

A New Record of the Carangid Fish, *Decapterus tabl* (Pisces, Carangid) from Korea

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Carangid fish, *Decapterus tabl* Berry collected in Pusan, Korea was recorded for the first time from Korea. It was differentiated from the two other species of *Decapterus* by the numbers of scales in the curved lateral line, scutes in the straight lateral line, and total scales and scutes in Korea.

This specimen of *Decapterus tabl* is recorded from Koera for the first time in this paper. "Honggi-ga-ra-ji" is proposed as Korean name of this species.

KEY WORDS: *Decapterus tabl*, carangid fish, taxonomy, Korea

The carangid genus *Decapterus* occurs in most tropical and subtropical marine waters of the world. Several of the species, at least, occur in large pelagic schools.

These are generally found in inshore waters, although the schools of young, especially, may occur in oceanic areas (Berry, 1968).

The genus *Decapterus* was established by Bleeker in 1851 with the type species *Caranx kurra* Cuvier, 1833. Species of the genus were dealt with by Nichols (1911, 1936, 1951) and defined on the basis of its curved lateral line, body depth and gill rakers. Until now, two species of the genus *Decapterus* (*Decapterus muroadsi* and *Decapterus maruadsi*) were reported from the waters of Korea. In this study, *Decapterus tabl* is redescribed and figured as new record in Korea.

Materials and Methods

Collection was made at Pusan, Korea in April, 1993 and identified as unrecord species, *Decapterus tabl* Berry. The methods of taking accurate data are frequently dependent on knowledge of morphology of the characters. Specimens were measured with 1/20 mm caliper

to the nearest 10th of a millimeter. The methods of counts and measurement followed Berry (1968). The comparison of this specimen is made in the original description and additional morphological informations (Berry, 1968; Nekrasov, 1969). Vertebral and fin ray counts were taken from the radiographs by soft x-ray (Hitex, Japan).

Results

***Decapterus tabl* Berry, 1968 (New Korean name: Honggi-ga-ra-ji, 홍기가라지) (Fig. 1)**

Caranx punctatus Cuvier, 1829. 208; replacement name for Mitchill's "*Scomber hippos*"; New York Mkt.

Caranx sanctaehelenae Cuvier, 1833. 37; in Cuvier and Valenciennes.

Decapterus punctatus (non Cuvier), 1952. 87; Ginsburg (in part; "the New Smyrna variant"); Berry in Anderson and Gehringer, 1959. 64 (part of stomach contents of *Coryphaena hippurus*).

Material examined: one specimen, 180.44 mm in standard length (SL), Pusan, April, 1993.

Diagnosis: For diagnostic characters of *Decapterus tabl* see Tables 1 and 2. D.VIII-I,

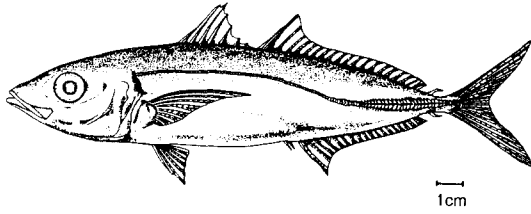


Fig. 1. *Decapterus tabl*, 180.44 mm SL, Pusan, Korea.

30+1; A.II-I, 23+1; P₁, 21; Scutes, 37; Branchiostegal ray, 7; vertebrae, 10+14; long curved lateral line 66 scales (Figs. 2 and 3); Gill Rakers, 10+31 (Fig. 4).

Description: Lateral line relatively long curved than *Decapterus maruadsi* (Fig. 2), gill chamber to show two small papillae on cleithrum. Lateral line pored scales are circularity; pored scutes triangular form (Fig. 3). Scales covered with head part, extending forward on eye (Fig. 4). All teeth small, short, conical, granular or deciduous. Upper jaw with single series of minute teeth. tongue teeth usually in a narrow band, slightly broader

posteriorly; band or row mainly on posterior part of tongue. Margin of opercular membrane minutely serrated (Fig. 5).

Coloration: Freshed specimen was blue to greenish above, silvery below; top of head dark; most of straight part of lateral line bright silver, especially scutes; first dorsal fin with spines dark, membranes clear; caudal fin bright red and tip of dorsal rays reddish; pelvic fins apparently tinged with red.

Pigmentation: Specimen preserved 15% formaline. Dorsal part of snout and head and dorsal third to half of body dark on extending down slightly onto operculum and preoperculum; a dark opercular spot; tips of jaws, isthmus, branchiostegal membranes, and inner surface of operculum dusky; inner surface of lower jaw and dorsal surface of tongue dark to dusky. Rays of spinous and soft dorsal fins dusky, rays of other fins less dusky, especially pelvic fin rays; interradiol membranes mostly clear.

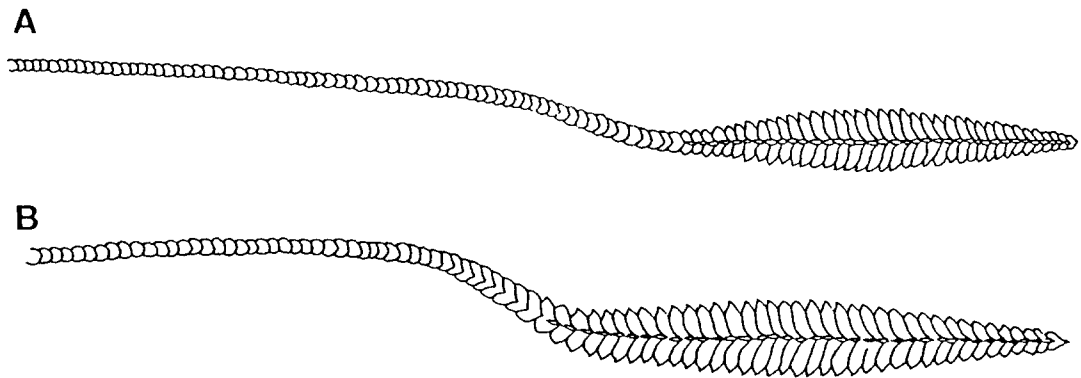
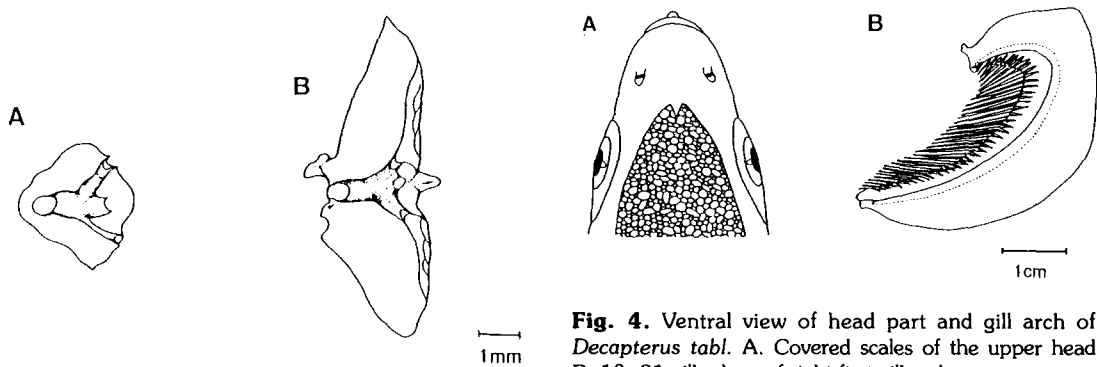
Distribution: Originally believed to be restricted to the Atlantic Ocean; now known from Keyna,

Table 1. Comparison of body proportions (in percent of standard length) between *Decapterus tabl* and *Decapterus punctatus*

Characters	Present study	Berry (1968)	
		<i>Decapterus tabl</i>	<i>Decapterus punctatus</i>
Number of Specimen	1	50	208
Standard length (mm)	180.44	156-199	140-183
% to Standard length			
Total length	115.0	113-115	116-117
Fork length	106.0	104-106	106-108
Head length	27.6	27.5-29.0	25.5-27.5
Eye diameter	6.8	6.5-7.4	7.1-7.9
Snout length	10.0	8.3-10.4	7.3-9.1
Postorbital head	16.7	11.8-13.0	10.2-12.3
Upper jaw	9.2	9.2-9.9	8.3-8.6
Maxillary depth	3.1	2.8-3.4	2.9-3.2
Depth D1 to D2	9.2	17.0-20.2	18.8-22.0
Depth D2 to A1	24.1	16.5-20.0	19.5-23.1
Depth max. vert	22.8	16.7-19.8	18.8-23.0
Pectoral length	24.3	16.4-18.1	18.2-23.5
Pelvic length	13.0	10.5-12.1	11.0-13.0
Dorsal spine	14.9	12.4-13.9	12.4-15.6
Dorsal sofray	10.4	10.2-11.2	11.5-12.4
Anal spine	4.3	2.9-3.1	4.2-4.6
Anal sofray	—	8.8-9.5	10.1-11.3

Table 2. Meristic characters of *Decapterus tabl* and *Decapterus punctatus*

Meristic Characters	Present study	Berry (1968)	
		<i>Decapterus tabl</i>	<i>Decapterus punctatus</i>
Number of Specimen	1	50	208
Dorsal fin rays VIII-I, 30+1	VIII-I, 32+1	VIII-I, 32+1	
Anal fin rays	VII-I, 23+1	VII-I, 25+1	VII-I, 28+1
Pectoral fin rays	21	21	19
Pelvic fin rays	1, 5	-	-
Gillrakers upper limb	11	11	13
lower limb	31	32	37
Branchiostegal rays	7	-	-
lateral-line scutes	37	39	41

**Fig. 2.** Contour of the lateral lines and relative size of their scales and scutes. A. *Decapterus tabl*; B. *Decapterus maruadsi***Fig. 3.** Lateral line pored scale and scute of *Decapterus tabl*. A. 12th scale of scales; B. 26th scute of scutes**Fig. 4.** Ventral view of head part and gill arch of *Decapterus tabl*. A. Covered scales of the upper head B. 10+31 gill rakers of right first gill arch

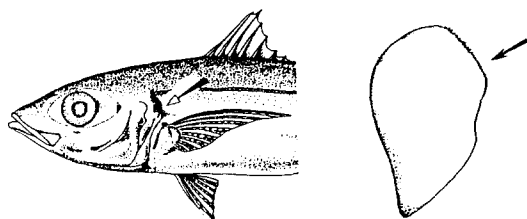


Fig. 5. Margin of opercular membrane of *Decapterus tabl*. The arrow indicate serrated opercular membrane.

Japan, Indonesia, Australia and Hawaii; in its adult stage a more offshore and deeper living species than *punctatus* or *macrellus* (Berry, 1968).

Etymology: The specific name of *tabl* is given in honor of Dr. Berry; An "Arbitrary combination of letters" (International Code of Zoological Nomenclature, Appendix D.V.), *TABL*-The Tropical Atlantic Biological Laboratory of the Bureau of Commercial Fisheries established on Virginia Key, Miami, Florida, October 1965- to be treated as an indeclinable noun. The new Korean species name is "Hong-gi-ga-ra-ji"; according to the reddish color of caudal fin when alive; hong-gi means a reddish caudal; ga-ra-ji is Korean name of genus *Decapterus*.

Remark: Recent literatures (Ginsburg, 1952; Briggs, 1958) have defined only two species of *Decapterus* from the western Atlantic-*Decapterus punctatus* Agassiz and *Decapteus macarellus* (Cuvier in Cuvier and Valenciennes, 1883). The name of these two species have been confused in nomenclatorial using. And Berry was identified *Decapterus punctatus* as *Decapterus tabl* based on such characters as the long curved lateral line, scale, scute numbers, gill rakers, pectoral softrays and vertebrae (Berry, 1968).

Most characters of the present specimen agree with the original discription. *Decapterus table* by

Berry (1968) is proposed "Honggi-ga-ra-ji" as Korean name. Especially this species is characterized by curved lateral line scutes, gill rakers and reddish caudal fin.

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(Accepted February 18, 1994)

한국산 전갱이과 어류 1 未記錄種, *Decapterus tabl*

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1993년 4월 부산시 부산 공동어시장에서 채집된 전갱이과 어류 1개체가 등지느러미와 뒷지느러미에 1개의 작은 토막지느러미가 있는 점에서 전갱이과 Caranginae에 속하는 종으로, 가라지屬 *Decapterus*의 한국 未記錄種인 홍기가라지(국명신칭) *Decapterus tabl*로 동정되었기에 이를 기재하였다. 본종은 상대적으로 측선이 완만한 경사를 이루고, 측선의 경사 부위에 모비늘이 없으며, 측선 모비늘수가 34-48개이고, 두정부의 비늘은 안구의 중앙 뒤쪽까지 분포하고 있다. 또한 복추골에 2개의 側突起孔 및 꼬리지느러미가 赤色인점 등이 동일 屬의 다른 種들과 잘 구분된다.