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## First record of *Polyprion oxygeneios* (Perciformes: Polyprionidae) for the south-west Atlantic and a northernmost range extension

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The occurrence of *Polyprion oxygeneios* (Perciformes: Polyprionidae) is recorded for the first in the south-west Atlantic. Twenty specimens were caught off Rio Grande do Sul (33°41'8"–34°3' S, 370–854 m depth) during winter cruises of the commercial fishing fleet.

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The hapuka *Polyprion oxygeneios* (Schneider & Foster) (Fig. 1) is an important deep-water commercial fish species, caught mainly off Australia, New Zealand, Juan Fernandez Archipelago off Chile, the Tristan da Cunha Group of the South Atlantic (Sepúlveda & Pequeño, 1986; May & Maxwell, 1986; Paulin *et al.*, 1989; Paxton *et al.*, 1989; Andrew *et al.*, 1995) and incidentally caught off Chilean Patagonia (Nakamura *et al.*, 1986). The distribution of *P. oxygeneios* is exclusively southern circum-global, in temperate-cold waters from 28° to 43° S (Paxton *et al.*, 1989).

*Polyprion oxygeneios* (Polyprionidae; Nelson, 1994) is mainly a demersal species with a depth range of 50–450 m, occurring over 'rough' ground from the central shelf to the upper slope (Paxton *et al.*, 1989). It reaches 150 cm total length ( $L_T$ ) and may weigh up to 100 kg, its juveniles being found near the surface, probably associated with drifting material in a way similar to that recorded for *Polyprion americanus* (Bloch & Schneider) (Paxton *et al.*, 1989; Saldanha, 1995). This paper reports the first record of *P. oxygeneios* from the south-west Atlantic.

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FIG. 1. *Polyprion americanus*, 53 cm  $L_S$  (above) and *Polyprion oxygeneios*, 62 cm  $L_S$  (below) caught off southern Brazil; scale = 30 cm.

During July to September (southern hemisphere winter) 2000, 20 specimens of *P. oxygeneios* were caught by trawling by the F/V Neutron at the latitudes 33°41'8"–34°15'3" S, over 370–854 m depth, this being considerably deeper than the values given by Paxton *et al.* (1989), probably constituting the deepest record so far registered for this species. All specimens were measured and counted according to the method of Hubbs & Lagler (1964), photographed, and compared to the much commoner target species *P. americanus*, widely caught during fishing by the trawler (>400 specimens). This was the first time 'different types of wreckfish' were noticed in >6 years of deep trawling in the area (E. Luca, unpubl. obs.). Unfortunately, the fishing crew treated the *P. oxygeneios* specimens, in the same manner as that for the target species. All were subsequently frozen and traded, resulting in no vouchers being preserved in scientific collections. This also implied that biological observations were not made since no authorization to open even a single specimen was given.

Meristic data for the 20 specimens of *P. oxygeneios* showed no differences when compared to *P. americanus* (all specimens of both species had the same counts: D XI,12 and A III,9). *Polyprion oxygeneios*, however, is readily distinguished by its more slender body [body depth >3.2 times standard length ( $L_S$ ) for individuals >25 cm  $L_S$ , v. <3.1  $L_S$  for the deeper-bodied *P. americanus* (Roberts, 1989)]. *Polyprion oxygeneios* also has a more concave caudal fin, smaller eye, and more projecting mandible. Additionally, freshly caught *P. oxygeneios* is bluish grey on the dorsum and flanks whereas *P. americanus* is uniformly brownish grey (Fig. 1). Sizes for the 20 hapuka ranged between 65 and 60 cm  $L_S$ .

*Polyprion oxygeneios* is regarded as a southern circum-global species (Paxton *et al.*, 1989), occasionally caught off Chilean Patagonia. Thus, its occurrence off south Brazil is not entirely unexpected, as the increased seasonal influence of the Falklands Current during the southern hemisphere winter is likely to be the main factor that expands the northern distribution of cold-water species along the South American coast (Stramma, 1989). The occurrence of *P. oxygeneios* in Brazilian waters is its northernmost record in the Atlantic, but it may occur

further northwards in deep waters. Also, this deeper water occurrence might be a reflection of the unusually deep sounding in which the specimens were actually caught. Other cold-water species recorded both off Patagonia and southern Brazil includes *Cheilodactylus bergi* (Norman), *Stromateus brasiliensis* Fowler, *Verecundum rasile* (Jordan) and *Paralichthys patagonicus* Jordan (Carvalho-Filho, 1999; Figueiredo & Menezes, 2000).

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