

First Reliable Record of the Maned Blenny *Scartella emarginata* (Perciformes: Blenniidae) from Jeju Island, Korea

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ABSTRACT Based on a single adult and two juvenile fishes collected from the coastal waters of Jeju Island, *Scartella emarginata* was redescribed as the first reliable record from Korea. The species is characterized by having a median fringe of cirri on head, short branched supraorbital cirrus, and by lacking canine teeth on both jaws.

Key words : description, *Scartella emarginata*, Jeju Island, first reliable record

The circumtropical blenniid genus *Scartella* Jordan, 1886, now comprising seven valid species worldwide as follows (Rangel *et al.*, 2004): *S. cristata* (Linnaeus, 1758), *S. nuchifilis* (Valenciennes in Cuvier and Valenciennes, 1836), *S. emarginata* (Günther, 1861), *S. tongana* (Jordan and Seale, 1906), *S. springeri* (Bauchot, 1967), *S. caboverdiana* Bath, 1990, and *S. poiti* Rangel, Gasparini and Guimarães, 2004. *S. emarginata* and *S. tongana* of them have been recognized from the Indo-Pacific (Shen *et al.*, 1986; Springer, 1986; Bath, 1996; Aizawa, 2002), although the validity of the latter is still controversy (Bath, 1996).

While investigating coastal fishes of Jeju Island, Korea, we collected a single adult and two juveniles of *Scartella emarginata* from the coastal waters of the island. Although it has been already reported that the larval and juvenile fishes of the species occur from the southern coastal waters of Korea (Cha and Park, 1994; Han and Hwang, 2003), no report of adult fishes of *S. emarginata* was made from Korean waters yet.

Thus, we describe *S. emarginata* as the first reliable record from Korea on the basis of them. Counts and measurements generally follow those of Hubbs and Lagler (1958), and the vouchers are deposited in the National Institute of Biological Resources (NIBR-P), Korea.

Genus *Scartella* Jordan, 1886

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

Scartella Jordan, 1886: 50 (type species: *Blennius micro-*

stomus Poey, 1860).

Scartella emarginata (Günther, 1861)

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

(Fig. 1; Table 1)

Blennius emarginatus Günther, 1861: 224 (type locality: Pakistan according to Randall, 1995).

Scartella cristata: Yoshino, 1984: 283 (Wakayama, Kochi, Japan); Cha and Park, 1994: 67 (Gwangyang Bay, Korea); Han and Hwang, 2003: 53 (Gwangyang Bay, Gamak Bay, Dolsan Isl., Korea).

Scartella emarginata: Springer, 1986: 754; Shen *et al.*, 1986: 6 (Taiwan); Aizawa, 2002: 1091, 1592 (Japan).

Materials examined. NIBR-P0000005311, formerly MRIC (Marine and Environmental Research Institute, Cheju National University, Korea) 1336, 73.0 mm in standard length (SL), Gimnyeong-ri, Gujwa-eup, Jeju-si, Jeju-do, Korea, 4 September 2003, collected by B. J. Kim and H. Endo; NIBR-P0000005312, formerly MRIC 4774-4775, 2 specimens, 19.4~22.2 mm SL, Haye-dong, Seogwipo-si, Jeju-do, Korea, 25 October 2006, collected by B. J. Kim, hand net.

Description. Dorsal fin rays XII, 14; anal fin rays II, 15~16; pectoral fin rays 13~14; pelvic fin rays I, 3; branched caudal fin rays 9; upper jaw teeth 36; lower jaw teeth 36; vertebrae 32. Proportion as % SL of adult is given first, followed by those of juveniles in parentheses: head length 27.4 (28.8~30.9); snout length 11.2 (9.8~9.9); eye diameter 5.9 (7.7~8.6); interorbital width 2.7 (2.7~3.1); upper jaw length 11.1 (9.8~10.4); body depth 26.6 (23.7~26.6); snout to origin of dorsal

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Fig. 1. *Scartella emarginata* (above: adult, NIBR-P0000005311, 73.0 mm SL; below: juvenile, NIBR-P0000005312, 22.2 mm SL), from Jeju Island, Korea.

fin 22.3 (25.2~26.8); snout to origin of pelvic fin 22.3 (19.6~19.8); snout to origin of anal fin 55.9 (52.6~53.2); caudal peduncle length 12.6 (11.3~12.4); caudal peduncle depth 9.7 (9.9~10.3); length of dorsal fin base 79.3 (68.6~71.2); length of anal fin base 36.7 (37.1~40.5); pectoral fin length 27.0 (22.1~23.7); pelvic fin length 15.5 (18.0~19.8); caudal fin length 18.6 (19.1~20.7).

Body rather stout and compressed posteriorly. Head short, the anterior profile nearly straight. Eye large, interorbital space nearly flat. Mouth moderate and subterminal, posterior tip of maxilla beyond a vertical at center of pupil. Teeth on both jaws small curved; no posterior canines. Small multifid cirrus on each nasal and eye. A row of 10 (2~3 in juveniles) short, slender cirri along dorsal midline on occipital region. Gill membranes broadly united, free from isthmus. Base of median fins long; dorsal fin membrane connected posteriorly to caudal peduncle. Pectoral fin relatively large. Caudal fin round. Head and body fully naked.

Color of adult specimen when fresh. Body pale yellowish brown with many small dark reddish dots (some white) and five reddish brown vertical bands, dorsal tips of each band extended to basal region of dorsal fin. Ventral portion of head and abdomen pale grey without any distinct bands or markings. Dorsal fin pale yellowish with a black spot on fin membrane between first and

Table 1. Comparison of morphological characters of *Scartella emarginata*. TL, total length

	Present study 19.4~73.0 mm SL (n=3)	Günther (1861) 33.0 mm TL (n=1)	Shen <i>et al.</i> (1986) 28.0~61.0 mm SL (n=3)
Dorsal fin rays	XII, 14	XII, 14	XII, 15
Anal fin rays	II, 15~16	II, 17	II, 16
Pectoral fin rays	13~14	-	14
Pelvic fin rays	I, 3	-	I, 3
Nasal cirrus	palmate	a fringed tentacle	palmate
Supraorbital cirrus	palmate	four or five short filaments	palmate
Nuchal cirri	2~10	A longitudinal series of filaments	3~11

second spines, and small reddish dots scattered. Pectoral fin yellowish brown with many small reddish spots scattered on basal region, lower several fin rays reddish. Anal fin pale reddish brown basally and darkish distally. Pectoral fin darkish without any markings. Caudal fin yellowish with 3~4 brownish crescentic stripes.

Distribution. Known from Indo-West Pacific: Japan, Taiwan, and Korea (Yoshino, 1984; Shen *et al.*, 1986; Randall, 1995; Aizawa, 2002; present study). From the Korean waters, the larvae and juveniles of *Scartella emarginata* occur in the South Sea of Korea (Cha and

Park, 1994; Han and Hwang, 2003), including coastal waters of Jeju Island (present study).

Remarks. The present specimens of *Scartella* collected from the coastal waters of Jeju Island, Korea agree well with the original description of *S. emarginata* (Günther, 1861) in the numbers of dorsal and anal fin rays and states of cirrus on head as well as general body appearance (Table 1), except for the state of tooth on upper jaw, although the detail comparison with the type specimen of the species was not made. According to the original description, there are small curved teeth on lower jaw only in the type specimen of *Blenniinus emarginatus* Günther, 1861, whereas many of small curved teeth are present on both jaws of the present specimens. Further examination for clarifying this difference is needed.

Shen *et al.* (1986) have described *S. emarginatus* (= *S. emarginata*) from the coastal waters of Taiwan, and used “*emarginatus*” instead of “*crinata*” based on the private communication with Bath, i.e., *Scartella* species from Taiwan differs from *S. crinata* from the Atlantic Ocean by having small black dots on body. This opinion was followed by Aizawa (2002) who identified the Japanese species of *Scartella* as *S. emarginata*. In the present study, we also identified the present *Scartella* specimens from Jeju Island, Korea as *S. emarginata* following the opinion of Shen *et al.* (1986), because we could not find out any remarkable differences between the characteristics of these Korean specimens and descriptions of *S. emarginatus* from Taiwan by Shen *et al.* (1986).

Although the larvae and juveniles of the species have recorded from the South Sea of Korea (Cha and Park, 1994; Han and Hwang, 2003), it has not been reported the occurrence of adult fish of *Scartella emarginata* to date. Thus, the present study describing adult fish of *S. emarginata* represents the first reliable record of the species from Korea. Especially, Han and Hwang (2003) were described the development of larvae and juveniles of the species with range of 2.5~15.9 mm in SL, and provided a new Korean name, “Gal-gi-be-do-ra-chi” under the name of “*Scartella crinata*”. Instead of providing a new Korean name for the species in this study, the Korean name of *S. emarginata* followed that of Han and Hwang (2003).

Scartella emarginata is similar to *Parablennius yatabei* (Jordan and Snyder, 1900) that is one of the common blenny species inhabited in the coastal waters of Jeju Island. The former, however, is easily differentiated from the latter in having a fringe of median cirri on occipital region (vs. absent in *P. yatabei*), absence of posterior canine teeth on upper jaw (vs. present) (Aizawa, 2002).

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제주도에서 채집된 청베도라치과(Blenniidae) 갈기베도라치 *Scartella emarginata*

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요 약 : 지금까지 국내에서는 자치어만 기록된 청베도라치과 갈기베도라치 (*Scartella emarginata*)의 성체 1개체와 유어 2개체가 제주도에서 처음으로 채집되었기에 이들을 근거로 본 종의 형태적 특징을 상세하게 기재하였다. 갈기베도라치는 두부 정중선을 따라 부채살 모양의 피변이 있고, 눈의 상부와 비공에 분지된 1개의 피변이 있으며, 양턱에 견치가 없는 특징이 있다.

찾아보기 낱말 : 기재, *Scartella emarginata*, 청베도라치과, 제주도