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NOMENCLATURAL PROBLEMS ASSOCIATED WITH THE GENUS
COENOBITA LATREILLE, 1829 (DECAPODA, ANOMURA)

BY

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RÉSUMÉ

Discussion sur le genre grammatical et la nomenclature du nom générique *Coenobita* Latreille, 1829. Le nom est masculin en dépit de sa désinence en -a. Les auteurs signalent l'existence de deux synonymes objectifs plus anciens (*Carcinion* Jarocki, 1825, et *Cenobites* Berthold, 1827) et d'un possible synonyme subjectif, plus ancien encore, *Eremita* Osbeck, 1765. L'auteur et la date correctes de l'espèce type, *Pagurus clypeatus* Fabricius, 1787, sont également discutés.

The terrestrial hermit crabs of the genus *Coenobita* Latreille have a long taxonomic history. Perusal of the literature reveals that there is considerable confusion regarding the date and authorship of the genus, its type species and the gender of the generic name. There are also problems regarding the synonymy of the genus.

Latreille (1825: 277) erected the genus with the French vernacular name, Cénobite. The date of Latreille's work, 'Familles naturelles du règne animal', is often inaccurately cited as 1826 (e.g., by Henderson, 1888; Alcock, 1905; Fize & Serène, 1955; McLaughlin, 1974; Miyake, 1978). However, on p. 255 of the issue of June 1825 of the Bulletin universel des sciences et de l'industrie: Sciences naturelles et géologie (vol. 5 no. 2), the publication of Latreille's "Familles naturelles du Règne Animal" is announced ("Nous nous empressons d'annoncer la publication de cet important ouvrage..."), while in the July issue of the same journal (vol. 5 no. 3) it is more extensively reviewed. Therefore there can be no doubt that the year of publication is 1825, and the date can even be narrowed down to June 1825.

As a vernacular name, Cénobite is not available under Articles 11b and 12c of the International Code of Zoological Nomenclature. Latreille (1829: 77) in Cuvier's 'Le Règne Animal' latinized the name to *Coenobita* and hence *Coenobita* Latreille, 1829, should not be regarded as an emendation but rather the original citation of that available name.

Latreille (1825) did not establish a new species but noted 'Le g. Cénobite (*Pagurus clypeatus*)' and in 1829 placed *Pagurus clypeatus* in the newly named genus *Coenobita*. Latreille (1825, 1829) did not redescribe the species *Coenobita clypeatus*. The author of *Coenobita clypeatus* is usually cited as Herbst (1791: 22) (e.g., by Dana, 1852; Heller, 1865; Ortmann, 1892; Gordan, 1956; Provenzano, 1959; Chace & Hobbs, 1969; Miyake, 1978) but *Cancer clypeatus* Herbst, 1791, is actually a new combination of *Pagurus clypeatus* of Fabricius (1787: 328) and hence Fabricius, 1787 is the original author of this species name. Fabricius' authorship generally has been overlooked in the literature and in fact *Pagurus clypeatus* in Fabricius (1798: 413) has been incorrectly cited as a new combination of Herbst's *Cancer clypeatus* (e.g., by Dana, 1852; Henderson, 1888).

The type species by monotypy of *Coenobita* Latreille, 1829, is therefore *Pagurus clypeatus* Fabricius, 1787. As noted above, Latreille did not name the species although *Coenobita clypeatus* (or *C. clypeata*) Latreille is often cited (e.g., by Stimpson, 1858; Borradaile, 1903; Alcock, 1905; Thompson, 1943; Fize & Serène, 1955; Yaldwyn & Wodzicki, 1979). The authorship of *C. clypeatus* has also been ascribed to H. Milne Edwards, 1837 (e.g., by Whitelegge, 1897).

The gender of the generic name *Coenobita* Latreille, 1829 has been regarded historically as either feminine or masculine. This is particularly evident in the use of *-a* and *-us* suffixes for the names of several species of *Coenobita*, including *C. clypeata/clypeatus* (Fabricius, 1787), *C. rugosa/rugosus* H. Milne Edwards, 1837, *C. compressa/compressus* H. Milne Edwards, 1837, *C. spinosa/spinosus* H. Milne Edwards, 1837, *C. perlata/perlatus* H. Milne Edwards, 1837 and *C. brevimana/brevimanus* Dana, 1852. Authors using the feminine termination include H. Milne Edwards (1837), Owen (1839), Dana (1852), Haswell (1882), Henderson (1888), Whitelegge (1897), McCulloch (1918), Estampador (1937), Fize & Serène (1955) and Yaldwyn & Wodzicki (1979). Authors using the masculine termination include Ortmann (1892), Faxon (1895), Alcock (1905), McCulloch (1909), Boone (1931), Holthuis (1954), Forest (1954), Provenzano (1959), Lewinsohn (1969), Ball & Haig (1972), Miyake (1978) and Haig (1984).

The name *Coenobita* is later ecclesiastical Latin meaning 'a monk', derived from the Greek κοινὸβιον for 'communal life' (κοινός, 'common' and βίος, 'life') (Lewis & Short, 1890; Souter, 1949). The majority of Latin nouns ending in *-a* are feminine in gender, but *Coenobita* is masculine, as are *poeta* 'a maker (of verse)', and *nauta* 'a sailor'. Under Article 31(b) of the International Code of Zoological Nomenclature, species-group names which are, or end in, a Latin adjective, or are latinized, must agree in gender with the respective genus and hence the masculine suffix *-us* rather than the feminine *-a* is correctly employed with *Coenobita*. The masculine gender of *Coenobita* was previously noted by Eduard von Martens in a footnote in the paper by Hilgendorf (1869: 98). This footnote is as follows: "*Coenobita* wird fälschlich von den Meisten als

Femininum gebraucht, es ist Masculinum so gut wie *poëta* und andere dem Griechischen entlehnte Nomina der lateinischen ersten Deklination. Latreille scheint bei der Wahl dieses Namens von den Begriff Einsiedler, Eremit, durch den Doppelsinn des Wortes Mönch, monachus, von *μόνος*, allein, verführt, auf den des Klosterbewohners überggesprungen zu sein und hat unglücklicher Weise ein Wort gewählt, dessen Etymologie (*κοινός*, *βίος*) gerade die Gemeinschaftlichkeit des Lebens bezeichnet, was auf die Einsiedlerkrebse schlecht passt. (E. v. Martens)”. The limited availability of Hilgendorf’s work and the consequent widespread ignorance of Von Martens’ comment prompted the present discussion of gender.

Although the name *Coenobita* Latreille is universally accepted and is the only name used for the genus since the middle of last century, it is threatened by two, possibly three, older names. Berthold (1827) in his book, ‘Latreille, Natürliche Familien des Thierreichs’, a German translation of Latreille (1825), latinized many of Latreille’s French vernacular names and thereby became the author of these names (e.g. the genus *Gonodactylus* in Stomatopoda). Berthold (1827: 263) latinized Cénobite, using the latin name *Cenobites*. *Cenobites* Berthold, 1827, type species *Pagurus clypeatus* Fabricius, 1787, is therefore an older objective synonym of *Coenobita* Latreille, 1829, and should be used in its stead. However, such a name change would cause great confusion and serve no useful purpose so that an application now will be submitted to the International Commission on Zoological Nomenclature for the suppression of *Cenobites* Berthold, 1827.

The second name that threatens *Coenobita* is even older than *Cenobites*. It is *Carcinion* Jarocki, 1825. Felix Paul von Jarocki, a Polish zoologist published between 1821 and 1838 the six volumes of his treatise “Zoologiia”. The fifth volume, published in 1825, deals with the Crustacea. Here on p. 108 the following paragraph is found:

“a. Konchista. Carcinion.

Rożki szrodkowe wstawowato-nitkowate, bardzo długie, od skrajnych nie wiele krótsze. Oczy na słupkach krótkich. Nogę cztery szrodkowe bardzo grube. Na ogonie tabliczki chrząstkowe dosyć gęsto ułożone. np. *Pagurus clypeatus*. Oliv. Tabl. Enc. Meth. pl.311.f.l.”

The next paragraph deals with “b. Muszlowiec. *Pagurus*.” The name *Carcinion* is an available generic name, the type species of the genus (by monotypy) is *Pagurus clypeatus* Fabricius, 1787. The generic name has not been used previously and it is an objective senior synonym of both *Cenobites* Berthold, 1827, and of *Coenobita* Latreille, 1829. The genus is listed in the main nomenclators, but has almost been completely overlooked by carcinologists. The only reference to it in carcinological literature that we have been able to find is that by De Haan (1849: 212) in the Crustacean volume of *Fauna Japonica*, where it is cited as a synonym of *Coenobita*. Probably De Haan considered *Coenobita* Latreille to date from 1825 and treated therefore *Carcinion* as a junior synonym. In no other work dealing with *Coenobita* did we find any

reference to *Carcinion*. The reintroduction of *Carcinion* at this late date would greatly upset nomenclatural stability, and therefore the suppression of the name has been requested.

A third name which poses a possible threat to *Coenobita* is *Eremita* Osbeck, 1765. In his 'Reise nach Ostindien und China', Osbeck (1765: 365) described from the Meeuwenbaai, southwest Java, the following species: "Der Schneckendieb oder *Eremita javanica* ward in einer Schneckenschaale angetroffen; die linke Klaue desselben war grösser, es ist aber doch eine andere Gattung, als unser gemeiner *Cancer bernhardus*". Osbeck's generic name has been overlooked and is not in any nomenclator that we consulted (e.g. C. D. Sherborn's 'Index Animalium' and S. A. Neave's 'Nomenclator Zoologicus'). The name is available as it is accompanied by a description, albeit a very short and unsatisfactory one. Osbeck evidently found the species on the shore, which he described in the previous paragraph as covered almost everywhere with corals, especially madrepores and tubipores, as well as fossilized sponges and mollusks. If the hermit crab was found between these dead corals out of the water it could very well be *Coenobita*, *C. rugosus* being quite common on the Javanese coast. However, this cannot be proven. Both the names *Eremita* Osbeck, 1765 and *javanica* Osbeck, 1765, have never been used since for a hermit crab. *Eremita*, is the oldest generic name for a hermit crab, being even older than *Pagurus* Fabr., 1775. In the interest of stability, the Commission will be asked to suppress these two names proposed by Osbeck.

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