



Article

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A new species of *Pachycara* Zugmayer (Teleostei: Zoarcidae) from off Monterey Bay, California, USA, with comments on two North Pacific *Lycenchelys* species

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Abstract

A new species of the eelpout genus *Pachycara* Zugmayer is described from the lower bathyal zone of central California, USA on the basis of three adult males. It is distinguished from its congeners mainly by its low vertebral counts, origin of the mediolateral branch of the lateral line system, lack of pelvic fins, presence of scales on the nape and cheeks and restricted gill slit. In addition, two species of the eelpout genus *Lycenchelys* Gill (*L. micropora* and *L. monstrosa*), taken in the same collection as the new *Pachycara*, are discussed, with the latter added to the California marine fish fauna.

Key words: Pacific Ocean, Monterey Bay, California, Zoarcidae, eelpouts, *Pachycara*, *Lycenchelys*, new species

Introduction

Eelpouts of the genus *Pachycara* are found in all oceans except the Arctic from upper slope to abyssal depths (Anderson 1989, 1994). The genus was known from a single specimen collected in the northeastern Atlantic (Zugmayer 1911) until Markle and Sedberry (1978) reported a second specimen of the same species (*P. bulbiceps*, as *P. obesa*) off Virginia, USA. Anderson (1989) revised the genus to include 12 species. Since then, 12 additional species have been described (Anderson 1991, 2006; Anderson & Bluhm 1997; Anderson & Mincarone 2006; Biscoito & Almeida 2004; Geistdoerfer 1994; Møller 2003; Møller & King 2007; Shinohara 2012). Møller and Anderson (2000) placed *Lycodes microcephalus* Jensen in *Pachycara* as well, bringing the total to 25 currently recognized species in the genus.

In April and September to October, 2009, Dr. Jeffrey C. Drazen, University of Hawaii, and colleagues conducted deep-sea trawling operations off central California, USA, aboard the research vessel POINT SUR of the Moss Landing Marine Laboratories. The purpose of the cruise was to study the metabolism of fishes from shelf to abyssal depths to test hypotheses about what controls metabolic rates in marine fishes and to accurately model food webs. Six specimens of a *Pachycara* species were captured during the cruise off Monterey Bay, California, and discovered to represent the 26th species of the genus. Three specimens were made available for study by Dr. Drazen, and this paper describes and illustrates the new species along with comments on its possible relationships to congeners.

Material and methods

Measurements were made with digital calipers to the nearest 0.1 mm. Terminology and character definitions follow Anderson (1989, 1994). All specimens were radiographed for characters of the axial skeleton. Preservation, and probably natural variation, resulted in specimen USNM 405384 appearing relatively less robust than the two other specimens of the new species, hence the great variation in some morphometrics. Abbreviations in the text are as follows: CAS, California Academy of Sciences, San Francisco; SIO, Scripps Institution of Oceanography, La Jolla; USNM, National Museum of Natural History, Washington, D.C.; HL, head length; SL, standard length.