

First Record of a Bandfish, *Acanthocephala indica* (Cepolidae: Perciformes) from Korea

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ABSTRACT A single specimen (220.4 mm SL) of the bandfish *Acanthocephala indica* was collected near Maemul Island, off southeastern Korea. This species is characterized by having a serrated posterior margin of preopercle and a black blotch on anterior part of dorsal fin. It differs from two other species, *A. limbata* and *A. krusensternii*, in having a deeper body, 88 dorsal fin rays, and 101 anal fin rays. Our specimen of *A. indica* is the first record of the species from Korea, for which we propose the new Korean name "Nam-bang-hong-gal-chi."

Key words : *Acanthocephala indica*, Cepolidae, first record

The family Cepolidae comprises two subfamilies, Cepolinae and Owstoniinae, four genera and about 19 species in the eastern Atlantic and Indo-West Pacific (including New Zealand) (Nelson, 2006). The Cepolinae is composed of two genera, *Acanthocephala* Bleeker, 1874 and *Cepola* Linnaeus, 1764, based on presence or absence of preopercular spines (Smith-Vaniz, 2001).

This family was firstly reviewed by Jordan and Fowler (1903) in Japan, recognizing three species, *Cepola schlegelii* Bleeker, 1854, *A. krusensternii* (Temminck and Schlegel, 1845) and *A. limbata* (Valenciennes in Cuvier and Valenciennes, 1835). In the genus *Acanthocephala*, three species are known from Japan (Nakabo, 2002a), and two species, *A. krusensternii* and *A. limbata* have been reported from Korea at present (Kim *et al.*, 2005).

During a bottom trawl conducted survey near Maemul Island, off east-southern Korea, we collected a single specimen of *Acanthocephala indica* (Day, 1888), which represents an unrecorded species from the Korean waters (Fig. 1).

Methods of counts and measurements followed those of Nakabo (2002b). The number of vertebrae, dorsal and anal fin rays were counted from radiographs. The examined specimen is deposited at Ichthyology Laboratory in Pukyong National University (PKU) in Korea.

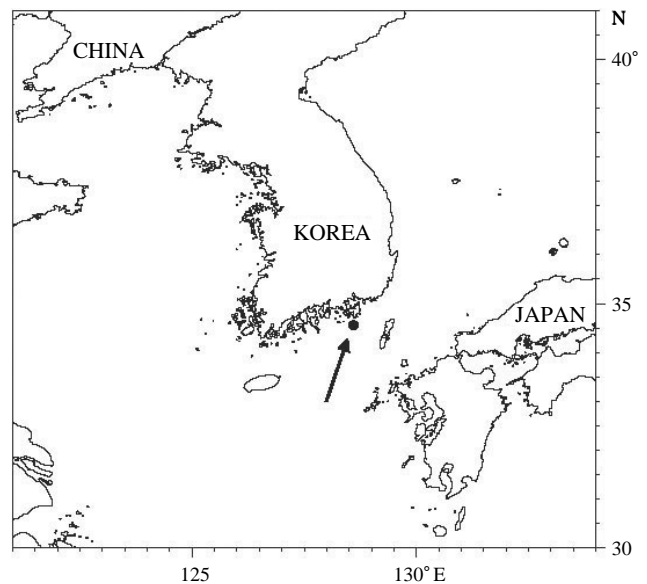


Fig. 1. Map showing the sampling area of *Acanthocephala indica* near Maemul Island, off east-southern Korea.

Acanthocephala indica (Day, 1888)
(New Korean name: Nam-bang-hong-gal-chi)
(Fig. 2; Table 1)

Cepola indica Day, 1888: 796 (Madras, India).

Acanthocephala indica: Araga in Masuda *et al.*, 1984:

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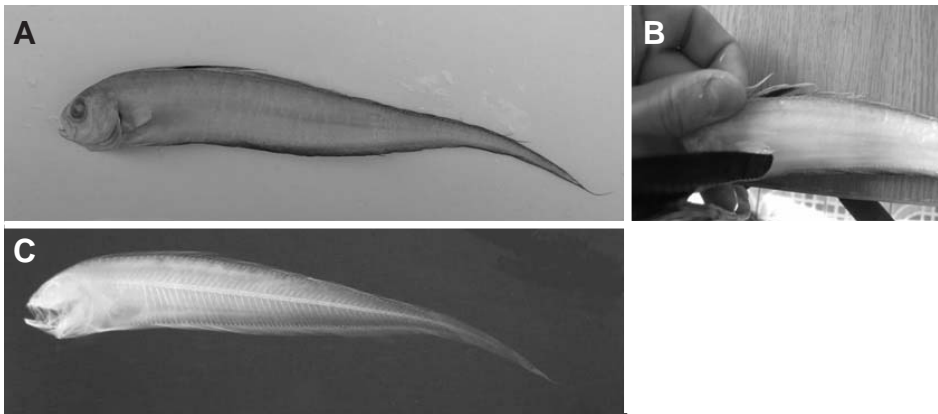


Fig. 2. *Acanthocephala indica* (Day), PKU 25, 220.4 mm SL, near Maemul Island, Korea. (A) Lateral view; (B) Black blotch between 9th and 13th dorsal fin rays; (C) X-ray photograph.

Table 1. Comparison of meristic characters for *Acanthocephala indica*

	Present study	Day (1888)	Smith-Vaniz (1986)	Nakabo (2002)
Number of specimens	1	1	—	—
Total length (mm)	245.0	200.3	—	—
Standard length (mm)	220.4	—	—	—
Counts				
Dorsal fin rays	88	ca. 90	82~89	ca. 85
Anal fin rays	101	ca. 90	91~102	ca. 100
Pectoral fin rays	17	17	—	17
Pelvic fin rays	I, 5	—	—	—
Gill rakers	16+33	—	14-16+32-36	—
Branchiostegal rays	6	6	—	—
Vertebrae	12+66	—	12+60-66	—

201, pl. 192-D (Japan); Zhang, 1983: 74 (South China Sea); Smith-Vaniz in Smith and Heemstra, 1986: 728 (Arabian Sea); Shen *et al.*, 1993: 437, pl. 137-1 (Taiwan); Okamura in Okamura and Amaoka, 1997: 432 (Japan); Shinohara *et al.*, 2001: 327 (listed, Tosa Bay, Japan); Randall and Lim, 2002: 915 (South China Sea); Nakabo in Nakabo, 2002a: 915 (Key, description, Japan).

Material examined. PKU 25, 1 specimen, 220.4 mm in standard length (SL), near Maemul Island, Korea, 40 m depth, 17 September 2007, bottom trawl, collected by J.H. Ryu.

Description. Meristic characters are shown in Table 1.

Measurements in percentage of SL: Body depth 13.7; body width 5.7; head length 14.4; postorbital length 6.8; snout length 3.3; eye diameter 4.4; upper jaw length 6.0; interorbital width 3.2; suborbital width 2.8; predorsal length 11.3; prepectoral length 14.4; prepelvic length 13.8; preanal length 17.2; preanus length 16.6; pectoral fin length 8.8; pelvic fin length 7.8; length of longest dorsal fin ray 8.8; length of longest dorsal fin ray 8.1.

Body elongated, highly compressed and gradually tapering to caudal fin; snout short and blunt, its length shorter than eye diameter; eye large and located dorsally; interorbital space flatten; mouth large and oblique,

both jaws equally protruding; preopercular margin serrated with six spines; upper jaw reach to the middle of eye; a single row of recurved canine teeth on both jaws, anterior teeth slightly bigger than lateral ones; two nostrils, posterior nostril a simple pore, located just anterior edge of eye, slightly bigger than anterior one; gill rakers long and slender; dorsal and anal fin bases long and confluent with caudal fin; posterior margin of pectoral fin rounded, all rays branched; pelvic fin inserted slightly anterior to pectoral fin; outermost ray of pelvic fin longest; anus located just before origin of anal fin; lateral line ascending from the upper part of gill opening, then running very close to dorsal fin base; caudal fin pointed; scales minute, ctenoid in cheek and body.

Color of preserved specimen. Body and head overall pale beige, bases of dorsal and anal fins more darker; interorbital space dark brown; anterior part of 9th to 13th dorsal fin rays with a black blotch; dorsal and anal fins blackish; pectoral fin translucent; pelvic fin translucent with many melanophores.

Distribution. Indo-western Pacific: Korea (Maemul Island, present study), Japan (Nakabo, 2002), China (Randall and Lim, 2000), Taiwan (Shen *et al.*, 1993), India (Day, 1888), and South Africa (Smith-Vaniz, 1986).

Remarks. Meristic characters of the present specimen agreed well with those of the previous descriptions of

Acanthocephala indica (Day, 1888), including the original description (Table 1). *A. indica* is easily distinguished from *A. limbata* by the number of dorsal fin rays (88 in the former vs. 102~104 in the latter) and body depth (7.3 vs. 13 in SL). *A. indica* also differs from *A. krusensternii* by a black blotch on anterior part of dorsal fin (vs. absent in the latter), the number of dorsal fin rays (88 vs. 78~82), anal fin rays (101 vs. 76~82), pectoral fin rays (17 vs. 19), and body depth (7.3 vs. about 8 in SL) (Nakabo, 2002b). We proposed the new Korean name, “Nam-bang-hong-gal-chi”, for this species.

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한국산 농어목 (Perciformes) 홍갈치과 (Cepolidae) 어류 1 미기록종, *Acanthocephala indica*

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요 약 : 농어목 홍갈치과에 속하는 *Acanthocephala indica* 1개체 (체장 220.4 mm)가 경남 거제도 남부 매물도 주변해역에서 채집되었다. 본종은 전새개골 후단에 거치 모양의 가시가 있고, 등지느러미 전방에 1개의 검은 반점을 가진다. 또한, 체고가 다소 높고 등지느러미 연조수가 88개, 뒷지느러미 연조수가 101개인 점에서 이미 알려진 먹점홍갈치 (*A. limbata*)와 점줄홍갈치 (*A. krusensternii*)와 잘 구분된다. 본종은 국내에서 처음으로 보고되는 종으로서, 신한국명을 “남방홍갈치”로 제안한다.

찾아보기 낱말 : *Acanthocephala indica*, 남방홍갈치, 홍갈치과, 한국미기록종