



<http://dx.doi.org/10.11646/zootaxa.3630.2.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:02661D74-296D-4577-A425-FBA13614A09F>

## Bathyconchoeciinae, a new subfamily of deep oceanic planktonic halocyprid Ostracod (Myodocopa, Ostracoda)

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### Abstract

Species of the genera *Bathyconchoecia* and *Scottoecia* are currently classified in the subfamily Euconchoeciinae together with species of the genus *Euconchoecia*. The morphological and ecological characteristics of many of the species currently attributable to these two taxa are compared with a range of *Euconchoecia* species and are shown to differ extensively. These differences are sufficient to separate these taxa at the subfamily level. Therefore, a new subfamily, the Bathyconchoeciinae is proposed to accommodate all the species currently classified in the genera *Bathyconchoecia* and *Scottoecia*.

**Key words:** Myodocopa, *Euconchoecia*, *Bathyconchoecia*, *Scottoecia*, systematics, oceanic, abyssopelagic, morphology, Atlantic, Euconchoeciinae

### 1. Introduction

During the last decade more effort has been targeted towards investigating benthopelagic faunas at great oceanic depths than throughout the whole of the twentieth century. Consequently there has been a dramatic increase in the numbers of species attributable to the halocyprid genus *Bathyconchoecia* Deevey, 1968. The genus was established by Deevey (1968) when she described six novel species that had been recovered from the stomachs of benthic fishes in the Gulf of Mexico. Deevey also included within her new genus two of the species that had previously been classified as *Euconchoecia* species, namely *E. lacunosa* Müller, 1908 and *E. darcythompsoni* Scott, 1909. Poulsen (1969) described two more species. But while he acknowledged Deevey as the authority for the genus, in his key he makes no reference to any of Deevey's new species, but he did include the two species previously attributed to *Euconchoecia* Müller, 1890. Maybe he did not have access to Deevey's paper prior to submitting his own paper, but his most serious omission was in making no reference to *Bathyconchoecia paulula* Deevey, 1968, which had been designated as the type species for the genus. Poulsen (1969: 27) states 'The genus [*Bathyconchoecia*] is known from temperate and tropical seas from depths between about 130 and 2000m, thus not from the very surface waters where the two species of *Euconchoecia* have their main distribution'. Skogsberg (1920: 747), when discussing the four species, which at that time were classified as *Euconchoecia*, had also remarked 'The first two of these species *E. chierchiae* and *E. aculeata* are certainly closely connected to each other: on the other hand they show rather far-reaching differences from *E. lacunosa* and *E. darcythompsoni*'.

Even so, when Poulsen (1969) modified the higher classification of the suborder Halocypriformes, he divided it into two families—the Halocypridae, which includes the majority of the recent species of pelagic ostracods, and the Thaumatoocypridae. He further divided the Halocypridae into four subfamilies, critically mainly basing his classification on characteristics of the first and second antennae. He placed *Bathyconchoecia* in his new subfamily the Euconchoeci(i)nae, arguing that their possession of large numbers of setae on the fifth segment of the first antenna is a significant homologous character that links the two genera.

Knowledge of these two genera has increased considerably during the 40 years that have elapsed since Deevey and Poulsen wrote their papers, and as a result Poulsen's classification of the two genera together in the same