

First Record of the Green Jobfish, *Aprion virescens* (Perciformes: Lutjanidae) from Korea

By Joon Sang Kim, Byung Yeob Kim¹ and Choon Bok Song^{2,*}

Fisheries Resources Management Division, National Fisheries Research and Development Institute, Busan 618-756, Korea

¹Jeju Project Station of Korea Fisheries Resources Agency, Jeju 695-929, Korea

²College of Ocean Sciences, Jeju National University, Jeju 690-756, Korea

ABSTRACT This is the first report of *Aprion virescens*, belonging to the family Lutjanidae, collected in Korea. The specimen (151.4 mm in standard length) was caught by the gill net in the coastal waters of Jeju Island on 30 October, 2009. This species is characterized by having a deep vertical groove in front of eye, very short pectoral fin almost equal to snout length, and four black spots on dorsal fin. We propose a new Korean name, "Nok-saek-tung-dom-sok" and "Nok-saek-tung-dom" for the genus and species, respectively.

Key words : Lutjanidae, *Aprion virescens*, first record, Jeju Island, Korea

INTRODUCTION

There are 17 genera with about 105 species of jobfishes or snappers (Family Lutjanidae) in the world (Nelson, 2006) and 4 genera with 10 species in Korea (Kim *et al.*, 2005; Kim *et al.*, 2007). They generally inhabit near the bottom of tropical and subtropical seas, usually no deeper than 100 m. Among them, the genus *Aprion* comprises only one species worldwide and is morphologically characterized by having a deep groove in front of eye and a short pectoral fin (Shimada, 2002). The green jobfish (*Aprion virescens*) is widely distributed throughout the Indo-Pacific and is mainly caught with trolled lures, hand lines, bottom long lines and bottom trawls (Allen, 1984).

Recently, one specimen of *A. virescens* was collected by gill net in the southern coastal waters of Jeju Island, Korea. We described the morphological characters of *A. virescens* as an addition to the list of Korean fishes.

A single specimen of *A. virescens* was collected from Daepo-ri, Jeju Island, Korea, on 30 October 2009. The specimen was preserved in 10% formalin for a week and then preserved in 70% ethanol. Counts and measurements were followed by the method of Hubbs and Lagler (1964). The examined specimen was deposited at the Fish Genetics and Breeding Laboratory, Jeju National University (JNU), Korea.

Genus *Aprion* Valenciennes, 1830

(New Korean genus name: Nok-saek-tung-dom-sok)
Aprion Valenciennes in Cuvier and Valenciennes, 1830: 544 (type species: *Aprion virescens* Valenciennes, 1830).

Aprion virescens Valenciennes, 1830

(New Korean name: Nok-saek-tung-dom)
(Fig. 1; Table 1)

Aprion virescens Valenciennes in Cuvier and Valenciennes, 1830: 544 (Seychelles); Lee, 1987: 293 (Taiwan); Goren and Dor, 1994: 36 (Red Sea); Shimada, 2002: 828 (Japan); 1984: 167 (Japan); Randall *et al.*, 2004: 16 (Tonga).

Material examined. JNU 20091030, one specimen, 151.4 mm in standard length (SL), Daepo-ri, Seowgiposi, Jeju Island, Korea, with gill net, 30 October 2009.

Description. Counts for the present specimen are shown in Table 1. Dorsal fin rays X, 11; anal fin rays III, 8; pectoral fin rays 18; pelvic fin rays I, 5; caudal fin rays 21; lateral line scales 50; first gill rakers 6+14.

Measurements are presented as a percentage in standard length (SL): body depth 26.9; head length 33.0; upper jaw length 10.6; snout length 11.6; interorbital width 10.2; eye diameter 7.4; predorsal fin length 12.2; prepectoral fin length 31.6; preanal fin length 65.3; preventral fin length 31.9; dorsal fin base length 44.5; pectoral fin base length 4.6; anal fin base length 14.2; pelvic fin base

*Corresponding author: Choon Bok Song Tel: 82-64-754-3471,
Fax: 82-64-756-3493, E-mail: cbsong@jejunu.ac.kr



Fig. 1. *Aprion virescens* Valenciennes, JNU 20091030, 151.4 mm SL, gill net, Jeju Island, Korea.

Table 1. Comparison of morphological characters of *Aprion virescens*

Morphological characters	Present study	Cuvier and Valenciennes (1830)	Lee (1987)
Standard length (mm)	151.4 (n=1)	none (n=7)	364.0 (n=1)
Counts			
Dorsal fin rays	X, 11	X, 11	X, 11
Pectoral fin rays	18	18	18
Pelvic fin rays	I, 5	I, 5	–
Anal fin rays	III, 8	III, 8	III, 8
Gill rakers	6+14	–	4+13
Pores in lateral line	50	–	47

length 3.6; length of longest dorsal fin ray 10.0; length of longest pectoral fin ray 12.2; length of longest anal fin ray 9.4. Measurements are presented as a percentage in head length (HL): snout length 35.0; upper jaw length 32.2; interorbital width 31.0; eye diameter 22.4.

Body typical fusiform and anterior profile of head curved gently. Eye entered somewhat deeply and located above head; posterior margin of maxilla slightly reaching anterior margin of eye; teeth in both jaw single arrangement, with three strong canines anteriorly and roof of mouth present on vomer and palatines; scaleless in anterior part of head, between eye and mouth; a few ctenoid scales on cheek and preopercle; pectoral fin very short, almost equal to snout length; soft parts of posterior dorsal and anal fins towards back and no scales.

Color when fresh. Body overall dark blue, but greenish on back; head light brown with dark blue on above; dorsal fin dark yellow with four black spots; pectoral and ventral fin light yellow with brown margin; anal fin white; caudal fin yellowish with slightly reddish on lower lobe margin.

Color after preservation. Dark brown dorsally, white brown ventrally; dorsal fin and ventral fin dark gray.

Distribution. Widely known from East Africa to the

Central Pacific Ocean: East Africa to Hawaii (Allen, 1985; Goren and Dor, 1994), from south Australia to south Japan (Allen, 1985; Shimada, 2002; Randall *et al.*, 2004), Taiwan (Lee, 1987) and Korea (Jeju Island, present study).

Remarks. *Aprion virescens* is easily distinguished from related species by having a deep vertical groove in front of eye, very short stubby pectoral fin almost equal snout length, and 4~5 black dots on dorsal fin membranes (Allen, 1984; Lee, 1987). Although the gill rakers and lateral lines of our specimen were somewhat different from previous study (Lee, 1987), meristic counts of the present specimen almost agree well with previous descriptions of *A. virescens* (Table 1). Furthermore, Akazaki (1984) and Shimada (2002) reported that *A. virescens* has 48~50 lateral line pores and 5~9+14~15 gill rakers.

On the hand, *A. virescens* is not comparable to similar species due to the only in genus *Aprion*, but the species similar to *Aphareus furca* and *Aphareus rutilans* in Japan, but the former is easily distinguished from the others by having posterior end of maxilla not reaching middle of eyes, short pectoral fin and groove before eye (Shimada, 2002). We propose a new Korean name, “Nok-saek-

tung-dom”, for this species.

ACKNOWLEDGEMENTS

This work was funded by a grant from the National Fisheries Research & Development Institute (RP-2012-FR-001).

REFERENCES

- Akazaki, M. 1984. Family Lutjanidae. In: Masuda, H., K. Amaoka, C. Araga, T. Uyeno and T. Yoshino (eds.), the fishes of the Japanese archipelago. Tokai. Univ. Press, Tokyo, pp. 166-171.
- Allen, G.R. 1984. Lutjanidae. In: Fischer, W. and G. Bianchi (eds.), FAO species identification sheets for fishery purposes, Western Indian Ocean (Fishing Area 51), Vol. 3. FAO, Rome.
- Allen, G.R. 1985. FAO species catalogue. Vol. 6. Snappers of the world. An annotated and illustrated catalogue of lutjanid species known to date. FAO Fish Synop. No. 125, 6: 1-208.
- Cuvier, M.B. and M. Valenciennes. 1830. Histoire naturelle des poissons. Tome Sixième. Livre sixième. Partie I. Des Sparoïdes; Partie II. Des Ménides. Histoire naturelle des poissons. 6: i-xxiv+6+1-559.
- Goren, M. and M. Dor. 1994. An updated checklist of the fishes of the Red Sea. CLOFRES II. The Israel academy of sciences and humanities, Jerusalem. An updated checklist of the fishes of the Red Sea. CLOFRES II, i-xii+1-120.
- Hubbs, C.L. and K.F. Lagler. 1964. Fishes of the Great Lake Region. Bull. Granbrook Inst. Sci., 26: 19-27.
- Kim, B.J., K. Nakaya and H. Endo. 2007. Three juvenile snappers of the genus *Lutjanus* (Perciformes: Lutjanidae) collected from Jeju Island, Korea. J. Kor. Fish. Soc. Tech., 10: 68-73.
- Kim, I.S., Y. Choi, C.L. Lee, Y.J. Lee, B.J. Kim and J.H. Kim. 2005. Illustrated book of Korean fish. Kyo-Hak Publishing Co Ltd, Seoul, pp. 320-322.
- Lee, S.C. 1987. Fishes of the family Lutjanidae of Taiwan. Bull. Inst. Zool., Academia Sinica, 26: 279-303.
- Nelson, J.S. 2006. Fishes of the World. 4th ed. John Wiley and Sons, Inc., Hoboken, New Jersey, 601pp.
- Randall, J.E., J.T. Williams, D.G. Smith, M. Kulbicki, G. Mou Tham, P. Labrosse, M. Kronen, E. Clua and B.S. Mann. 2004. Checklist of the shore and epipelagic fishes of Tonga. Atoll Research Bulletin, No. 502, ii+1-35.
- Shimada, K. 2002. Lutjanidae. In: Nakabo, T. (ed.), Fishes of Japan with pictorial keys to the species, English edition. Tokai Univ. Press, Tokyo, pp. 819-832.

한국산 통돚과 어류 1미기록종, *Aprion virescens*

김준상 · 김병엽¹ · 송춘복²

국립수산과학원 자원관리과, ¹한국수산자원사업단 제주사업소, ²제주대학교 해양과학대학

요 약 : 통돚과에 속하는 *Aprion virescens* 1개체 (표준체장 151.4 mm)가 제주연안에서 자망으로 처음 채집되었다. 이 종은 눈 앞에 세로로 깊게 파인 홈이 있고, 가슴지느러미는 매우 짧아 주둥이 길이와 비슷하며 등지느러미에 선명한 4개의 점이 존재한다. 이 미기록종의 속명과 국명은 “녹색통돚속”, “녹색통돚”이라고 각각 제안하였다.

찾아보기 낱말 : 통돚과, 녹색통돚, 미기록종, 제주도