Ichthyological note – *Note ichtyologique*

An additional specimen of a rare lanternbelly *Acropoma lecorneti* (Perciformes: Acropomatidae) from Vanuatu, South Pacific Ocean

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Résumé. – Un nouveau spécimen de l'espèce rare de maconde lumineux *Acropoma lecorneti* (Perciformes: Acropomatidae) des Vanuatu, océan Pacifique Sud.

Un unique spécimen de l'espèce rare de maconde lumineux, *Acropoma lecorneti* Fourmanoir, 1988, a été collecté aux Vanuatu à des profondeurs de 275-290 m. C'est le troisième spécimen capturé pour l'espèce et le premier pour la zone des Vanuatu, dans l'océan Pacifique Sud. Cette étude présente également de nouvelles données morphologiques pour *A. lecorneti*, basées sur le nouvel individu, en comparaison des autres individus connus pour cette espèce.

Key words. – Acropomatidae - *Acropoma lecorneti* - South Pacific - Vanuatu - First record.

A species of the lanternbelly (Perciformes: Acropomatidae) genus *Acropoma* Temminck & Schlegel, *Acropoma lecorneti* Fourmanoir, 1988, was originally described based on a single specimen collected off the west coast of New Caledonia. Since, only an additional specimen of the species from off Okinawa Island, Japan, has been known to date (Yamanoue and Toda, 2008). Recently, the first author found a single specimen of genus *Acropoma* from Vanuatu deposited in the collections of the Muséum national d'Histoire naturelle, Paris (MNHN) and it is identified as *A. lecorneti* by having an O-shaped luminous gland, which is a unique character among the genus (Yamanoue and Toda, 2008). In the present study, we report this specimen as third specimen and first record of the species from Vanuatu, with a comparison to the previous studies.

MATERIAL AND METHODS

Meristic and morphometric methods follow Hubbs and Lagler (1958) and Okamoto (2014). The condition of the luminous gland and the sex of the specimen were established by dissection of the abdomen on the right side. The specimens examined in the present study are deposited in the Kagoshima University Museum, Kagoshima, Japan (KAUM); Muséum national d'Histoire naturelle, Paris (MNHN); and National Museum of Nature and Science, Tsukuba, Japan (NSMT).

Material examined

Acropoma lecorneti, MNHN-IC-2008-1612, 141.9 mm SL, female, Santo 06 cruise, R/V *Alis*, st. At121, 15°38'42"S; 167°01'12"E, West of Malo Island, Vanuatu, western South Pacific, 275-290 m depth, 19 Oct. 2006.

Comparative material

Acropoma lecorneti, NSMT-P 75219, 221.0 mm SL, off Okinawa I., East China Sea, Japan, 29 Nov. 1987. *Acropoma japonicum*, KAUM–I. 89430, 64.0 mm SL, Uchinoura Bay, Kimotsuki, Kagoshima, Japan, 16°55'N, 131°04'49"E, 30-35 m, 10 May 2016. *Acropoma hanedai*, KAUM–I. 44831, 78.2 mm SL, off Tashi, Yilan, Taiwan, 500 m, 6 Jul. 2011.

Acropoma lecorneti Fourmanoir, 1988
[New English name: Lecornet's lanternbelly]

(Figs 1-2)

Acropoma lecorneti Fourmanoir, 1988: 259, fig. 1 and photo (original description, west coast of New Caledonia); Yamanoue and Toda, 2008: 199, figs 1-3 (off Okinawa I., Japan).

Diagnosis

A species of *Acropoma* is distinguished from its congeners by the following combination of characters: O-shaped luminous ground around anus (Fig. 1B); luminous-gland length 13.2-14.6; proximal radial of 1st anal-fin pterygiophore slender lacking trough or hollow; anus pale situated closer to pelvic-fin origin than to that

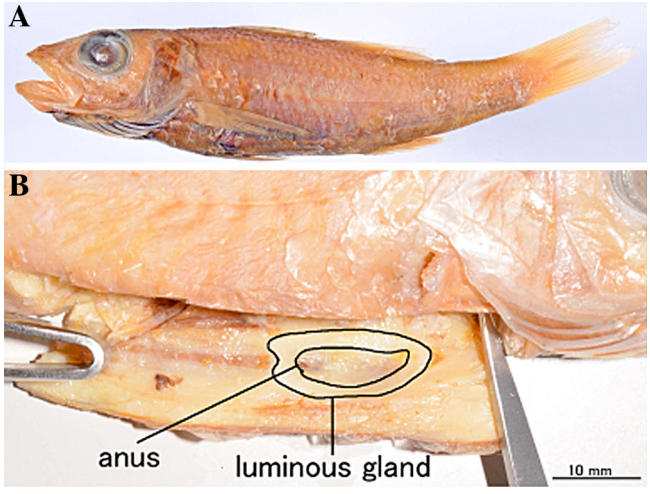

Figure 1. – *Acropoma lecorneti*, MNHN-IC-2008-1612, 141.9 mm SL, from Vanuatu. **A**: Lateral view of left side; **B**: Inside of the abdominal region of right side (dissected and outlined luminous gland).

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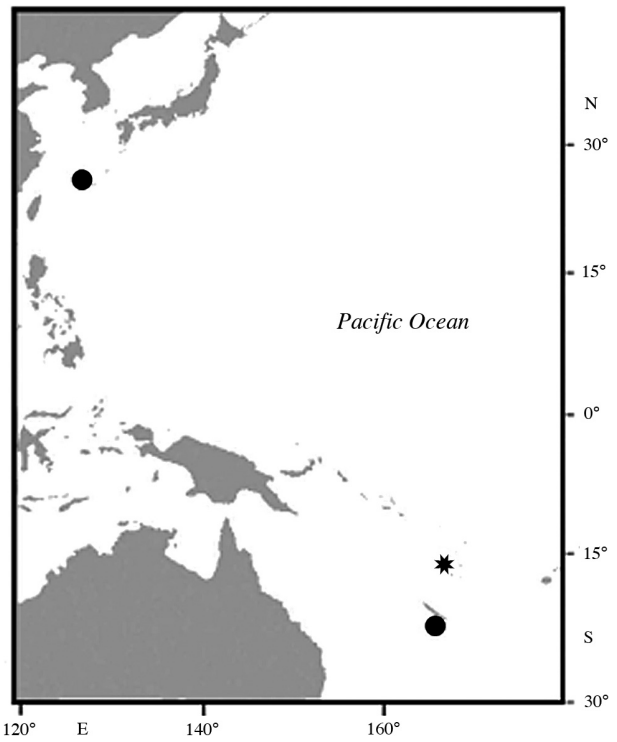

Figure 2. – Collection localities of *Acropoma lecorneti* (present study = star; previous studies = circles).

Table I. – Comparison of the selected counts and measurements (% of standard length) of *Acropoma lecorneti*. *: measured in the present study.

	Present study	Yamanoue and Toda (2008)	Fourmanoir (1988)
Standard length	141.9 mm	221 mm	326 mm
Dorsal-fin rays	VII-I-I, 10	VII-I-I, 10	VII-I-I, 10
Anal-fin rays	III, 7	III, 7	III, 7
Pectoral-fin rays	15	15	15
Gill rakers (left/right)	27/21	15/14	21/14
Lateral line scales	48	49	48
Head length	37.4	37	34.4
Body depth	24.8	25	24.5
Body width at P1 base	14.1	15	15.0
Orbital diameter	11.6	7.9	9.5
Interorbital width	7.0	8.5	7.7
Snout length	12.0	12	9.5
Postorbital length	15.1	15	No data
Upper-jaw length	16.1	16	15.6
Lower-jaw length	19.9	22	No data
Pre-1st dorsal-fin length	40.4	42	No data
Pre-2nd dorsal-fin length	62.8	64.1*	No data
Prepectoral-fin length	36.9	37	No data
Prepelvic-fin length	40.4	40	No data
Pre-anus length	49.1	47.5*	No data
Preanal-fin length	70.5	71	No data
Pelvic fin base to anus	9.3	9.1	7.4
1st dorsal-fin spine length	6.4	6.6	6.4
2nd dorsal-fin spine length	12.0	13.6*	12
3rd dorsal-fin spine length	Broken	17	14
7th dorsal-fin spine length	5.5	6.1	6.1
2nd dorsal-fin spine length	8.8	6.7*	No data
1st anal-fin spine length	1.6	1.6*	No data
2nd anal-fin spine length	6.1	5.0*	No data
3rd anal-fin spine length	10.5	9.6	No data
Pelvic-fin spine length	12.8	11	No data
1st dorsal-fin base	15.1	17.5*	No data
2nd dorsal-fin base	14.0	15.8*	15.0
Anal-fin base	14.0	11	No data
Pectoral-fin length	26.0	24	25
Pelvic-fin length	17.7	15.0*	14.7
Caudal-peduncle depth	10.4	10	9.5
Caudal-peduncle length	24.9	21	No data
Gill-raker length (left/right)	2.0/1.9	3.3/3.5	2.5/2.8
Luminous-gland length	13.2	14.6*	No data

of anal fin; gill rakers 14-27; scales ctenoid except for axil of pectoral fin and cheek (cycloid).

Description

Dorsal-fin rays VII-I-I, 10; anal-fin rays III, 7; pectoral-fin rays 15; lateral line scales 48; gill rakers 10 (including 6 rudiments) + 11 (including 1 rudiments) = 21 in right side, 10 (4 rudiments) + 17 (7 rudiments) = 27 in left side; vertebrae 10 + 15. Measurements are given in table I. Body elongate, moderately compressed. Mouth large, gape oblique; posterior margin of maxilla reaching to below anterior margin of pupil; lower jaw projecting when mouth closed; symphysis of lower jaw not protruded. One or two rows of villiform teeth with a few conical teeth on vomer and palatines. Single row of inwardly directed conical teeth on upper jaw; villiform teeth band present on inside of upper jaw. Single row of developed conical teeth on lower jaw. Two pairs of inwardly directed canine teeth near symphyseal region of both jaws. Eye large, oval, its horizontal diameter sub-equal to snout length. Posterior margin of opercle with two weak spines. Preopercle thin, weakly serration on posterior corner. Posteroventral margin of interopercle with small number of tiny spines forming weak serration. Subopercle thin, anteroventral margin weakly serrated, posterior part lacking thin flap. Anus nearer to pelvic-fin base origin than to origin of anal fin. Scales thin, deciduous; weakly ctenoid on body and bases of second dorsal and anal fins except for axil of pectoral fin and cheek (cycloid). Eighth dorsal-fin spine between first dorsal and second dorsal fins isolated, short, thick. Pectoral fin long (right side lacking), slender, posterior tip just reaching to vertical line from origin of second dorsal fin. Anal fin originating beneath a vertical drawn through middle of second dorsal-fin base; anal fin spines moderately developed, proximal radial of first pterygiophore lacking trough or hollow. Luminous gland short, O-shaped, around anus (Fig. 1B).

Colour in alcohol (Fig. 1A). – Body and head light tan, opercular, branchiostegal rays, and ventral surface of abdomen light brown, anus pale bordered by black pigments.

Distribution

West coast of New Caledonia (Fourmanoir, 1988); off Okinawa, Japan (Yamanoue and Toda, 2008); and west of Vanuatu (present study); at 275-360 m depth (Fig. 2).

Remarks

Acropoma lecorneti is unique in the genus in having an O-shaped luminous gland surrounding the anus. The luminous-gland length of the present specimen and a Japanese specimen (NSMT-P 75219) were 13.2% SL and 14.6% SL, respectively. We could not make an examination of the luminous gland of the holotype of *A. lecorneti*, owing to its unknown whereabouts (R. Causse, pers. comm.). Selected characters of the three specimens of the species are compared in table I.

Yamanoue and Toda (2008) reported that the gill rakers of a Japanese specimen of *A. lecorneti* are difficult to count, owing to small tooth plates on the gill arch that could not easily be discriminated from gill rakers. Similarly, the present specimen has small tooth plates and many rudimental gill rakers on the gill arch. Furthermore, the gill rakers of *A. lecorneti* being greatly different on both sides (Fourmanoir, 2008; Yamanoue and Toda, 2008; present study), it is not usable as a diagnostic character. Whereas, in all other congeners, most of gill rakers of these species developed and only a few rudiments occurred on the gill arch compared to *A. lecorneti*. This character is thus useful for distinguishing other species (Okamoto and Ida, 2002).

The present specimen and a Japanese specimen of *A. lecorneti* were a male with a fully ripe testis and a female with a great number of eggs (the most developed eggs ca. 0.5 mm in diameter), respectively. *Acropoma lecorneti* is the largest species in the genus, reported by Fourmanoir (1988) from the holotype measuring 326 mm SL. The other congeneric species mature at ca. 40-100 mm SL, and do not reach 200 mm SL (Okamoto, 2014).

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