J. Appl. Ichthyol. 18 (2002), 216–218

ISSN 0175–8659

Received: September 25, 2000
Accepted: May 27, 2001

Short Communication

Poromitra crassiceps (Teleostei, Melamphaidae) associated with the 500 fathoms fauna off Argentina

By M. L. García[1,2] and C. C. Morgan[2]

[1]*Consejo Nacional de Investigaciones Científicas (CONICET);* [2]*Departamento Zoología Vertebrados, Museo de La Plata, La Plata, Argentina*

Summary

We established the presence of *Poromitra crassiceps* on the slope off Argentina (49°29.8′S; 55°27.4′W, 941 m depth) during a research cruise in 1978. The report is based on a single specimen 130.09 mm total length.

Introduction

The family Melamphaidae includes 34 species in five genera (Nelson 1994) distributed throughout the meso- and bathypelagic ocean zones of the world. The genus *Poromitra* Goode & Bean 1883 (Goode and Bean 1895) is distinguished by a conspicuous internarial spine and crestlike, serrated ridges on the head (Ebeling 1962; Fitch and Lavenberg 1968; Ebeling and Weed 1973; Ebeling 1975; Parin and Ebeling 1980). The genus is composed of five species: *P. oscitans* and *P. crassa* in the tropical Indo-Pacific Ocean, *P. megalops*, circumtropical, *P. capito* in the North Atlantic Ocean, and *P. crassiceps* with an almost cosmopolitan distribution (Ebeling 1975). Parin and Ebeling (1980) included the Caribbean Sea and the North and South Atlantic as far as 30°S in the geographical range of the species. Gon (1990) recorded its presence to about 60°S in the Southern Ocean (*sensu* Gon 1990).

The specimen studied here was obtained during fishery research jointly performed by the Argentine and Japanese governments.

Materials and methods

The *P. crassiceps* specimen reported in this paper was collected during the 5th exploratory cruise of the R/V 'Shinkai Maru' from 25 August to 15 September 1978. The sampling area ranged from 39°30′S to 51°31′S and 55°27.4′ to 68°27′W (Fig. 1), covering most of the Argentine sea with a network of stations (Menni et al. 1981). The captures were made using a trawl net (6.8 m height × 28.9 m width) trawled at 3.3 knots. Measurements and counts were made according to Ebeling (1975), Parin and Ebeling (1980) and Amaoka et al. (1983).

Results

The 106.5 mm standard length P. *crassiceps* was collected by R. Menni and H. López on 11 September 1978 at station 86 (49°29.8′S; 55°27.4′W), at a depth of 941 m. The bottom temperature was 2.3 °C and the surface temperature 7 °C. The specimen was deposited in the Ichthyological Collection of the Museo de La Plata, number MLP 9521. This is the first record of *P. crassiceps* in Argentinian waters (Fig. 2). Description of gross morphology: body elongate; deep caudal peduncle (depth about 40% of its length); eye moderately large and surrounded by a bony ridge; one of the paired serrated crests on top of the head is missing in the specimen; internarial spine conspicuous and directed upward; eleven spines along the ventral margin of preopercle; cheek ridge with 6 spines; mouth large, maxilla extending to posterior margin of eye; teeth recurved, small and numerous in a single row on each jaw; gill rakers flattened and serrated posteriorly; the specimen is in poor condition, having lost all scales and most of the tegument; color in preservative yellowish brown, edges of

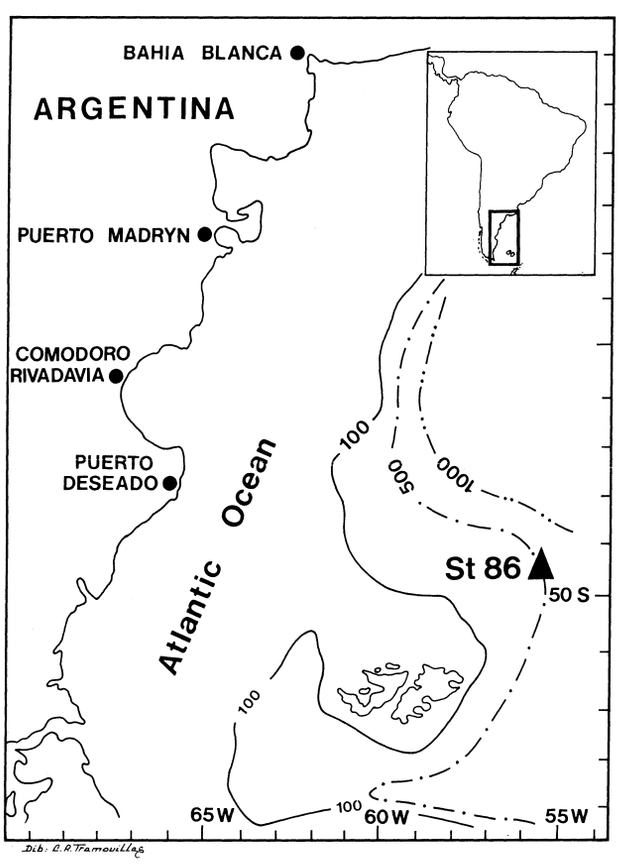

Fig. 1. Occurrence of *Poromitra crassiceps* in the southern South Atlantic off Argentina

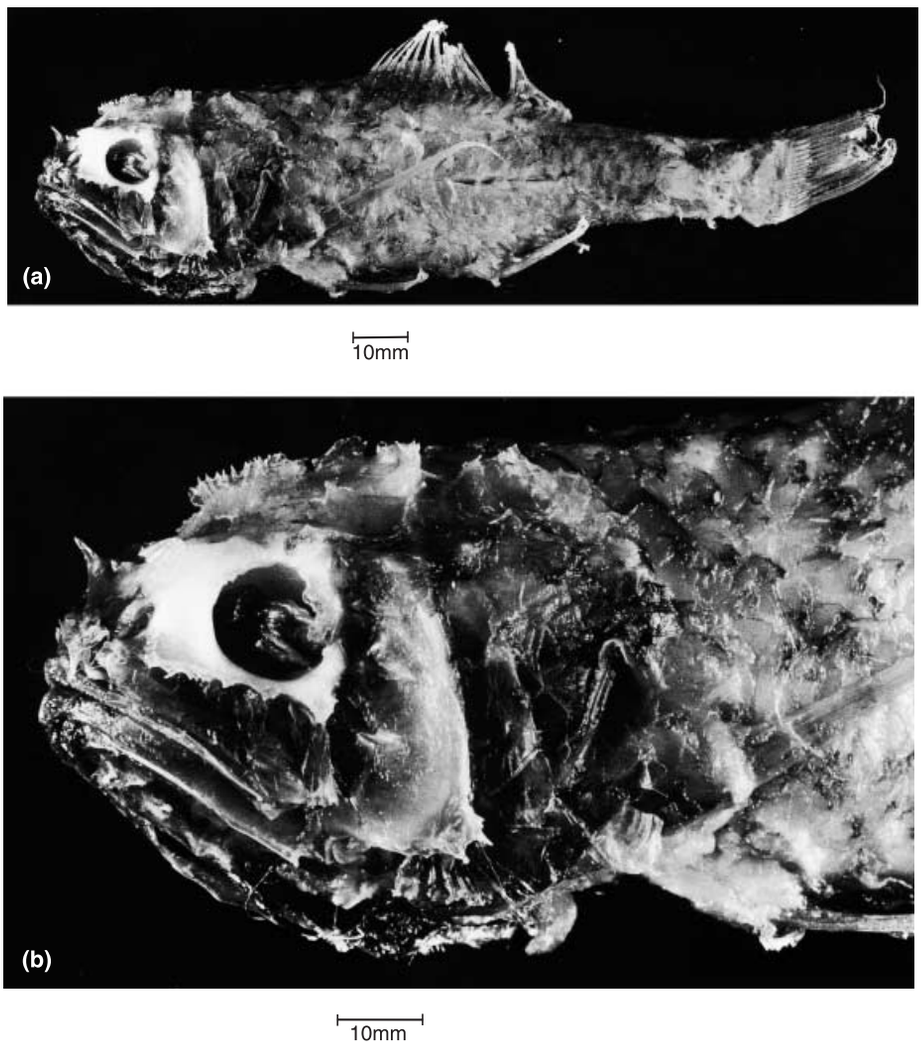

Fig. 2. Photograph of the preserved specimen of *Poromitra crassiceps* in the Museo de La Plata ichthyological collection, code number MLP 9521. (a) Total view (b) close up of the front section. Bars indicate the scale in mm

scale pockets dark, cephalic ridges white, oral and branchial cavities black.

Meristic counts: dorsal-fin rays III, 14; anal-fin rays I, 9; pectoral-fin rays 13; pelvic-fin rays I, 7; caudal-fin rays 3 upper procurrent 3 + 9 upper principal + 10 lower principal + 3 lower procurrent; gill rakers on first arch 10 + 19; scale rows: horizontal (from end of post-temporal bone to caudal-fin base) 28, vertical (from dorsal-fin origin to anus) 11; number of spines on horizontal arm of preopercle: 11; vertical cheek-ridge angle: 80°.

The following ratios are considered distinctive characteristics for the *Poromitra* species (Parin and Ebeling 1980): caudal peduncle: depth/length (%) 38.32; longest serrated crest spine length/horizontal preopercular width (%) 60.24; preopercular spine length/anal base length (%) 42.96; eye diameter/head length (%) 19.55. Table 1 includes the morphometric characters of the specimen.

Discussion

Ebeling (1975) considers *P. crassiceps* to be a widely distributed species, excluded only in the Mediterranean Sea and Arctic Ocean. Amaoka et al. (1983) mentioned the same distribution at depths of 700–3300 m. According to Fitch and Lavenberg (1968), this species ranges from Alaska to mid-Chile (33°S) in the Pacific Ocean. Parin and Ebeling (1980) recorded the species for the Caribbean Sea and North and South Atlantic to 30°S, and Gon (1990) extended its range in the Southern Ocean to about 46°S at 48°W and to 60°S at 70°W.

The *P. crassiceps* specimen was captured toward the lower limit of the mesopelagic zone. At the same station *Bathyraja griseocauda, Bathylagus* sp., *Borostomias* sp., *Stomias* sp., *Antimora rostrata, Lepidion ensiferus, Physiculus marginatus, Salilota australis, Dissostichus eleginoides, Icichthys australis* and species of Myctophidae, Ceratoidei and Oreosomatidae were collected. Most of these species are typical members of the deep water fish fauna which often occur in waters over the continental slope (Menni and Lopez 1984).

Menni and Gosztonyi 1982) recorded a similar association in samples from the R/V 'Kaiyo Maru' at two stations north east of the Falkland Islands (Islas Malvinas), at depths from 807 to 1314 m and at bottom temperatures ranging from 2.4 to 3.1 °C. This association, entitled 'the 500 fathoms fauna', is composed of Lepidopidae, *Ophtalmolycus* sp., *Stomias* sp., *Bathylagus* sp., Oreosomatidae, *Antimora rostrata*, *Melanostomias* sp., *Borostomias* sp., Gonostomatidae (2 spp.), *Lestidiops* sp., *Electrona* sp., *Nemichthys* sp., *Epigonus robustus*, *Lepidion ensiferus* and *Halargyreus* sp.

Ebeling et al. (1970), in a study of the ecological groups of organisms in the Pacific Ocean off California, recorded

Table 1
Morphometric measurements and proportional relationships (in percentage of Standard length = SL) of a single specimen of *Poromitra crassiceps* caught off the Argentine coast at 941 m depth in September 1978

	mm	% SL
Total length	130.09	–
Standard length	105.30	–
Body depth	29.25	27.70
Predorsal length	46.45	44.10
Length of caudal peduncle	30.66	29.91
Head length	36.30	34.47
Length of upper jaw	15.91	15.10
Snout length	9.90	9.40
Dorsal-fin origin to caudal-fin base	59.85	56.84
Postorbital length of head	20.03	19.02
Distance snout to preopercle	29.43	27.95
Greatest depth of head	25.79	24.49
Head width	14.87	14.12
Interorbital width	12.39	11.76
'Frontal fossa' length	18.86	17.91
Snout-pectoral fin origin	38.65	36.70
Snout-pelvic fin origin	42.94	40.78
Pelvic fin origin-anal fin origin	24.26	23.04
Length of pectoral fin	32.25	30.62
Length of pelvic fin	17.36	16.48
Anal fin origin-snout	64.71	61.45
Anal fin origin-caudal base	41.05	38.98
Depth of caudal peduncle	11.80	11.20
Length of caudal peduncle	29.93	28.42

P. crassiceps as belonging to the rare bathypelagic species co-occurring with *Scopelogadus mizolepis*, *Melamphaes acanthomus*, *Cyclothone acclinidens*, *Bathylagus milleri*, *Anoplogaster cornuta*, *Melanostigma pammelas* and *Taaningichthys bathyphilus*, collected at depths ranging from 582 to 1122 m. Most of the families which include these species are also represented in the associations described by Menni and Gosztonyi (1982) for the southern Atlantic Ocean, to which we are now adding *P. crassiceps*.

Acknowledgements

We thank Dr R. C. Menni for providing the material and for his critical reading of the manuscript, to Dr A. W. Ebeling and M. Larrey for the many reprints, and C. Tremouilles for drafting the map.

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Author's address: M. L. García, Consejo Nacional de Investigaciones Cientificas (CONICET), Departamento Zoología Vertebrados, Museo de La Plata, Paseo del Bosque s/n°, 1900, La Plata, Argentina.
E-mail: mlgarcía@museo.fcnym.unlp.edu.ar