

Snailfishes (Pisces: Liparidae) of Australia, Including Descriptions of Thirty New Species

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ABSTRACT. Examination of all available liparid specimens collected in Australian waters revealed more than 30 new species in three genera: *Careproctus* Krøyer, *Psednos* Barnard, and *Paraliparis* Collett. This is the first published description of liparids from Australia. The new species include *Careproctus paxtoni* n.sp., *Psednos balushkini* n.sp., *Ps. nataliae* n.sp., *Ps. whitleyi* n.sp., *Paraliparis anthracinus* n.sp., *P. ater* n.sp., *P. atrolabiatus* n.sp., *P. auriculatus* n.sp., *P. australiensis* n.sp., *P. avellaneus* n.sp., *P. badius* n.sp., *P. brunneocaudatus* n.sp., *P. brunneus* n.sp., *P. coracinus* n.sp., *P. costatus* n.sp., *P. csiroi* n.sp., *P. delphis* n.sp., *P. dewitti* n.sp., *P. eastmani* n.sp., *P. gomoni* n.sp., *P. hobarti* n.sp., *P. impariporus* n.sp., *P. infeliciter* n.sp., *P. labiatus* n.sp., *P. lasti* n.sp., *P. obtusirostris* n.sp., *P. piceus* n.sp., *P. plagiostomus* n.sp., *P. retrodorsalis* n.sp., *P. tasmaniensis* n.sp., and four more unnamed taxa. All are endemic to Australia. We discuss and describe new characters, describe the new species and provide keys for their identification. The described *Paraliparis* species are morphologically very similar to one another, and form a group that is clearly distinct from the Antarctic species of the genus, suggesting that the two groups are not closely related and that neither is derived from the other. Two of the unnamed taxa constitute the second record of liparids from the Indian Ocean.

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The family Liparidae was long considered to be almost completely confined to the Northern Hemisphere (Burke, 1930), with only a few poorly known species described from the South Atlantic, the southern tip of South America, and the Antarctic. In fact, liparids seem to occur worldwide in marine environments where temperatures are low enough. In equatorial areas, they exhibit tropical submergence and occur in cold waters at great depths, but (with one exception, *Liparis fishelsoni* Smith, 1967) not in shallower, warmer

waters. Within the last ten years, it has become apparent that the Southern Hemisphere has an extensive liparid fauna composed entirely of endemic species. The Southern Ocean is particularly rich, having well over 100 species representing seven genera (Andriashev, 1986; Andriashev, 1993; Stein & Andriashev, 1990; Andriashev & Stein, 1998; Duhamel, 1992; Stein & Tompkins, 1989). There is also a Chilean group of liparids, including a morphologically notable endemic genus, *Eknomoliparis* (Stein *et al.*, 1991).