

**A Psychrolutid Fish, *Psychrolutes pustulosus*,  
Collected from the Southwestern Okhotsk  
Sea off Hokkaido, Japan**

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A specimen of a psychrolutid fish, *Psychrolutes pustulosus*, was collected from Kitami-yamato Bank off Abashiri, Japan, during the bottom trawl surveys in the southwestern Okhotsk Sea, directed by the Japan Marine Fishery Resource Research Center (JAMARC) in 1993. The species has been known to be rare in the northern Okhotsk Sea and the Bering Sea (Schmidt, 1937, 1950; Taranetz, 1937; Lindberg and Krashkova, 1987; Dudnik and Dolganov, 1992), and this record is the first occurrence from Japanese waters, and the southernmost distribution for the species. The specimen is deposited in the Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University, Hakodate (HUMZ). Methods for taking counts and measurements follow Hubbs and Lagler (1958) and Yabe (1991). Measurement of caudal peduncle length and counts of median fin rays and vertebrae were taken from radiographs. The osteological observations were made by partly dissecting the specimen.

*Psychrolutes pustulosus* (Schmidt, 1937) comb. n.  
(Japanese name: Kon-nyaku-kajika)  
(Figs. 1, 2)

*Gilbertidia pustulosa* Schmidt, 1937: 280 (original description: Okhotsk Sea, 55°31'N, 149°10'N); Taranetz, 1937: 120 (keys); Schmidt, 1950: 179, pl. 15, figs. 1–3; Matsubara, 1955: 1162 (keys); Lindberg and Krashkova, 1987: 264, fig. 170 (Okhotsk Sea, Bering Sea); Dudnik and Dolganov, 1992: 87 (lists, Okhotsk Sea).

**Material examined.** HUMZ 126268, male, 76.3 mm SL, 44°30.1'N, 144°14.5'E, Kitami-yamato Bank, southwestern Okhotsk Sea, off Abashiri, Hokkaido, Japan, depth 208 m, 6 June 1993.

**Description.** Counts: Dorsal fin VI, 21; anal fin 16; pectoral fin 17; pelvic fin I, 3; lateral line pores 11; branchiostegal rays 7; vertebrae 13+21=34.

Proportional measurements (percents of standard length): head length 39.8, body depth 24.0, body width 25.6, predorsal length 30.0, snout to base of pelvic fin 32.8, preanal length 57.7, caudal peduncle length 11.9, caudal peduncle depth 6.6, snout length 11.3, length of orbit 12.3, upper jaw length 18.1, lower jaw length 18.4, postorbital head length 19.7, interorbital width (bony) 8.0, length of pectoral fin 32.1, length of pelvic fin 17.2, length of caudal fin 20.7.

Body covered with loose skin and soft tissue, rather elongated, slightly depressed anteriorly, compressed posteriorly; depth at origin of dorsal fin 1.1 in width at base of pectoral fin. Head roundish, depressed, head depth at postorbital region 1.3 in head width. Lower jaw protruding slightly forward part of upper jaw. Maxilla extending to vertical through anterior margin of pupil. Villiform tooth band on both jaws. Prevomer and palatines toothless. Snout blunt, its length 3.5 in head length. Anterior nostril with short cylindrical tube; posterior nostril with low rim. Exposed eye small, its diameter 2.0 in length of orbit. Posterior projection of suborbital stay narrow, extending to preopercle bone. Interorbital space almost flat with soft margins, its width 5.0 in head length. Occipital region slightly concave. Gill membranes attached to isthmus, not to each other. Dorsal and anal fins covered with loose skin proximally. Spiny portion of dorsal fin low; spines slender, flexible, its distal tips distinct. No notch between spiny and soft-rayed portions of dorsal fin. Soft-rayed position of dorsal and anal fins gently swelled posteriorly. Terminal membranes of dorsal and anal fins broadly attached to caudal peduncle. Pectoral fin elongate, distal tip of fin almost extending above base of third ray of anal fin; upper two and lower eight rays unbranched. Postcleithrum absent. Pelvic fin thoracic, proximal half covered with body skin; inner ray longest, length 2.3 in head length. Caudal fin rounded; 14 unbranched rays supported by hypural plate; five upper and four lower procurent rays. Space between anus and origin of anal fin about equal to interorbital width. Urogenital papilla short, threadlike. Minute dermal prickles

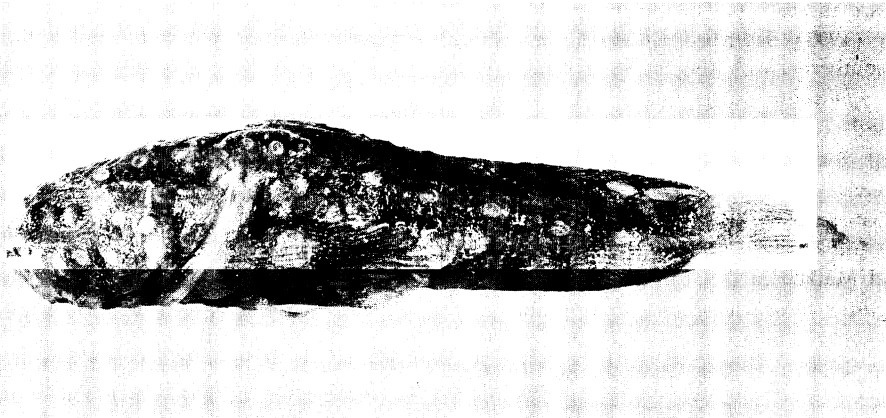


Fig. 1. *Psychrolutes pustulosus* from the southwestern Okhotsk Sea off Abashiri, Hokkaido ( $44^{\circ}30.1'N$ ,  $144^{\circ}14.5'E$ , depth 208 m), HUMZ 126268, male, 76.3 mm SL.

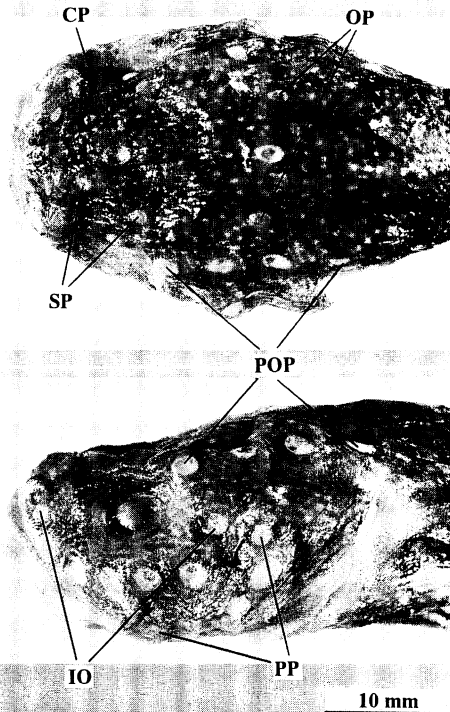


Fig. 2. Dorsal (above) and lateral (below) views of head of *Psychrolutes pustulosus*, HUMZ 126268. CP—coronal pore; IO—infraorbital pores; OP—occipital pores; POP—postorbital pores; PP—pores on preopercle; SP—supraorbital pores.

scattered on head and body. Pores of cephalic sensory canals and lateral line extremely large; seven on infraorbital, four on mandible, five on preopercle, five on postorbital canal, four on occipital canal; roundish coronal pore on middle of interorbital space; terminal pores of mandibular sensory canal smaller, opening separately on each side of symphysis; two pairs of supraorbital pores rather smaller.

*Color when fresh.*—Head and body uniformly yellowish gray with many small translucent spots. Peritoneum black.

**Remarks.** The present specimen closely agrees with the original description of *Gilbertidia pustulosa* by Schmidt (1937) and figures by Schmidt (1950). Nelson (1982) placed the genus *Gilbertidia* Berg, 1898 into synonymy with the genus *Psychrolutes* Günther, 1861 because their type species, *Gilbertidia sigalutes* (Jordan and Starks, 1895) and *Psychrolutes paradoxus* Günther, 1861, respectively, were thought to be relatively closely related in sharing, for example, a narrow posterior projection of the suborbital stay, an autosphenotic with two distinct prongs, and no postcleithrum. *Psychrolutes pustulosus* is similar in these characters. Therefore we recognize this species in the genus *Psychrolutes*, although the relationships between *P. pustulosus* and other psychrolutid fishes are still uncertain. *Psychrolutes pustulosus* is clearly distinguished from other species of this genus in having extremely large pores of the cephalic sensory canals on the dorsal, lateral and ventral surfaces of the head; pores on the dorsal surface of

the head are rather small in the latter. Recently, Mandritsa (1993) described *Gilbertidia dolganovi* from the southern Kuril Islands, which differs from *Psychrolutes pustulosus* in having broad dark bands on body and no sensory pores on dorsal surface of head except for terminal pores of the supraorbital sensory canal.

The Japanese name, kon-nyaku-kajika, was first applied to *Gilbertidia ochotensis* Schmidt, 1915, by Okada and Matsubara (1938). However, Schmidt (1950) regarded *G. ochotensis* as a junior synonym of *Eurymen gyrinus* Gilbert and Burke, 1912. Later, Matsubara (1955) used this Japanese name for *Gilbertidia pustulosa*.

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オホーツク海南西域から得られたウラナイカジカ科の稀種コンニャクカジカ

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北海道網走沖のオホーツク海南西域(北緯 44°30.1′, 東経 144°14.5′, 水深 208 m)で行われた着底トロール調査の際に, ウラナイカジカ科の 1 種コンニャクカジカ *Psychrolutes pustulosus* (1 個体, 雄, 76.3 mm SL) が採集された。本種は体全体が微細な皮質突起の散在する柔軟な皮膚に覆われ, 頭部および側線の感覚孔が著しく大きく, 尾鰭主鰭条が不分枝であるなどの特徴を示す。本種はオホーツク海北部およびベーリング海からのわずかな採集例があるにすぎず, 日本周辺海域からは報告されていなかった。従来, 本種の学名として *Gilbertidia pustulosa* が用いられてきたが, Nelson (1982) が模式種の比較に基づきコンニャクカジカ属 *Gilbertidia* をウラナイカジカ属 *Psychrolutes* に統合したので, それに従い本種の学名を新組み合わせ (new combination) とした。また, 本種の和名は, 岡田・松原 (1938) により *Gilbertidia ochotensis* に用いられたが, Schmidt (1950) により *G. ochotensis* が *Eurymen gyrinus* (ヤギシリカジカ) の新参同物異名とされた後に, 松原 (1955) が *Gilbertidia pustulosa* に用いたものである。

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