subacute spine; two well-marked tuberculate submedian, post-rostral carinae directed backward as extension of rostral lateral margins, reaching slightly less than half way towards cervical groove; wide orbits with tuberculate orbital margins; large, concave post-orbital margin; one elongate, prominent, unarmed anterolateral spine; carapace weakly constricted at level of cervical groove behind anterolateral spine; straight, unarmed posterolateral margins; deep cervical groove; wide, rounded urogastric region; subtriangular cardiac region narrowing anteriorly; poorly preserved posterior margin as width as frontal margin; dorsal carapace covered with small pits uniformly arranged (as preserved).

DISCUSSION

According to several authors (Holthuis 1991; Martin & Davis 2001; Lavalli & Spanier 2010; Schweitzer *et al.* 2015), the Achelata are subdivided into four families: Cancrinidae Beurlen, 1930, Palinuridae Latreille, 1802, Scyllaridae Latreille, 1825, and Synaxidae. Extant synaxid lobsters, including only two genera (*Palibythus* Davie, 1990 and *Palinurellus* von Martens, 1878), are easily differentiated from palinurid lobsters in that they lack frontal supra-orbital horns. However, according to Fraaije *et al.* (2023), synaxids bear a prominent, broad-based rostrum, a tapered carapace, not depressed or flattened, but tubular, and the anterior part of carapace (rostrum to cervical groove) exceeds

the posterior one (cervical groove to posterior margin) in length. Moreover, synaxid lobsters differ from scyllarid lobsters in having a long and broad triangular rostrum and a tapered anterior carapace that is not depressed. Finally, synaxid lobsters differ from cancrinid lobsters in having short antennal flagella.

According to Holthuis (1991: 90) the members of Synaxidae have carapaces lacking frontal horns, but with a large, broad, and flat rostrum, and the dorsal surface covered only with granules or tubercles. *Cretapalibythus* n. gen. fits the main characters of this family to which it is assigned.

The representatives of the Synaxidae are rare components of extant benthic communities, as reported by Holthuis (1991). The fossil record of the family is instead more common, especially from reefal settings of Late Jurassic age in Europe with *Palaeopalinurellus culocervus* Fraaije, Van Bakel, Jagt & Brochet, 2020 (Oxfordian, France), *Palaeopalinurellus strambergensis* Bachmayer, 1959 (Tithonian, Czech Republic), and *Palaeosynaxes montserratiae* Fraaije, van Bakel, Jagt, Krobicki, Ossó, Palero & Wallaard, 2023 (Oxfordian, Poland). *Palaeopalinurellus jbeilensis* Garassino & Pasini, 2020 (Cenomanian, Lebanon) is the first record of *Palaeopalinurellus* out of Europe and the sole species from the Late Cretaceous. Finally, *Palinurellus bericus* De Angeli & Garassino, 2014 (Priabonian, Italy) is the so far oldest fossil species of the extant genus *Palinurellus*.

Cretapalibythus n. gen. differs from *Palaeopalinurellus* and *Palaeosynaxes* in having the dorsal carapace covered with small pits uniformly arranged (vs anterior part with irregularly tuberculate, posterior part densely covered with scale-like tubercles in *Palaeopalinurellus* and carapace densely covered with coarse, blunt, forwardly directed tubercles in *Palaeosynaxes*). It differs from *Palinurellus* in having a rostrum wider than long and tuberculate post-rostral carinae (vs rostrum longer than wide without post-rostral carinae in *Palinurellus*).

Based on Davie (1990), *Cretapalibythus* n. gen. shares with the extant *Palibythus* the rostrum wider than long and the tuberculate post-rostral carinae. However, besides its smaller size, the studied specimen differs from *Palibythus* in having unarmed, rimmed, rostral lateral margins (vs rostral lateral margin with several spines in *Palibythus*) and just one elongate, prominent, unarmed anterolateral spine (vs anterolateral spines with several spines in *Palibythus*). Based on these observations, *Cretapalibythus* n. gen. represents the first report of a furry lobster from the Early Cretaceous, filling the gap between the Late Jurassic and Late Cretaceous synaxid lobsters. Finally, it represents the second report of a fossil synaxid lobster from France after the report of the Late Jurassic (Oxfordian) *Palaeopalinurellus culocervus* by Fraaije *et al.* (2020).

Infraorder BRACHYURA Linnaeus, 1758
Superfamily HOMOLOIDEA De Haan, 1839
Family HOMOLIDAE De Haan, 1839

Genus *Laeviprosopon* Glaessner, 1933

TYPE SPECIES. — *Prosopon laeve* Meyer, 1857, by original designation.

INCLUDED SPECIES. — See Starzyk *et al.* (2023).

Laeviprosopon gignouxii (Van Straelen, 1928), n. comb.
(Fig. 3)

Prosopon gignouxii Van Straelen, 1928: 606, figs 1, 2; 1936: 26. — Withers 1951: 184.

TYPE MATERIAL. — **Holotype.** France • 1 specimen (carapace; adult); Auvergne-Rhône-Alpes, Drôme, Lorient-sur-Drôme; Early Cretaceous, Hauterivian; Maurice Gignoux leg.; UJF-ID1826.

TYPE LOCALITY. — Lorient-sur-Drôme, Drôme, Auvergne-Rhône-Alpes, France.

TYPE AGE. — Early Cretaceous, Hauterivian.

ORIGINAL DIAGNOSIS BY Van Straelen (1928: 607). — Carapace convex transversally, inflected anteriorly, wider posteriorly, widest at level of posterior margin; half-circle-shaped cervical groove; gastro-antennal groove marking a median gastric region bearing two crests posteriorly at level of cervical groove; postcervical groove deep medially, originating a groove marking the mesobranchial region; branchiocardiac groove extending posteriorly, originating a forward-directed short groove marking the epibranchial region; hepatic regions with a groove; marked cardiac regions narrowing posteriorly bearing two tubercles posteriorly; grooved branchial regions on their anterior median part (literal translation from the original French text).

SYSTEMATIC REMARKS

According to Van Bakel *et al.* (2021: 7), *Laeviprosopon* has generally been included in the Prosopidae Meyer, 1860 by several authors (see Schweitzer & Feldmann 2008; Guinot 2019; Klompmaker *et al.* 2020; Starzyk 2020). However, Van Bakel *et al.* (2021) excluded it from this family, because it possesses a *linea homolica* (see Patrulius 1966; Collins & Wierzbowski 1985), a weakly projecting trifurcate front, a non-sinuuous, arched concave posterior margin, and undefined orbits (the cornea resting on the dorsal carapace surface). In addition, *Laeviprosopon* usually has a complete oblique groove that subdivides the hepatic regions. The genus is interpreted as an early representative of the superfamily Homoloidea, and thus excluded from the Homolodromioidea Alcock, 1900, adopting the views expressed by several previous authors (Patrulius 1966; Collins & Wierzbowski 1985), and recently by Starzyk *et al.* (2023). However, the presence or not of a molting line similar to the *linea homolica* in *Laeviprosopon* is not well clarified yet though three species of the genus show this character. In the extant representatives of the Homolidae, the *linea homolica* is always present in all individuals, not in the molting specimens only (A.G., pers. obs. 2023). Anyway, the discussion of the systematics of *Laeviprosopon* is not the aim of the present note.

In conclusion, we follow herein the most recent updated systematics proposed by Starzyk *et al.* (2023) for *Laeviprosopon* based on the presence of a molting line in the type species and other species of the genus.

EMENDED DESCRIPTION

Carapace

Small carapace uniformly granulated, longer than wide moderately vaulted transversally and longitudinally; nearly straight frontal margin poorly preserved; rostrum not preserved; poorly

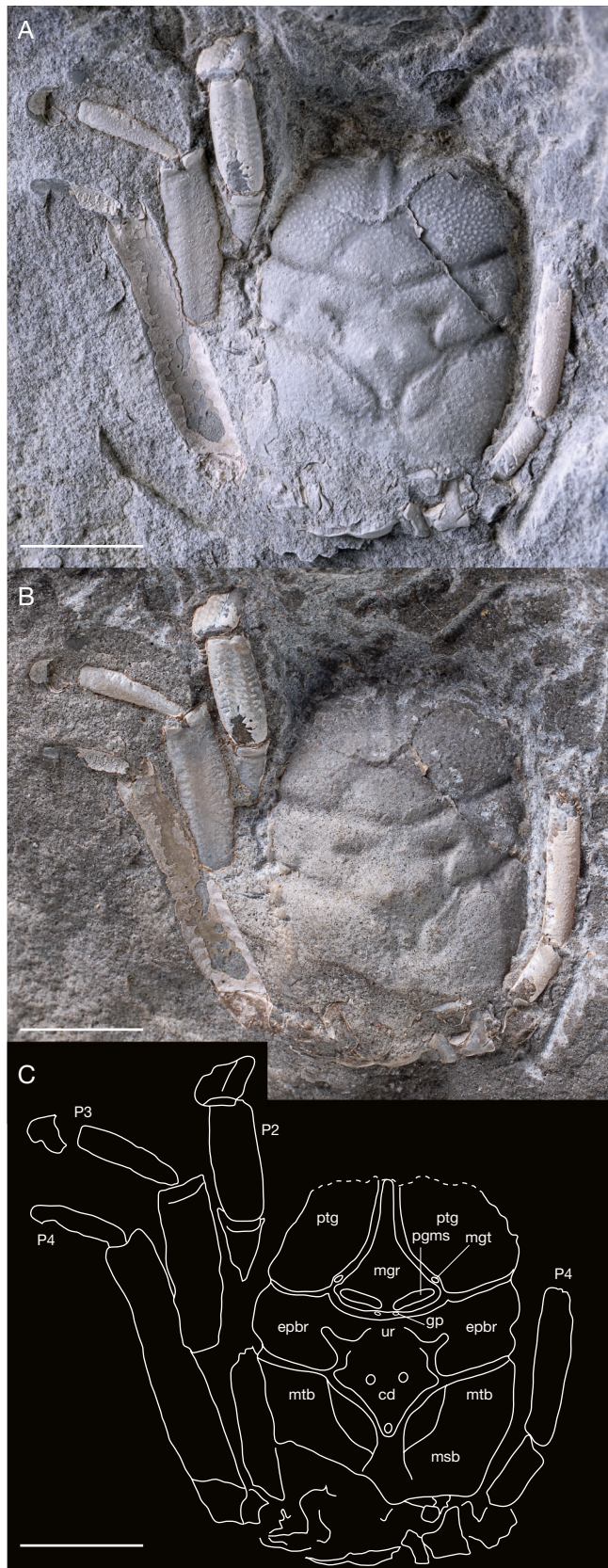


FIG. 3. — Holotype UJF-ID1826 (Gignoux coll.) of *Laeviprosopon gignouxii* (Van Straelen, 1928), n. comb. (Brachyura, Homolidae) from the Hauterivian of Loriol-sur-Drôme, Drôme, France: dorsal view of carapace whitened with ammonium chloride (A), under natural light (B), and interpretative line drawing (C). Abbreviations: **cd**, cardiac region; **epbr**, epibranchial region; **gp**, gastric pit; **mgt**, mesogastric groove tubercle; **msb**, mesobranchial region; **mtb**, metabranchial region; **pgms**, posterior gastric muscle scars; **ptg**, protogastric region; **P2-P4**, second to fourth pereopods; **ur**, urogastric region. Scale bars: 5 mm. Photographs: Lilian Cazes.

preserved ?small orbits; anterolateral margins slightly narrowing frontally; posterolateral margins slightly rounded weakly narrowing posteriorly; posterior margin not preserved; very narrow epigastric region; slightly swollen hepatic regions; slightly swollen protogastric regions; elongate, narrow anterior metagastric process; mesogastric region with a pair of swollen distal tubercles and a pair of small mesogastric groove tubercles; small gastric pits between meso- and urogastric regions; narrow urogastric region; diamond-shaped cardiac region with a pair of aligned tubercles medially and one tubercle distally; wide intestinal region; slightly swollen epi-, meta-, and mesobranchial regions; deep cervical groove reaching lateral margins; deep branchiocardiac grooves, delimiting cardiac region and reaching posterior margin; lateral transverse groove joining cervical to branchiocardiac grooves; molting line not present.

Thoracic appendages

Elongate, subcylindrical P2-P4 partially preserved, flattened laterally, ovoidal in transverse section; elongate P2-P4 meri with smooth dorsal and ventral margins; narrow subtriangular P2-P4 carpi shorter than meri.

DISCUSSION

Van Straelen (1928: 606) assigned the studied specimen to “the tribe *Dromiacea*, subtribe *Dromiidea* and the family *Prosoponidae*”, but he did not provide a detailed discussion to justify his assignment, limiting to comparisons with several other Jurassic and Cretaceous dromiacean crabs known at that time. *Prosopon gignouxii* was not reported or discussed in any systematic study after Withers (1951).

Our examination of the holotype leads us to highlight major affinities with *Laeviprosopon*, which was recently revised by Starzyk *et al.* (2023). According to these authors, the diagnostic characters of *Laeviprosopon* are as follows: carapace rectangular, longer than wide, often narrowing slightly anteriorly; regions well defined by deep grooves; rostrum, projected well beyond orbits; orbits shallow, rimmed, directed forward, located at base of rostrum; augenrest poorly formed to nearly absent; subhepatic region inflated, sometimes greatly; epigastric, protogastric, and hepatic regions separated by transverse grooves into three anteriorly to posteriorly successive regions; cervical groove deep, strongly concave forward to sinuous; branchiocardiac groove shallower than cervical groove; postcervical groove short, interrupted axially; posterolateral portions of carapace often broken as if less calcified than other portions of carapace. Although the holotype does not preserve a complete frontal margin, rostrum, and orbits, and despite the lack of a molting line (*linea homolica*), the morphological characters listed in our updated description are diagnostic of *Laeviprosopon*, and we therefore propose the new combination *Laeviprosopon gignouxii* (Van Straelen, 1928), n. comb.



FIG. 4. — Holotype MHN-Aux-2012.0-8 of *Laeviprosopon icaunensis* (Van Straelen, 1936) (Brachyura, Homolidae) from the Hauterivian of Auxerre, Yonne, France: carapace in dorsal (A-B), left lateral (C-D) and frontal (E-F) views; natural light and whitened with ammonium chloride. Abbreviations: **epg**, epigastric region; **epbr**, epibranchial region; **hr**, hepatic region; **ptg**, protogastric region; **msb**, mesobranial region; **mtb**, metabranial; **r**, rostrum. Scale bars: 5 mm. Photographs: Lilian Cazes.

We add that the holotype is a corpse and is furthermore the only specimen partially preserving P2-P4, previously unknown in all representatives of the family.

According to Starzyk *et al.* (2023), *Laeviprosopon icaunensis* (Van Straelen, 1936) from the Hauterivian of Yonne (Bourgogne-Franche-Comté) is the only other species of the genus reported to date in France (Fig. 4). Although most of

the central dorsal carapace is not preserved in the holotype of *L. icaunensis*, it differs from *L. gignouxii* n. comb. by a carapace bearing hepatic regions with two grooves, a cervical groove not rimmed, and the median part of branchial regions without groove. Moreover, *L. icaunensis* has a smooth carapace (vs granulated in *L. gignouxii* n. comb.), and is more convex antero-posteriorly with a strongly downward pro-

jected rostrum. Its frontal margin is more rounded. There are two shallow flattened epibranchial tubercles/bulges (vs smooth epibranchial regions in *L. gignouxii* n. comb.), and a shorter epigastric region (as preserved).

In conclusion we consider *L. gignouxii* n. comb. as a valid distinct species within the genus as actually regarded (Starzyk *et al.* 2023).

Van Straelen (1928) noted that *Laeviprosopon gignouxii* n. comb. was collected in the deep-water sediments of the Vocontian Trough, and thus considered it as the only bathyal species known to date within the genus. Another interpretation could be that the crab specimen – as most other known species – likely did not live in this deep-water setting but was transported from the neighbouring shallow-carbonate platforms. The transport may have been brief as attested by the completeness of the specimen. It is not possible to decide which of these two hypotheses is the most consistent one.

CONCLUSION

This study reveals that the ancient literature on Early Cretaceous decapod crustaceans from France still needs a revision and that probably many undescribed specimens are housed in regional museums and university collections. Besides, this study illustrates the strong link between academic research and amateur discoveries. Only a general revision taking into account the historical collections and the new specimens collected by amateur palaeontologists can reveal the richness of the Early Cretaceous crustacean diversity, which is clearly underestimated at present.

Acknowledgements

We thank the reviewers Günter Schweigert (State Museum of Natural History Stuttgart, Germany) and René Fraaije (Oertijdmuseum Boxtel, Netherlands). We are grateful to Michèle Fouché (Muséum d'Histoire naturelle d'Auxerre) and to Fabienne Giraud (Observatoire des Sciences de l'Univers de Grenoble) for access to the palaeontological collections. We thank Lilian Cazes (MNHN, CR2P) for the photographic work, Danièle Groshény (Université de Lorraine) and Stéphane Reboulet (Université Claude Bernard Lyon 1) for discussion about the Hauterivian sedimentology in the Vocontian Trough.

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Submitted on 22 November 2024;
accepted on 15 December 2024;
published on 13 November 2025.