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Diagnosis of a new subfamily within Barbouriidae (Decapoda: Caridea)

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ABSTRACT

In a recent revision of the Barbouriidae Christoffersen, 1987, the authorship for the subfamily Calliasmatinae was cited as “Holthuis, 1973.” This is incorrect as the subfamily name has not been used before. We here diagnose the Calliasmatinae as a new subfamily and validate the name. All members of the new taxon are endemic to anchialine caves. We also provide a revised list of the species of Barbouriidae.

Key Words: anchialine shrimps, cave crustaceans, nomenclature, taxonomy

INTRODUCTION

In a recent update to the classification of the family Barbouriidae Christofferson, 1987, Ditter *et al.* (2020) recognized two subfamilies Calliasmatinae Holthuis, 1973 and Barbouriinae Christoffersen, 1987. Holthuis (1973) did not formally recognize a supra-generic grouping for the genus in his description of *Calliasmata*. Calliasmatinae therefore used as a familial-grouping name for the first time in Ditter *et al.* (2020), but as the current code (ICZN, 1999, 2012) requires that all new names be explicitly stated as such (Article 8.1.3.2), the Calliasmatinae is not made available by Ditter *et al.*'s (2020) action. We therefore here formally establish a new subfamily name for the taxon within Barbouriidae, Calliasmatinae **subfam. nov.** for *Calliasmata* Holthuis, 1973 (Ditter *et al.*, 2020).

Calliasmata is comprised of three species endemic to anchialine caves, with one species found in the Indo-West Pacific region (*C. pholidota* Holthuis, 1973) and two species in the Western Atlantic (*C. nohochi* Escobar-Briones, Camacho & Alcocer, 1997 and *C. rimolii* Chace, 1975). De Grave *et al.* (2014) transferred *Calliasmata* to Barbouriidae Christofferson, 1987 based on sequence data for the Enolase and NaK nuclear, and the 16S mitochondrial gene regions from a single specimen of *C. pholidota*.

It should also be noted that the symbols in Figure 2 of Ditter *et al.* (2020) denoting the localities of *C. pholidota* and *C. nohochi* were reversed.

We used one abbreviation, FICC-HBG, for the museum number of specimens housed in the Florida International Crustacean Collection, North Miami, FL, USA.

Order Decapoda Latreille, 1802

Suborder Pleocyemata Burkenroad, 1963

Infraorder Caridea Dana, 1852

Superfamily Alpheoidea Rafinesque, 1815

Family Barbouriidae Christoffersen, 1987

Calliasmatinae subfam. nov.

Calliasmatinae Ditter, Mejía-Ortiz & Bracken-Grissom, 2020 (not Calliasmatinae Holthuis, 1973).

Type genus: *Calliasmata* Holthuis, 1973

Material examined: *Calliasmata nohochi*, 8 adult specimens, Mayaguana, Bahamas, T.M. Iliffe coll., July 2007; FICC-HBG-10006.

Diagnosis: Infraorbital angle of carapace depressed, inconspicuous below antennal tooth (references to all structures in Chace, 1975: figs. 5–7; Escobar-Briones *et al.*, 1997: figs. 2–4; Holthuis, 1973: figs. 12, 13). Subocular tooth (antennal tooth) posterodorsal to the orbital angle, branchiostegal tooth absent. Sensory dorsal organs of carapace, if present, highly reduced. Carapace bearing minute scale or setules. Rostrum, if present, highly reduced and unarmed. Palp and incisor of the mandible, if present, highly reduced. Eyes highly degenerate, with eyestalks fused basally. First pereopod and third maxilliped notably robust in comparison to remaining pereopods.

The new subfamily contains only the genus *Calliasmata* Holthuis, 1973.

Taxa within Barbouriidae Christoffersen, 1987

Family Barbouriidae Christoffersen, 1987

Subfamily Barbouriinae Christoffersen, 1987

Genus *Parhippolyte* Borradaile, 1900

- P. antiquensis* (Chace, 1972)
- P. cavernicola* Wicksten, 1996
- P. misticia* (Clark, 1989)
- P. rukuensis* Burukovsky, 2007
- P. sterrevi* (Hart & Manning, 1981)
- P. uveae* Borradaile, 1900

Genus *Barbouria* Rathbun, 1912

- B. cubensis* von Martens, 1872

Subfamily Calliasmatinae **subfam. nov.**

Genus *Calliasmata* Holthuis, 1973

- C. nohochi* Escobar-Briones, Camacho & Alcocer, 1997
- C. pholidota* Holthuis, 1973
- C. rimolii* Chace, 1975

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