

First Record of Hairtail Blenny *Xiphasia setifer* (Perciformes: Blenniidae) from Korea

By Hyuck Joon Kwun, Jung Hwa Ryu¹ and Jin Koo Kim*

Department of Marine Biology, Pukyong National University, Busan 608-737, Korea

¹Ryu Jung Hwa Marine Research Institute, Busan 614-811, Korea

ABSTRACT *Xiphasia setifer* is reported for the first time from the South Sea of Korea based on a single specimen (291.0 mm SL) collected in September 2010. This species is characterized by the origin of the dorsal fin located vertically above the anterior margin of the eye; dorsal fin rays XIV, 114; anal fin soft rays 114, and vertebrae 130. The new Korean name of the genus *Xiphasia* is proposed as “Gal-chi-be-do-ra-chi-sok” and the Korean name of *X. setifer* as “Gal-chi-be-do-ra-chi”, following Yamada *et al.* (2009).

Key words : First record, *Xiphasia setifer*, Blenniidae, Korea

INTRODUCTION

A total of 360 species in 56 genera are recognized in the family Blenniidae in the order Perciformes (Nelson, 2006), and 14 of these species in 8 genera have been recognized in Korea to date (Kim and Endo, 2009; Kim *et al.*, 2009; Kim and An, 2010). The genus *Xiphasia* Swainson, 1839, belongs to the family Blenniidae, containing only two species worldwide (*Xiphasia setifer* Swainson, 1839 and *X. matsubarai* Okada and Suzuki, 1952), but there has been no report of them in Korea, except by Yamada *et al.* (2009), who suggested a new Korean name for *X. setifer*. In the present study, a single specimen of *X. setifer* was collected from Korea for the first time, and we describe the genus and species as the first record, based on this specimen.

The counts and measurements follow Hubbs and Lagler (2004), and the vertebrae were counted from a radiograph (SOFTEX HA-100, Japan). The specimen has been deposited at Pukyong National University (PKU), Korea.

Xiphasia Swainson, 1839

(New Korean name: Gal-chi-be-do-ra-chi-sok)

Xiphasia Swainson, 1839: 259 (type species: *Xiphasia setifer* Swainson, 1839).

Description. D. XI ~ XIV, 99-119; A. II, 97 ~ 119; P₁.

10 ~ 14; P₂. I, 3; Vert. 113-135.

Body slender, elongated, and eel like, gill openings small. All fin rays unbranched, origin of the dorsal fin located on the head. Pelvic fin composed of one embedded spine and three soft rays. Membrane of the last dorsal and anal fins connected to the caudal fin. Swim bladder absent. Only two species are recognized worldwide (Smith-Vaniz, 1976; Springer, 1986; Aizawa, 2002; Nelson, 2006).

Xiphasia setifer Swainson, 1839

(Korean name: Gal-chi-be-do-ra-chi)

(Fig. 1; Table 1)

Xiphasia setifer Swainson, 1839: 259 (type locality: Vizagapatam, India); Smith-Vaniz, 1976: 70 (Indo-Pacific); Springer, 1986: 755 (Indo-Pacific); Kuitert, 1996: 332 (Australia); Shen, 2001: 496 (Taiwan); Aizawa, 2002: 1119 (Japan); Yamada *et al.*, 2009: 575 (East China Sea).

Material examined. PKU 4212, one specimen, 291.0 mm SL, Sangju, Namhae, both sides fyke net, depth 10 m, 5 Sep. 2010, collected by Jin Koo Kim.

Description. Counts are shown in Table 1. Proportion of Standard length (%): body depth 2.6; head length 6.5; head width 2.1; snout length 1.6; eye diameter 1.6; inter-orbital width 1.3; postorbital length 3.3; upper jaw length 1.8; predorsal length 2.0; preanal length 13.3; pectoral fin length 3.2; pelvic fin length 3.1.

Body very elongated, ribbon like, with low depth. Con-

*Corresponding author: Jin Koo Kim Tel: 82-51-629-5927,
Fax: 82-51-629-5931, E-mail: taengko@pknu.ac.kr



Fig. 1. *Xiphasia setifer*, PKU 4212, 291.0 mm SL.

Table 1. Comparison of counts and measurements of *Xiphasia setifer*

	Present study	Springer (1986)	Shen (2001)	Aizawa (2002)	Yamada <i>et al.</i> (2009)
Number of specimens	1	–	–	–	–
Standard length (mm)	291.0	–	–	–	–
Dorsal fin rays	XIV, 114	XIII~XIV, 105~119	XIII, 111~114	XIII~XIV, 105~119	XIII~XIV, 115~116
Anal fin rays	II, 114	II, 107~119	II, 112~114	II, 107~119	II, 114~116
Pectoral fin rays	13	12~14	13	12~14	13
Pelvic fin rays	I, 3	I, 3	I, 3	I, 3	3
Caudal fin rays	11	–	10	10	10~12
Vertebrae	130	–	–	121~135	–

tour of the head round and slightly compressed. Mouth rather small. Posterior tip of the maxilla reaches the anterior margin of the eye. Small conical teeth anteriorly in a single row on both jaws; four small canine and two enlarged curved canine posteriorly on each side of the upper and lower jaws (Fig. 2). Interorbital region convex. Gill cover opened in the middle of the pectoral fin base. Origin of the dorsal fin located vertically at the anterior margin of the eye, and origin of the anal fin located vertically at the second dorsal soft ray. Dorsal and anal fin bases long, membrane of the posteriormost portion connected to the caudal fin. Caudal fin slightly pointed.

Coloration. When fresh, the head and body are greenish brown. Approximately 26~27 dark greenish brown bands. Black dot on part of the sixth dorsal spine and black blotch on portion between the 11th and 14th dorsal spines (Fig. 2). Many small melanophores present on the dorsal and anal fin membranes, and the dorsal and anal fin bases are greenish yellow. Posterior margin of the caudal fin darkish. After fixation, the head and body are grayish green, and the membranes of the dorsal and anal fins are darkish.

Distribution. *Xiphasia setifer* was collected in Sangju, Namhae from Korea (present study). It occurs in the Indo-Pacific (Smith-Vaniz, 1976; Springer, 1986), Australia (Kuitert, 1996), East China Sea (Yamada *et al.*, 2009) and Japan (Aizawa, 2002).

Remarks. The present specimen belongs to the genus *Xiphasia* based on its small gill openings and elongated body. It was identified as *X. setifer* by its numbers of dorsal fin rays, anal fin rays, pectoral fin rays, and vertebrae (Table 1). It corresponds well with *X. setifer* in that



Fig. 2. Head of *Xiphasia setifer* showing a distinctive black dot on part of the sixth dorsal spine.

the origin of the dorsal fin is located on the head, and a black dot occurs on a portion of the dorsal spine (Smith-Vaniz, 1976; Kuitert, 1996; Aizawa, 2002; Yamada *et al.*, 2009; Fig. 2). When compared with the original description, the present specimen corresponds well in having an elongated and linear body, but there is no detailed description in the original paper. Therefore, we compared it with specimens cited in other references. *Xiphasia setifer* has a sexual dimorphism in that the central caudal fin rays are elongated in the male (Okada and Suzuki, 1952; Aizawa, 2002; Yamada *et al.*, 2009). According to this feature, our specimen is thought to be female. Yamada *et al.* (2009) mentioned that *X. setifer* has three pelvic fin rays, differing from our specimen and those reported by other ichthyologists (P_2 , I, 3). This discrepancy may be the result of embedded pelvic spines counted incorrectly by Yamada *et al.* (2009). *Xiphasia setifer* is easily distinguishable from the congeneric species, *X. matsubara*, by the location of the origin of the dorsal fin (at the

anterior margin of the eye in *X. setifer* vs. in the middle of the eye in *X. matsubarai*, and the numbers of dorsal fin rays (XIII ~ XIV, 105 ~ 119 vs. XI, 99 ~ 104, respectively), anal fin soft rays (107 ~ 119 vs. 97 ~ 104, respectively), and vertebrae (121 ~ 135 vs. 113 ~ 117, respectively). We propose a new Korean genus name “Gal-chi-be-do-ra-chi-sok” for the genus *Xiphasia*, and the Korean name “Gal-chi-be-do-ra-chi” for *X. setifer*, following Yamada *et al.* (2009).

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한국 남해에서 채집된 청베도라치과(Bleniidae) 어류 1 미기록종, *Xiphasia setifer*

권혁준 · 유정화¹ · 김진구

부경대학교 자원생물학과, ¹유정화 해양연구소

요 약 : 2010년 9월, 우리나라 남해 상주에서 처음으로 *Xiphasia setifer* 1개체 (291.0 mm 표준체장)가 채집되어 형태 특징을 상세히 보고한다. 본 종은 등지느러미가 눈의 앞 가장자리와 동일선상에서 시작되며, 등지느러미는 극조 14개, 연조 114개, 뒷지느러미는 연조 114개, 척추골은 130개를 가지는 점에서 *X. setifer*로 확인되었다. 본 종의 새로운 국명으로 속명은 “갈치베도라치속”을 제안하며, 종명은 Yamada *et al.* (2009)을 따라 “갈치베도라치”로 명명한다.

찾아보기 낱말 : 미기록종, *Xiphasia setifer*, 청베도라치과, 한국