

## Occurrence of the Liparidid Fish, *Paraliparis pectoralis*, in the Bering Sea

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A deep water liparidid fish, *Paraliparis pectoralis*, was originally described by Stein (1978) on the basis of 8 specimens collected from off Oregon at depths of 1,097 to 1,536 m. In the summer of 1979 and 1981, *P. pectoralis* was captured by otter trawls in the Bering Sea during a joint Japan-United States ground fish survey. The new materials are compared with the original description and two paratypes, and additional morphological information is provided.

The present specimens are deposited at the Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University (HUMZ). Counts and measurements follow Stein (1978).

### *Paraliparis pectoralis* Stein (Figs. 1, 2)

**Material.** All 8 specimens were collected from the central Bering Sea: HUMZ 81933 (female, 127 mm SL), HUMZ 81935 (male, 94 mm SL), 58°20'N, 175°02'W, 740 m deep, 23 June 1979; HUMZ 81934 (female, 128 mm SL), 58°15'N, 175°28'W, 681–818 m, 24 June 1979; HUMZ 81954 (female, 131 mm SL), HUMZ 81955 (male, 114 mm SL), HUMZ 81964 (male, 140 mm SL), 59°50'N, 178°47'W, 900–930 m, 27 June 1979; HUMZ 83235 (male, 106 mm SL), 59°26'N, 178°47'W, 700–840 m, 26 June 1979; HUMZ 93383 (male, 157 mm SL), 60°24'N, 179°31'W, 870–990 m, 16 July 1981.

**Comparative material.** Two paratypes; OSUO (College of Oceanography, Oregon State University)

2286 (female, 103 mm SL), OSUO 2287 (female, 91 mm SL), 46°09'N, 124°45'W, off Oregon, 15 June 1966.

**Description.** Counts and proportional measurements of the new specimens are followed in parentheses by those given by Stein (1978) for the type specimens.

Dorsal 55–58 (55–58), anal 49–51 (49–52), pectoral 28–32 (29–32), caudal 8 (7–8), vertebrae 10–11+51–54=61–64 (10–11+52–54=63–64), pyloric caeca 6–10 (9–10).

Body depth 16.5–23.8% SL (15.8–19.1% SL), head length 19.3–23.0% (18.9–21.0%), head width 13.9–17.7%. Body depth 85.8–107.7% HL (75.2–101.2% HL), snout length 29.4–33.8%, eye diameter 16.5–18.4%, upper jaw length 43.3–47.7% (44.5–51.4%), gill opening length 26.6–35.7%, upper pectoral fin lobe length 69.7–83.5% (64.6–92.9%), lower pectoral fin lobe length 60.7–71.8% (52.6–72.6%), snout to anus length 58.3–72.3%, mandible to anus length 52.2–60.6% (58.8–66.6%).

Body gradually tapering posteriorly. Head stout and wide. Snout high and broadly rounded. Nostril with raised rim on a level with pupil. Mouth terminal and horizontal. Cephalic pores small: nasal pores 2; maxillary pores 6; mandibular pores 7; suprabranchial pores 2 (Fig. 2). Anteriormost pair of mandibular pores widely separated from each other. Both suprabranchial pores close to each other. Upper pectoral fin lobe extending to anal fin origin. Notch of pectoral fin moderately deep. Lower pectoral fin lobe reaching behind a vertical through gill opening; its anterior 4 or 5 rays almost entirely free from fin membrane. Rudimentary pores forming lateral line to caudal fin;

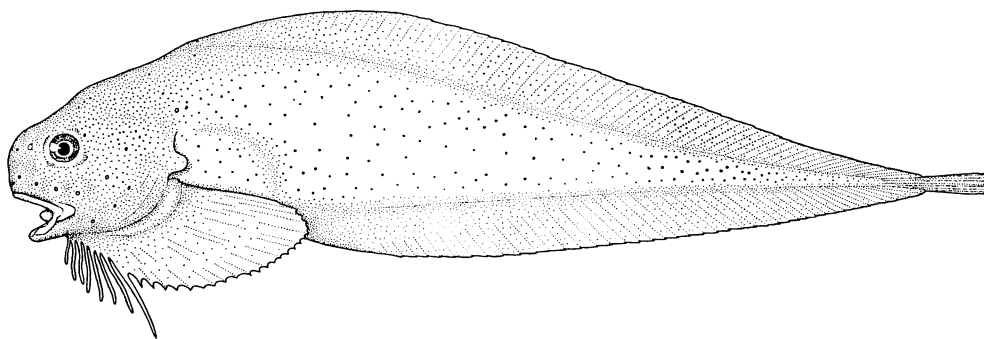


Fig. 1. *Paraliparis pectoralis* from the Bering Sea, HUMZ 81964, 140 mm SL.

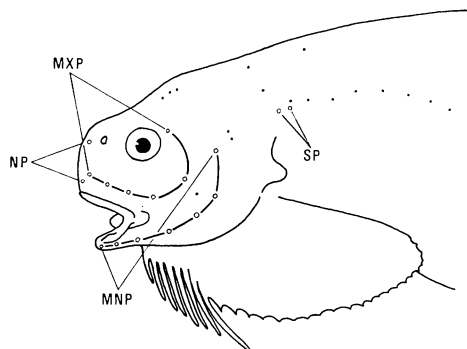


Fig. 2. Diagram showing the arrangement of cephalic and rudimentary pores in *Paraliparis pectoralis*. MNP, mandibular pore; MXP, maxillary pore; NP, nasal pore; SP, suprabranchial pore. Each dot indicates rudimentary pore.

other rudimentary pores situated above lateral line, and on nape, temporal and cheek regions.

**Distribution.** *Paraliparis pectoralis* is known from off Oregon and the central Bering Sea at depths of 681 to 1,536 m.

**Remarks.** The characters of the present specimens fit the two paratypes and the description of the type specimens very well except for the following character. Stein (1978) described "Rudimentary pores along lateral line, . . . , evidently not present anywhere else on body." In the present specimens which are in better condition than those of the type series, however, rudimentary pores were found on other areas of body (Fig. 2).

The number of nasal pores of this species was stated as 2 in the original description, but the numbers of other head pores were not given. The new specimens have 2 nasal, 6 maxillary, 7 mandibular, and 2 suprabranchial pores. This species seems to be an unusual species of the genus *Paraliparis* in having 2 suprabranchial pores, since the other species of the genus *Paraliparis* ever described have a single suprabranchial pore (Burke, 1930; Richards, 1966; Cohen, 1968; Stein, 1978).

*P. pectoralis* is the fifth species of the genus from the Bering Sea (*P. cephalus*, *P. holomelas*, *P. ulochir* and *P. dactylosus*), and is easily distinguished from them by 28–32 pectoral and 7–8 caudal rays, 2 suprabranchial pores, simple teeth and pale stomach.

## Acknowledgments

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## ベーリング海から初記録のインキウオ属(クサウオ科)の1種 *Paraliparis pectoralis*

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ベーリング海から初記録の *P. pectoralis* を記載した。本種はオレゴン沖の標本に基づき、Stein (1978) によって新種として記載されたが、それ以降記録がなかった。本標本は痕跡的な感覚孔の分布に若干の相違が認められたほかは、副模式標本および原記載によく一致した。また、本種の頭部感覚孔は吻部に2個、上顎から眼の後方にかけて6個、下顎から頬にかけて7個、鰓孔上方に2個あることが明らかになった。本属魚類では、これまで鰓孔上方の感覚孔を2個もつ種は知られていず、本種は本属中、特異な種と思われる。

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