Review of the steatiticus-species group of the cuskeel genus Neobythites (Ophidiidae) from the Indo-Pacific, with description of two new species

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Abstract

This review was motivated by the recent collection of a specimen of the specious cuskeel genus Neobythites (Ophidiidae) off Myanmar and difficulties to identify it based on the available literature. This specimen has an ocellus consisting of a dark oval spot and a concentric white ring placed on the dorsal fin at mid-body, typical for many Neobythites species. It belongs to a group of single-oellus bearing species which have no or only one weakly developed, flat preopercular spine which we term here the "steatiticus-species group". Before this study, the steatiticus group consisted of six Indo-Pacific species, N. longipes, N. malhaensis, N. malayanus, N. meteori, N. steatiticus, and N. stefanovi, and the Atlantic N. monocellatus. From 136 specimens representing the six Indo-Pacific steatiticus-group species counts or measurements of 12 meristic, 14 body shape, five ocellus and six otolith characters were obtained and compared, revealing two undescribed species. We describe N. gloriae n. sp. from the Arabian Gulf and inner Gulf of Oman based on nine specimens that had been previously misidentified as N. steatiticus and N. stefanovi. The latter species differ from the new species and from each other in the combination of five characters, head length, orbit length, gill-filament length, ocellus-spot distance, and ocellus-spot size. The second new species described is N. lombokensis n. sp. which consists of a single specimen from off SE Lombok, southern Indonesia. It differs from all other steatiticus-group species in having a larger ocellus spot and in several meristic and morphometric characters. The specimen from off Myanmar, eastern Bay of Bengal, was found to belong to N. steatiticus, providing new information on distribution and colour. Diagnoses, updated distribution information, and a key for the eight Indo-Pacific steatiticus-group species are here presented. We discuss our findings with special emphasis on the variation and possible function of colour patterns in Neobythites, being important for understanding the ecology and evolution of this specious genus.