

<Technical Note>

A Record of the Yellow Croaker *Pseudosciaena polyactis* in the East Sea

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The yellow croaker, *Pseudosciaena polyactis* Bleeker, has been considered an important fish resource not only in Korea but also in China and Japan. This species ranges from northern Taiwan to Bohai Bay, but is distributed mainly in the East China and Yellow Seas (Chyung, 1977; Yamada *et al.*, 1986). In the last four decades this species has been excessively fished, then their biomass and distribution area became greatly reduced (Zhang *et al.*, 1992).

In the East Sea (Sea of Japan), *P. polyactis* was recorded previously only once, having been known from Pusan (Lindberg and Krasnyukova, 1969). This report was originally based on the work of Lin (1938). However, Lin (1938: 165) stated that "One specimen (of *P. polyactis*) 270mm was sent from Fusan (Pusan), Chosen (Korea), by Dr. K. Uchida." There is great possibility that the only known specimen of *P. polyactis* was not sampled from Pusan by Lin himself. Because of uncertainty of its capture locality, the Russian scientists' list of *P. polyactis* on the East Sea fauna was thus invalid.

In the course of ecosystem survey in the east coast of Korea, we found 14 specimens of *P. polyactis* from the inshore waters off Kori and Wolsong. To our knowledge, this is virtually the first report on the occurrence of *P. polyactis* in the East Sea. The present record extends the known distribution range of *P. polyactis* to the East Sea (Fig. 1).

The seasonal samples of demersal fishes were taken from the coastal waters off Kori (35° 19'N and 129° 19'E), Wolsong (35° 41'N and 129° 30'E) and Uljin (37° 06'N and 129° 28'E) in 1993. All sa-

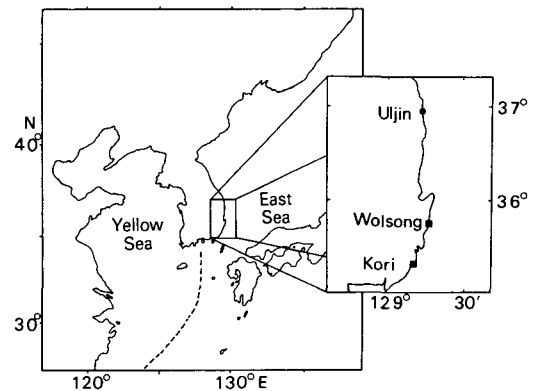


Fig. 1. Map showing the distribution range of the yellow croaker, *Pseudosciaena polyactis* and the locations of sampling sites. Broken line shows the known distribution range of *P. polyactis*. Sampling sites are marked with regard to occurrence of *P. polyactis* by solid squares, and no yellow croaker by a solid circle.

mples were collected with bottom trawls. During the seasonal survey 13 specimens of *P. polyactis* were sampled from Kori in summer (August 8) and fall (November 1), and one specimen off Wolsong in fall (November 3). Of these, five specimens (four from Kori and one from Wolsong) of *P. polyactis* were measured and fixed in 10% formalin in seawater (Fig. 2). The ranges of surface water temperature at the collection sites were 12.1~13.8°C, 17.0~17.2°C, 21.2~21.6°C and 16.0~16.2°C in winter, spring, summer and fall, respectively. The mean depths off Kori, Wolsong and Uljin were 30m, 25m and 30m, respectively. Methods of measurements and counts follow those of Masuda *et al.*

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(1984). Measurements are in millimeters with a mean value in parenthesis.

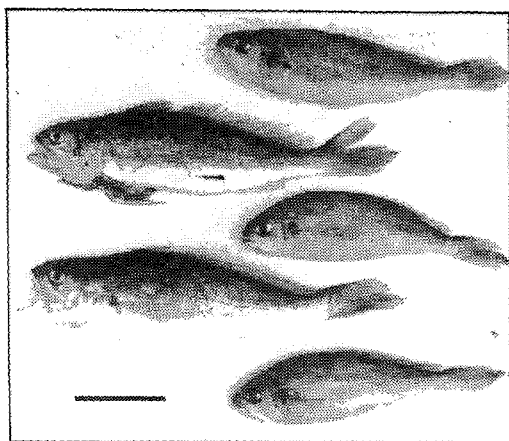


Fig. 2. *Pseudosciaena polyactis* Bleeker collected from inshore waters in the east coast of Korea. Scale bar indicates 5cm.

Dorsal fin IX I, 34; anal fin II, 9; pectoral fin 16. Standard length, 131.8~180.1mm (151.7mm); total length, 160.0~224.0mm (188.0mm); body width, 39.4~52.0mm (44.4mm); head length, 38.3~54.8 mm (45.1mm); snout length, 9.2~15.2mm (11.8 mm); upper jaw length, 19.2~27.1mm (22.6mm); eye diameter, 9.2~11.4mm (10.0mm); interorbital width, 4.4~4.9mm (4.6mm). Body weight, 47.5~107.1g (72.8g).

Mouth large, maxillary extending to below posterior margin of eye. Lower jaw little protruding beyond upper jaw. Jaws with a row of minute teeth. Posterior margin of preoperculum with dermal serration. The number of scale rows above lateral line 5 to 6. Second anal spine shorter than eye diameter. Anterior secondary branchlet of lower branchlet of ventral branch of lateral swim bladder process much longer than posterior secondary branchlet. Body orange-yellow.

The yellow croaker *P. polyactis* occupies not only shallow areas of the coast of mainland China and the western coast of Korea for spawning and nursing but also the southern Yellow Sea or the central East China Sea for wintering and feeding (Chyung, 1977). In this area there are three stocks of

P. polyactis: Yellow Sea stock, Jiangsu stock and Zhejiang stock (Ikeda, 1964). Of these, the Yellow Sea stock is recruited from the spawning grounds of Bohai Bay, Yalu River estuary and several islands along the west coast of Korea. During the months of October and November they move offshore and gradually proceed to the western and southwestern waters off Cheju Island for wintering. Here they remain from January until March and again return to their original habitat during the March~April period (Ikeda, 1964). It is postulated that our samples are part of the Yellow Sea stock.

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참조기의 동해 출현 기록

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1993년에 동해안의 고리, 월성, 울진 앞바다에서 저서어류의 생물상을 계절별로 조사했다. 그 결과 지금까지 남해와 서해에 분포한다고 알려진 참조기를 고리와 월성에서 각각 13마리(표준체장 131.8~180.1mm)와 1마리(170.2mm) 채집하여, 본 종이 동해에도 분포하고 있다는 것을 확인했다.