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STUDIES ON THE ZOARCIDAE (TELEOSTEI: PERCIFORMES) OF THE SOUTHERN HEMISPHERE. VIII. A NEW SPECIES OF THE GENUS *DIEIDOLYCUS* FROM TIERRA DEL FUEGO

by

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ABSTRACT

A new lower-slope eelpout of the genus *Dieidolycus* Anderson, 1988 (Family Zoarcidae, Subfamily Lycodinae), is described from a single juvenile female trawled in 2008-2165 m off Tierra del Fuego, Chile. It differs from congeners *D. leptodermatus* Anderson, 1988 and *D. adocetus* Anderson, 1994 by its head pore pattern, 10 caudal-fin rays, 18 pectoral-fin rays and longer gill slit.

INTRODUCTION

Gosztonyi (1977) and Anderson and Gosztonyi (1991) reviewed the eelpouts of the cold-temperate Magellan Province (sensu Briggs, 1974) of South America. Only two species are thought to be present in lower continental slope waters there. *Lycodonus malvinensis* has been taken to depths of 2044 m (Anderson and Gosztonyi, 1991). *Lycenchelys antarctica,* although never captured within the Magellan Province, is known from Antarctic waters and the northern Peru-Chile Trench in depths of 1976-5320 m (Anderson, 1988a). We consider the distribution of *L. antarctica* to be continuous through Chilean waters and possibly also southern Argentina. Anderson (1988a) recorded five zoarcid species (*Melanostigma bathium, M. gelatinosum, Lycenchelys antarctica, Lycodapus antarcticus* and *L. pachysoma*) found in both the South American and Antarctic regions. These deeper-dwelling species compromise the fidelity of Briggs'(1974) Magellan Province, thus its reference should be confined to shelf/upper slope faunas only.

In May 1996 the German research vessel POLARSTERN captured two eelpouts while trawling east of the entrance to the Beagle Channel, Tierra del Fuego, in Chilean territorial waters. These specimens were subsequently sent to the authors for identification. One is the rare *Lycenchelys bachmanni* Gosztonyi, 1977, and represents a range and depth extension for the species (to southern Chile in 107 m; see Anderson and Gosztonyi, 1991: 7). The other is a new lower slope species for southern South America and the third species to be assigned to the genus *Dieidolycus* Anderson, 1988.

METHODS

Measurements were made with dial calipers to the nearest 0.1 mm. Definitions of characters and their reporting follow those established by Gosztonyi (1977) and Anderson (1982), repeated in earlier parts of this series (e.g., Anderson, 1988a, b). The abbreviation MNHNC is: Museo Nacional de Historia Natural, Santiago, Chile. Other abbreviations are: A, anal-fin rays; C, caudal-fin rays; D, dorsal-fin rays; P, pectoral-fin rays; V, pelvic-fin rays; GR, gill-rakers; HL, head length; SL, standard length.

Dieidolycus gosztonyii sp. nov.

(Fig. 1)

Holotype: MNHNC 7089, 65 mm SL, female, off Isla Nueva, Chile, 55°31.6'S, 65°56.8'W to 55°30.7'S, 65°58.8'W, depth 2165-2008 m, FFS POLARSTERN, Sta. 40/114, cruise ANT XIII/4, 0458-0529 hrs, 18 May 1996.

DIAGNOSIS: A species of *Dieidolycus* as defined by Anderson (1988a), with emendation (see REMARKS), with vertebrae 23 + 55; C 10; P 18; gill-slit extending ventrally to opposite lower margin of pectoral base; suborbital pores 7; occipital pores 3; interorbital pore present; first dorsal-fin pterygiophore associated with vertebra 3.

DESCRIPTION: Vertebrae 23 + 55 = 78; D 73; A 57; C 10; P 18; V 2; GR 2 + 7; pyloric caeca 2; branchiostegal rays 6; vomerine teeth 6; palatine teeth 5-6; pseudobranch absent. Measurements in percent SL: head length 24; head width 10; head depth 9; predorsal length 25; preanal length 47; pectoral-fin length 13; body height 7. Measurements in percent HL: head width 41; head depth 38; upper jaw length 47; snout length 30; eye diameter 21; gill slit length 30; pectoral-fin length 55; pectoral-base height 24; interorbital width 8; interpupillary width 23; pelvic-fin length 18; caudal-fin length 26. Pectoral base/length ratio 43.

Head ovoid, dorsal and ventral profiles parallel behind eyes; snout broad and gently inclined before eyes. Eye moderately large, rounded, orbit large, ovoid. Single pair of tubular nostrils at snout tip, slightly overlapping upper lip when pressed forward. Pectoral fin origin at body midline, insertion on abdomen. Gill slit extending ventrally to opposite lowermost pectoral-fin ray, slit posterodorsally oblique above that, then canted gently anterodorsad from its posteriormost corner; no fleshy siphonal fold. Body short, ovoid in cross section. Tail gently tapering posteriad both laterally and dorsoventrally. Flesh gelatinous around head and abdomen.

Mouth moderately large, terminal. Upper jaw extending to vertical through middle of eye. Teeth in palate small, barely erupted, blunt. Vomerine teeth in small patch. Palatine teeth in single series, full complement not present. Anterior jaw teeth largest, in two rows in premaxilla, in four rows in dentary; single row in both jaws posteriorly.

Unpaired fins low, anteriormost dorsal and anal-fin rays longest, rays becoming shorter posteriad. First dorsal-fin pterygiophore associated with third vertebra; last dorsal ray associated with fourth preural vertebra. No free dorsal-fin pterygiophores. First three anal-fin pterygiophores anterior to haemal spine of first caudal vertebra; last

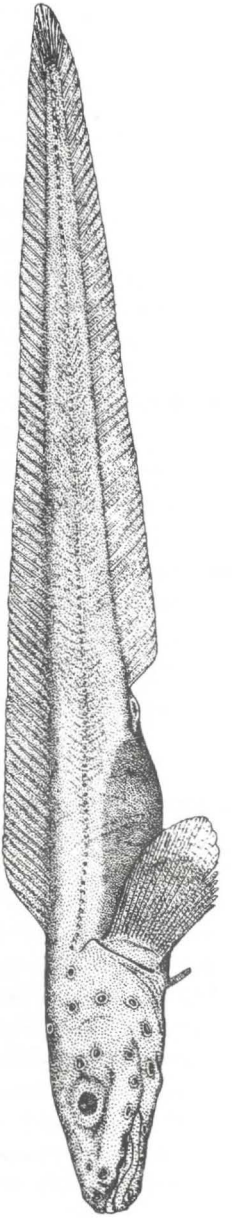

Figure 1. *Dieidolycus gosztonyi* sp. n., holotype, MNHNC 7089, 65 mm SL, off Tierra del Fuego, Chile.

anal ray associated with third preural vertebra. Caudal fin with one epural, four upper hypural and five lower hypural rays. Pectoral fin large, middle rays longest; lowermost 6-7 rays very slightly thickened, with tips exserted. Pelvic fins about one eye diameter in length, of two rays each (no spine rudiment). All fin elements segmented soft rays except first flexible spine of dorsal fin.

Cephalic lateralis pores enlarged, anteriormost ovoid, dorsoposteriormost rounded. Occipital pores three. Interorbital pore present. Two pairs of nasal pores (anterior supraorbitals), one anteromesial to nasal tube, the other posteromesial. Eight preoperculomandibular pores, four emanating from dentary, one from anguloarticular, and three from preopercle. Six suborbital pores emanating from ventral branch of bone chain and one from ascending ramus behind eye. Three postorbital pores (1, 3 and 4) on both sides of head. Lateral line mediolateral, not bowed on body. Scattered superficial neuromasts on body and head.

Gill rakers minute, blunt, only nine developed in this juvenile. Branchiostegal rays six, four articulating with ceratohyal and two with epihyal. Oral valve well developed, reaching anterior edge of vomer. No pseudobranch or scales. Pyloric caeca two, greatly reduced.

Color of body uniformly dark brown, head black. Head pores and anus ringed in white. Eye and coelomic area of abdomen dark blue. All fin membranes dusky but transparent. Lining of orobranchial chamber black.

DISTRIBUTION: Known only from lower slope waters east of the southern tip of Tierra del Fuego. Probably found throughout the Magellan Province and possibly Scotia Sea at lower slope depths.

ETYMOLOGY: Named in honour of our friend and colleague Dr. Atila Esteban Gosztonyi, Centro Nacional Patagónico, Puerto Madryn, Argentina, for his contributions to temperate South American ichthyology, especially his pioneering work on the Zoarcidae.

REMARKS: Anderson (1988a) partially diagnosed *Dieidolycus* on the basis of an absence of a lateral line. This was occasioned by observations on the original three very faded types (*D. leptodermatus*). A second species, *D. adocetus*, was based on two damaged juveniles in which presence or absence of the lateral line (and head pores) could not be verified, as they were completely skinned (Anderson, 1994). There is presently some doubt as to the correct generic placement of *D. adocetus*, but that is beyond the scope of the present paper. On the basis of *D. gosztonyii* and additional material of *D. leptodermatus* (see below), the diagnosis of the genus is here emended to include a single mediolateral lateral line, pending examination of undamaged *D. adocetus*. In *D. gosztonyii* and some *D. leptodermatus* recently observed, often scattered superficial neuromasts not forming a defined line run along the bases of the unpaired fins, or are seen on the body near the lateral line. The new specimens of *D. leptodermatus* and other unpublished records of Antarctic zoarcids will be described elsewhere by the senior author.

COMPARATIVE MATERIAL: *Dieidolycus leptodermatus*: USNM uncat. (5; 87-170 mm SL); South Sandwich Isls.; 57°04'S, 26°10.1'W; 10 ft Blake trawl, 2744-2745 m; 22 May 1975; H. H. DeWitt, collector.

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