Korean J. Syst. Zool. Vol. 22, No. 1: 13-16, May 2006

A New Species and Two New Records of Cheilostomata (Bryozoa) from Korea

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ABSTRACT

Three cheilostomatous bryozoans from Korean waters were identified. *Thalamoporella sibogae* Soule, Soule and Chaney, 1992 and *Schizomavella acuta* Osburn, 1952 are new to Korea, and *Buffonellaria acutirostris* is new to the bryozoans fauna. *S. acuta* and *B. acutirostris* n. sp. are described with figures.

Key words: taxonomy, Cheilostomata, Bryozoa, Korea

INTRODUCTION

Taxonomic status of the 27 species of the genus *Thalamoporella* from tropical and temperate waters worldwide was discussed by Soule et al. (1992). Among them, *T. rozieri* was defined newly as the species without avicularium and its neotype was designated because no Egyptian Red Sea specimens could be located (Soule et al., 1992). In the genus *Thalamoporella*, two species, *T. lioticha* and *T. rozieri* have been reported from Korea. According to Soule et al. (1992), *T. rozieri* reported from Korea (Rho and Seo, 1990) has avicularium, and so this needs to be synonymized.

Three species of *Smittoidea* from Korean waters were reviewed because they were recorded without description and illustration. As a result, *Smittoidea levis* (Song, 1985; Seo, 1998) was found to be two different species.

Stephanosella biaperta (see Seo and Rho, 1989) were reexamined and then it turned out to be a new species. Type specimens of new species are currently stored in the Department of Biological Science, Woosuk University.

SYSTEMATIC ACCOUNT

Phylum Bryozoa Ehrenberg, 1831
Class Gymnolaemata Allman, 1856
Order Cheilostomata Busk, 1852
Suborder [1]*Flustrina
Superfamily [2]*Microporoidea Gray, 1848
Family Thalamoporellidae Levinsen, 1909
Genus *Thalamoporella* Hincks, 1887

[3]***Thalamoporella sibogae* Soule, Soule and Chaney, 1992**

Thalamoporella sibogae Soule et al., 1992, p. 56, figs 77-81.

Thalamoporella rozieri: Harmer, 1926 (part), p. 292, pl. 19, figs 3-13; Rho and Seo, 1990, p. 149, pl. 4, figs 1-5 [not *T. rozieri* (Savigny and Audouin, 1826).

Material examined. Seogwipo, 12 Apr. 1975 (B. J. Rho), on other bryozoans; Daepo (Jejudo), 16 Jan. 1985 (J. E. Seo), on seaweed.

Remarks. Zooid measures 0.67 × 0.33 mm; orifice 0.16 × 0.16 mm; avicularium 0.57 × 0.17 mm. According to Soule et al. (1992), *Thalamoporella rozieri* (Savigny and Audouin, 1826) is defined into the species without avicularia. Moreover, *T. rozieri* has been collected only from the Red Sea, Mediterranean Sea and Indian Ocean. Korean specimen reported as *T. rozieri* has avicularia, and is characterized by the toothed avicularium mandible, and the sibling and adjacent nonsibling zooids torqued toward straight avicularium as *T. sibogae* Soule et al., 1992 from Makassar Strait.

Distribution. Korea (Jejudo Island); Indo-Pacific Ocean (Makassar Strait, Sulu Archipelago, Philippines).

Suborder Ascophora Levinsen, 1909
Infraorder [4]*Lepraliomorpha Gordon, 1989
Superfamily [5]*Smittinoidea Levinsen, 1909
Family [6]*Bitectiporidae MacGillivray, 1895
Genus [7]**Schizomavella* Can and Bassler, 1842

[8]***Schizomavella acuta* Osburn, 1952 (Fig. 1)**

Schizomavella auriculata acuta Osburn, 1952, p. 332, pl.

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38, figs 7-9.

Schizomavella acuta: Soule et al., 1995, p. 211, pl. 78A-D, fig. 20.

Smittoidea levis: Seo, 1998, p. 214 [not *S. levis* (Kirkpatrick, 1890)].

Material examined. Daepo (Geojedo, 70 m deep), 8 Jul. 1996 (J. E. Seo), on rock.

Description. Colony encrusting rock. Zooid irregularly quadrate to rhomboid, 0.58 × 0.45 mm; frontal wall more or less flat with small pores, with transverse walls joining orifice below distal rim. Areolar pores along suture lines. Orifice 0.12 × 0.12 mm, rounded distally and laterally with a very shallow proximal sinus; condyles large, showing cogged apperance. Avicularium 0.10 × 0.04 mm, not raised, located upon midline a short proximal sinus, not within or connected to sinus; acute mandible directed proximally or proximolaterally. Ovicell large, globular with tiny perforations, becoming sunken and merged into next distal zooid.

Remarks. Avicularium of our specimen is shorter than that of one from California which measures 0.10-0.19 mm long, 0.12-0.13 mm wide. Our specimen seems to be young

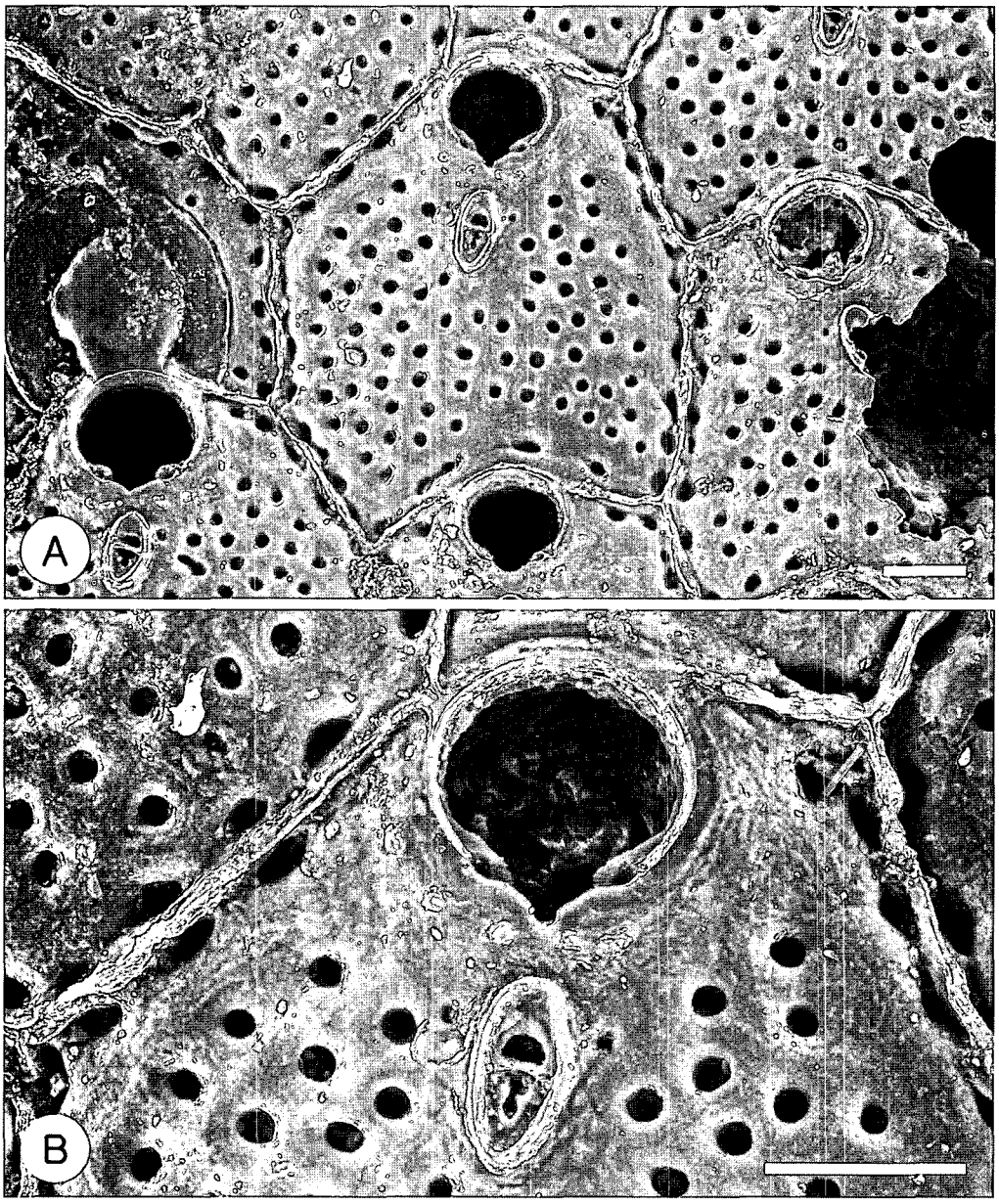

Fig. 1. *Schizomavella acuta*. A, zooids; B, orifice and suboral avicularium. Scale bars=0.1 mm.

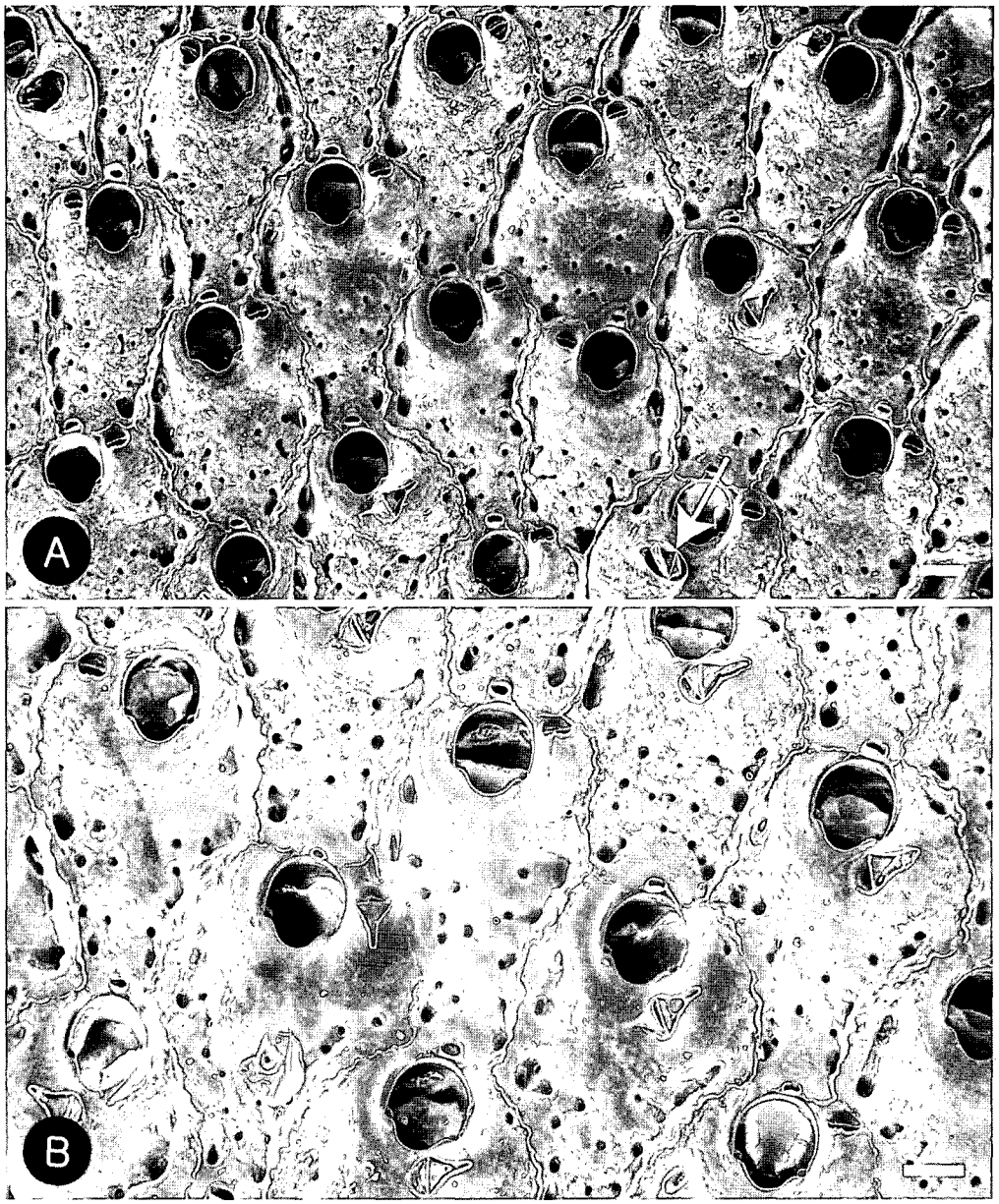

Fig. 2. *Buffonellaria acutirostris* n. sp. A, zooids with avicularium lateral to orifice and frontal avicularium. Arrow indicates enlarged semielliptical frontal avicularium; B, zooid showing funnel-shaped avicularium lateral to orifice. Scale bars=0.1 mm.

colony. When it is getting old, frontal wall is rugose and becoming reticulate with calcified nodules according to Soule et al. (1995). *Smittina levis* reported from Seocheon and Wolseong by Song (1985) is not *Schizomavella acuta*, but *Smittoidea prolifica* Osburn, 1952.

Distribution. Korea (South Sea), Pacific Ocean (California).

Superfamily [1]*Celleporoidea Johnston, 1838

Family Celleporidae Johnston, 1838

Genus [2]**Buffonellaria* Canu and Bassler, 1917

[3]***Buffonellaria acutirostris* n. sp. (Fig. 2)**

Stephanosella biaperta: Seo and Rho, 1989, p. 209, pl. 4, figs 1-3 [not *S. biaperta* (Michelin, 1945)].

Type specimens. Holotype: Munseom (Jejudo, 30 m deep), 3 Dec. 1978, collected from fishing net. Paratypes: Seogwipo,

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1 Aug. 1970; Munseom (Jejudo, 30 m deep), 2 Dec. 1978; Seogwipo, 12 Jul. 1979 (H. K. Kim); Dodong (Ulleungdo.), 10 Jul. 1984; Chujado, 26 May, 1987. All of paratypes were collected from the fishing net.

Description. Colony encrusting substatum not confirmed, forming a mass and erect when old. Zooids arranged regularly, multilamellar, hexagonal, 0.54 × 0.38 mm; frontal wall around orifice elevated a little, with small pores at proximal surface and a row of several areolar pores on each side. Orifice a little longer than wide, 0.13 × 0.12 mm, rounded distally and laterally, with a deep and wide sinus formed by a pair of condyles. A disto-medial tubular spine base presents. Avicularium lateral to orifice almost circular, sometimes substituted by funnel-shaped one same as frontal avicularium, directed proximally, raised at rostrum with serrated rim; pivot bar complete. Frontal avicularium 0.10 × 0.06 mm; rostrum tapering in distal half, so funnel-shaped and raised at rostrum, usually located just near below orifice, sometimes away from orifice, directed laterally; pivot bar complete. A few enlarged frontal avicularium with semielliptical rostrum instead of funnel-shaped one were found. Ovicell not found.

Remarks. The definition on *Stephanosella biaperta* has been confused because there was no type specimen, and its original description and illustration were so poor. Ryland (1969) clarified the shape of the orifice in *S. biaperta* which is different from the species belonging to *Buffonellaria* with condyles. Korean specimen reported as *S. biaperta* has a pair of prominent condyles forming wide and deep sinus. The present new species is similar to *B. divergens*, type species of the genus *Buffonellaria* in having single or paired elliptical or triangular avicularia lateral to orifice. However, grossly enlarged avicularia replacing the lateral oral type or arising on the frontal surface of the zooid are not found in new species. Oral avicularium is always single in *B. acutirostris* n. sp. The colony with ovicellate zooids needs to be collected and described, because none of specimens had ovicell.

Etymology. The specific name is derived from *acutus*, Latin, pointed, and *rostrum*, Latin, beak, referring to the pointed rostrum of frontal avicularium.

Distribution. Korea (Jejudo Island, East Sea).

ACKNOWLEDGEMENTS

This work was supported by the Korea Research Foundation Grant funded by the Korean Government (MOEHRD) (R05-2004-000-11065-0). I would like to express my thanks to Prof. P. J. Hayward (University of Wales, Swansea) for his helpful comments and nomenclatural advice on the new species.

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Received September 27, 2005
Accepted October 28, 2005