First Record of Zoarces elongatus (Perciformes: Zoarcidae) from Korea

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ABSTRACT

Eight specimens (330.2 ~ 431.3 mm TL) of the family Zoarcidae were collected from the coastal waters of the Byeonsanbando, Yellow Sea, Korea. They were identified as a Zoarces elongatus Kner based on the following characters: a dorsal fin with 14 ~ 16 notch-shaped spinous rays, irregular 13 ~ 16 dark spots in a row along the median body and 126 ~ 132 vertebrae. We proposed a new Korean name, ‘Mu-jeom-deung-ga-si-chi’, for the species.

Key words: Zoarces elongatus, eelpout, new Korean record

INTRODUCTION

The fishes of the family Zoarcidae (eelpouts) are known to constitute a diverse group composed of about 230 species in 46 genera from continental shelves and slopes of boreal seas (Nelson, 2006). Zoarcidae, the genus Zoarces Cuvier, 1829 includes about 5 species such as Z. adriashevi Parin, Grigoryev and Karmovskaya, 2005, Z. americanus (Bloch and Schneider, 1801), Z. elongatus Kner, 1868, Z. gilli Jordan and Starks, 1905 and Z. viviparus (Linnaeus, 1758) which are distributed primarily in temperate and arctic waters of the northern hemisphere (Anderson, 1994; Parin et al., 2005). Among them, Z. elongatus Kner 1868 was distributed over the ranges in northwestern Pacific Ocean (Anderson, 1994). Recently, we collected eight specimens of Z. elongatus from the Byeonsanbando, Yellow Sea, Korea. In this study, we described Z. elongatus as the first record from Korea based on the specimen.

MATERIALS AND METHODS

The eight samples were collected from the Byeonsanbando, Yellow Sea, Korea. The specimens were deposited at the Department of Biology, Chonbuk National University (CNUC), Korea. Counts and measurements followed those of Hubbs and Lagler (1964), and the number of fin rays and vertebrae were counted by soft X-ray photograph.

RESULTS AND DISCUSSION

Zoarces elongatus Kner, 1868

(New Korean name: Mu-jeom-deung-ga-si-chi)

(Fig. 1; Table 1)

Material examined. CNUC 36975 ~ 36982, eight specimens, 330.2 ~ 431.3 mm in total length, 35° 37′19″ N, 126° 28′16″E, Gyeokpo-ri, Byeonsan-myeon, Buan-gun, Jeollabuk-do, Korea, 30 September 2006, collected by M.H. Ko and J.Y. Park.

Description. Counts for the present specimens are shown in Table 1. Measurements in % of total length: head length 19.5 ~ 21.3 (20.9); body depth 10.7 ~ 12.7 (11.9); predorsal length 18.8 ~ 21.2 (20.1); preanal length 36.8 ~ 41.6 (39.1). Measurements in % of head length: head width 70.9 ~ 80.9 (75.0); snout length 33.1 ~ 34.6 (33.8); eye diameter 13.2 ~ 15.7 (14.2); interorbital width 19.6 ~ 23.6 (22.2). Body covered with cycloid scales, long and flat. Lowered gradually body depth toward posterior part. Head relatively large and round,
and without scales. Mouth large, and teeth blunt and strong. Lips fleshy and thick. Dorsal fin originating from the gill opening, and the highest at the anterior part. Pelvic fin very small and pectoral fin round. Anal fin originating from the one-third point of total length, and connected with a caudal fin. Lateral line in the middle of body, and curved-shape in only anterior part.

Color in formalin. Basic color brown to gray, irregular 13~16 dark spots in a row along the median body.

Distribution. This species was known from the Sea of Okhotsk northern part and coasts of Sakhalin, Russia. (Soldatov and Lindberg, 1930; Ueno, 1971). It was distribution in the Sea of Japan coast northward from Niigata Pref., eastern Hokkaido and Pacific coast of Japan (Ueno, 1971; Lindnerg and Krasyukova, 1975), Gulf of Bo Hai, China (Wang et al., 2001). In Korea, Z. elongatus is distributed around coast of Byeonsanbando of the Yellow Sea.

Remarks. Zoarces elongatus is very similar to Z. gilli in its distribution area and exomorphology. However, the former was clearly distinguished from the later by the dorsal fin with seven to sixteen short spiny rays (vs 16 to 20 spiny rays for Z. gilli) and the anterior part without black spot (vs present black spot) (Lindberg and Krasyukova, 1975).

Table 1. Comparisons of counts between Zoarces elongatus and Z. gilli

<table>
<thead>
<tr>
<th></th>
<th>Zoarces elongatus</th>
<th>Zoarces gilli</th>
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<tbody>
<tr>
<td>Total length (mm)</td>
<td>330.2~431.3 (n=8)</td>
<td>–</td>
</tr>
<tr>
<td>Dorsal fin rays</td>
<td>90<del>93, XIV</del>XVI, 25~27</td>
<td>80, XII, 22</td>
</tr>
<tr>
<td>Anal fin rays</td>
<td>107~110</td>
<td>90~</td>
</tr>
<tr>
<td>Pectoral fin rays</td>
<td>19~20</td>
<td>19~20</td>
</tr>
<tr>
<td>Pelvic fin rays</td>
<td>3</td>
<td>–</td>
</tr>
<tr>
<td>Vertebrate</td>
<td>126~132</td>
<td>–</td>
</tr>
<tr>
<td>Gill-rakers</td>
<td>4<del>5, 13</del>15</td>
<td>–</td>
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</tbody>
</table>

Key to the genus Zoarces (Family Zoacidae) from Korea

1. Dorsal fins with 16 to 20 spiny rays; anterior part of fin with black spot .......................... Zoarce gilli
2. Dorsal fins with 7 to 16 spiny rays; anterior part of fin without black spot ........................... Z. elongatus

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REFERENCES

Kim, I.S. and E.J. Kang. 1991. Taxonomic revision of the suborders Blennioidei and Zoarcoidel (Pisces: Perci-


변산반도 주변해역에서 채집된 등가시치과 한국미기록종, Zoarces elongatus

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요약 : 우리나라의 황해 변산반도 주변해역에서 등가시치과 Zoarces속에 속하는 한국미기록종 어류 8개체를 채집하였다. 본 종은 등지느러미 후부에 톱니모양의 14~16개 짧은 극조를 가지고, 몸의 중앙부와 등쪽 사이에 불규칙한 13~16개의 흑갈색 점이 있으며, 척추골수가 126~132개를 가지는 특징으로 Z. elongatus로 동정되었다. 본 종의 국명을 ‘무점등가시치’라고 명명하였다.

 찾아보기 낱말 : Zoarces elongatus, 무점등가시치, 한국미기록종