

# Rediscovery of the type material of *Eryon cuvieri* Desmarest, 1817 (Crustacea, Decapoda, Eryonidae) and nomenclatural consequences

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Charbonnier S., Garassino A., Pacaud J.-M. & Schweigert G. 2012. — Rediscovery of the type material of *Eryon cuvieri* Desmarest, 1817 (Crustacea, Decapoda, Eryonidae) and nomenclatural consequences. *Geodiversitas* 34 (4): 849-855. <http://dx.doi.org/10.5252/g2012n4a7>

## ABSTRACT

In 1817, Desmarest erected *Eryon cuvieri*, a new crustacean from the Late Jurassic of Bavaria (southern Germany). Later, the same taxon was described as *Macrourites arctiformis* by von Schlotheim (1820). Subsequently, numerous authors, probably unaware of Desmarest's first paper, referred to this taxon as *Eryon arctiformis* (von Schlotheim, 1820). Following the Principle of Priority, the original name must be used and *Macrourites arctiformis* von Schlotheim, 1820 is here considered to be a more recent, subjective synonym. Moreover, two specimens of the type series of *Eryon cuvieri* Desmarest, 1817, from Faujas de Saint-Fond's Cabinet of Natural History, have recently been traced in the Collection de Géologie of the Muséum national d'Histoire naturelle, Paris. A lectotype is herein designated.

## KEY WORDS

Crustacea,  
Decapoda,  
Eryonidae,  
*Eryon*,  
Lectotype,  
Jurassic,  
Germany,  
Solnhofen.

## RÉSUMÉ

*Redécouverte du matériel type d'Eryon cuvieri Desmarest, 1817 (Crustacea, Decapoda, Eryonidae) et conséquences nomenclaturales.*

En 1817, Desmarest a décrit *Eryon cuvieri*, un nouveau crustacé du Jurassique supérieur de Bavière (sud de l'Allemagne). Plus tard, le même taxon a été décrit sous le nom de *Macrourites arctiformis* par von Schlotheim (1820). Ce taxon a ensuite été repris sous le nom d'*Eryon arctiformis* (von Schlotheim, 1820) par de nombreux auteurs qui ignoraient probablement le premier travail de Desmarest. Conformément au Principe de Priorité, il convient de reprendre le nom initial et le taxon *Macrourites arctiformis* von Schlotheim, 1820 est ici considéré comme un synonyme subjectif plus récent. Par ailleurs, deux spécimens de la série type d'*Eryon cuvieri* Desmarest, 1817, du Cabinet d'Histoire naturelle de Faujas de Saint-Fond, ont été récemment redécouverts dans la Collection de Géologie du Muséum national d'Histoire naturelle de Paris. Un lectotype est désigné ici.

## MOTS CLÉS

Crustacea,  
Decapoda,  
Eryonidae,  
*Eryon*,  
Lectotype,  
Jurassique,  
Allemagne,  
Solnhofen.

## INTRODUCTION

Eryonids represent an odd group of Mesozoic decapod crustaceans, having been collected from various classic outcrops across Europe, in particular from Konservat-Lagerstätten such as at Osteno (northern Italy, Sinemurian; see Pinna 1968, 1969; Teruzzi 1990), Lyme Regis (southern England, Sinemurian; see Woods 1925-1931), Holzmaden (southern Germany, Toarcian; see Beurlen 1928, 1944), La Voulte-sur-Rhône (southern France, Callovian; see Van Straelen 1925; Charbonnier 2009; Charbonnier *et al.* 2010), and from the renowned Solnhofen Lithographic Limestones of southern Germany (Tithonian; see Garassino & Schweigert 2006). The majority of genera known to date, such as *Cycleryon* Glaessner, 1965, *Eryon* Desmarest, 1817, *Rosenfeldia* Garassino, Teruzzi & Dalla Vecchia, 1996, *Knebelia* Van Straelen, 1922, and *Palaeopentacheles* von Knebel, 1907, have been recorded from the well-known lithographic limestones of Bavaria (see Garassino & Schweigert 2006). From one of these localities, in the vicinity of Solnhofen, come the type specimens of *Eryon cuvieri* Desmarest, 1817, subject of the present study. They were originally part of the Barthélemy Faujas de Saint-Fond's Cabinet of Natural History and have recently been traced in the Collection de Géologie of the Muséum national d'Histoire naturelle, Paris, by the first author.

## FAUJAS DE SAINT-FOND'S COLLECTION

Barthélemy Faujas de Saint-Fond (1741-1819) was the first Professor of Geology at the Jardin des Plantes of the Muséum d'Histoire naturelle in 1793. One of his most important studies is the *Recherches sur les volcans éteints du Vivarais et du Velay*, published in 1778. This publication documents and develops a theory about the origin of volcanoes. Faujas de Saint-Fond is also famous for his rendition of the discovery of the first mosasaur, "the unknown animal of Maastricht". He secured the fossil skull of what was later to become the type specimen of *Mosasaurus hoffmanni* Mantell, 1859, confiscated after the city of Maastricht fell to the French revolutionary armies in November 1794. The fossil arrived in Paris during spring of 1795; at the same time, Georges Cuvier was appointed to the Muséum (Bardet & Jagt 1996). The type specimens of *Eryon cuvieri* Desmarest, 1817 and numerous other fossils were originally housed in the Barthélemy Faujas de Saint-Fond's Cabinet of Natural History and later transferred to the Collection de Géologie of the new Muséum national d'Histoire naturelle. At that time, the Department of palaeontology did not exist at the Paris Museum and the fossils were distributed over different collections: geology, botany and mineralogy. In 1853, when the chair of palaeon-

tology was especially created for Alcide d'Orbigny, numerous professors of the Museum refused to hand over their fossils to him, so as to constitute a new Collection de Paléontologie (Brygoo 2002; Vénec-Peyré 2002). This conflicting situation explains why the type specimens of "Eryon de Cuvier" published by Desmarest (1817) were forgotten in a drawer of the Collection de Géologie for the duration of almost two centuries, until their recent rediscovery.

## ABBREVIATION

MNHN.F Muséum national d'Histoire naturelle, Paris, Collection de Paléontologie.

## "ERYON DE CUVIER" BY DESMAREST

Class MALACOSTRACA Latreille, 1802

Order DECAPODA Latreille, 1802

Infraorder POLYCHELIDA

Scholtz & Richter, 1995

Superfamily ERYONOIDEA De Haan, 1841

Family ERYONIDAE De Haan, 1841

Genus *Eryon* Desmarest, 1817

TYPE SPECIES. — *Eryon cuvieri* Desmarest, 1817, by monotypy.

DIAGNOSIS. — Subcircular carapace, ventrally flattened; median postcervical and branchial ridges weak; deep cervical and postcervical incisions dividing margin into three parts; pereopods 1-4 chelate; pereopod 5 achelate; pereopod 1 larger and stronger than pereopods 2-5; pereopods successively shorter posteriorly; uropodal exopod petaloid, lacking diaeresis.

*Eryon cuvieri* Desmarest, 1817

(Figs 1; 2)

*Eryon Cuvieri* [sic] Desmarest, 1817: 512-513.

*Macrourites arctiformis* von Schlotheim, 1820: 37, n. syn.

*Eryon acutus* Germar, 1827: 100, n. syn.

*Eryon pentagonus* von Münster, 1839: 10, pl. 10, fig. 1, n. syn.

*Eryon cuvieri* – Desmarest in Brongniart & Desmarest 1822: 129, pl. 10, fig. 4. — Krüger 1823: 587; 1825: 265. — Desmarest 1825: 209, pl. 34, fig. 3. — Germar 1827: 98. — de Fréminville 1832: 275. — H. Milne Edwards 1837: 278. — von Meyer 1836: 273, pl. 137, fig. 2. — Long 1838: 4. — Lucas 1840: 179, pl. 12, fig. 4. — Pictet 1854: 441. — Woodward 1866: 494, 495. — Bate 1888: 126. — Van Straelen 1925: 113. — Malz 1969: 292.

*Macrourites arctiformis* – von Schlotheim 1822: 34, pl. 3, fig. 1.

*Cancer arcticus* – Desmarest in Brongniart & Desmarest 1822: 129 (an incorrect subsequent spelling for *Macrourites arctiformis* von Schlotheim, 1820).

*Eryon arctiformis* – Bronn 1837: 474, pl. 27, fig. 2. — von Münster 1839: 3, pl. 1. — Oppel 1862: 15, pl. 3, fig. 1. — Peiser 1904: 25. — Walther 1904: 173. — von Knebel 1907: 200, pl. 11, figs 1, 6; pl. 12. — Balss 1924: 174, figs 3, 6. — Van Straelen 1925: 114, fig. 63. — Glaessner 1929: 164; 1969: R470, fig. 274.2. — Malz 1969: 292, figs 1, 2. — Frickhinger 1994: 120, figs 203, 204. — Schweigert & Garassino 2005: 498. — Garassino & Schweigert 2006: 29, 30, fig. 11; pl. 7; pl. 17, fig. 1. — Schweitzer *et al.* 2010: 43. — Leich 2011: 70, figs 1, 2.

TYPE MATERIAL. — **Lectotype**, designated herein, is MNHN.FA32407 (Faujas de Saint-Fond collection); **Paralectotype** is MNHN.FR65101 (Brongniart collection, ex Faujas de Saint-Fond collection). Note: Desmarest (1817) included in the type material some specimens illustrated by Knorr (1755): the one illustrated in pl. 15, fig. 2. is attributed to *Eryon cuvieri* and is a second paralectotype, which, however, is not among Knorr's material that survived in the Naturhistorisches Museum Basel, Switzerland and thus seems to be lost (Cleaveley 1983). The other specimens (pl. 14, fig. 1; pl. 14a, fig. 1; pl. 14b, fig. 1) correspond to *Cycleryon propinquus* (von Schlotheim, 1822).

TYPE LOCALITY. — Solnhofen (Bavaria, southern Germany). On the original inscription of the slab with the lectotype the locality is given as "Pappenheim" (Fig. 1C). However, the town of Pappenheim is located in the valley of the River Altmühl, 5 kilometres north of the outcrop area of the Solnhofen Lithographic Limestones. Probably, the specimen was purchased there from a local salesman. On account of the lithology of the slab there is no doubt that the specimen comes from the Solnhofen area.

TYPE AGE. — Late Jurassic (early Tithonian), see Schweigert (2007).

DIAGNOSIS. — As for the genus.

## DESCRIPTION

See Garassino & Schweigert (2006).

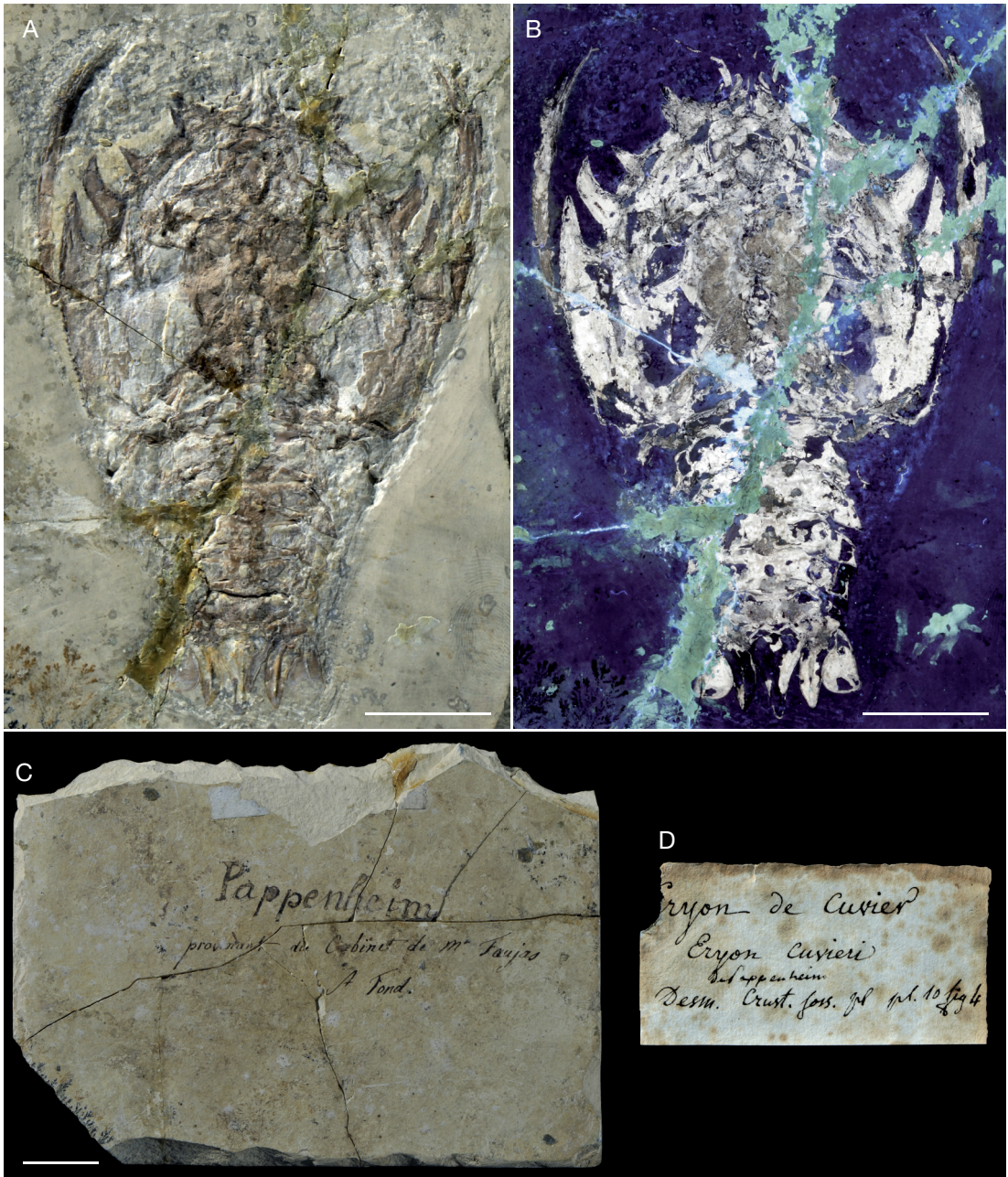


FIG. 1. — *Eryon cuvieri* Desmarest, 1817 from the Late Jurassic of Solnhofen (Bavaria, southern Germany): **A, B**, lectotype, designated herein (MNHN.F.A32407, Faujas de Saint-Fond coll.), complete specimen in dorsal view (**A**) and under ultraviolet light (**B**); **C**, lower side of the slab showing the original inscription in French: “*Pappenheim* provenant du Cabinet de Mr Faujas St Fond.” [= “*Pappenheim*, from the Cabinet of Mr Faujas St Fond.”]; **D**, original label dating the period of the cataloguing of the Collection de Géologie (before 1853). Scale bars: 2 cm. Photographs by C. Lemzaouda (MNHN).