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A review of the hyperiidean amphipod genus *Hyperoche* Bovallius, 1887 (Crustacea: Amphipoda: Hyperiidea: Hyperiidae), with the description of a new genus to accommodate *H. shihi* Gasca, 2005

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Abstract

This is the first comprehensive review of the genus *Hyperoche* since that of Bovallius (1889). This study is based primarily on the extensive collections of the ZMUC but also on more recent collections in other institutions. Seven valid species are recognised in this review, including one described as new to science. Two new characters were discovered; the first two pereonites are partially or wholly fused dorsally and the coxa of pereopod 7 is fused with the pereonite. These two new characters, combined with the knife-shaped carpus of the gnathopoda and the laminate mandibular molar, help to further distinguish this genus amongst the Hyperiidea. Partly as a result of establishing these distinctive characters, a new genus, *Prohyperia* **gen. nov.** is proposed for *H. shihi* Gasca, 2005 because it has characters not consistent with *Hyperoche* or the closely related genus *Hyperia*, to which it also bears some resemblance. *Hyperoche medusarum* and *H. luetkenides*, although morphologically similar, are considered separate species, with *H. medusarum* restricted to the colder waters of the northern Hemisphere and *H. luetkenides* to the Southern Ocean and Antarctic waters. *Hyperoche cryptodactylus*, still only known from the unique type, is considered a synonym of *H. luetkenides* because the character distinguishing it, the retractile dactyl of gnathopod 2, also occurs in some specimens of *H. luetkenides* and has also been found in other species of *Hyperoche.* Some specimens also have some pereopoda with partly or wholly retracted dactyls, although there is no pattern to the occurrence. In addition to the above the following species are also considered valid, *H. martinezii*, *H. mediterranea* and *H. picta*, found mainly in the tropical and temperate regions of the Atlantic and Pacific Oceans, and *H. capucinus*, restricted to the region between the Antarctic Polar Front and the Antarctic Continent. One new species, *H. macrocephalus* **sp. nov.**, is described from the tropical eastern Indian Ocean and the Mediterranean Sea. All species are described and illustrated and a key is provided to facilitate their identification.

Key words: Amphipoda, Hyperiidea, *Hyperoche*, review, *Prohyperia* **gen. nov.**, taxonomy, new species

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In this species the gnathopoda of females become more robust with age, judging by comparing the figures of the holotype (10.3 mm) (Gasca 2005) and the specimen illustrated here (5.8 mm); and in the adult male (12 mm) the carpal process is very elongate, overlapping the propodus and dactylus (Fig. 17). Also, the dactylus is not as sharp and appears worn in Gasca's (2013) illustration. In addition, in the current specimen the left mandible has a palp of only two articles, but this seems to be an abnormality because Gasca (2005) illustrates it with three articles for the type and also for the only known male (Gasca 2013), and this has been confirmed by the re-examination of specimens (Gasca pers. com. Feb. 2014).

This seems to be a deep-water species inhabiting depths of more than 500 m, yet the eyes are not reduced in any way, and are more typical of shallower water species. It is possible that it normally inhabits more shallow waters and was drawn deeper by its host but this is not supported by the limited information available.

The type was found on the hydromedusa *Chromatonema erythrogonon* (Bigelow, 1909). More recently, additional specimens have been collected from the same general locality; an adult male and female on the scyphomedusa *Nausithoe rubra* (Gasca 2013). Additional information, and ecological observations, of this species and its hosts is provided by Gasca (2005, 2013).

Distribution. Known only from a few records from the Gulf of California, collected at depths of 554–1136 m.

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