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Two new species of Membraniporoidea (Bryozoa: Cheilostomata) from Korea

Ji Eun Seo
(Department of Biology, Woosuk University, Chŏnbuk 565-800, Republic of Korea)

ABSTRACT

Two new species of the superfamily Membraniporoidea, *Conopeum hexagonum* and *Gregarinidra corbulra*, are reported from Korea. These two genera are new to the Korean fauna. The former species is characteristic in the shape of zooids and the latter one in the number of spines.

Key words: Bryozoa, Membraniporoidea, new species, Korea.

INTRODUCTION

The suborder Anasca contains several superfamilies. Since Vigneaux introduced the superfamily Membraniporacea based on Membraniporidae Busk, 1854, the superfamily Membraniporoidea, equivalent to the division Malacostega called by Levinsen, has been accepted preferentially (Gordon, 1984), and is the second largest superfamily, containing about seven families.

According to previous papers (Okada, 1923; Rho and Song, 1980; Rho and Seo, 1984; Song, 1985; Rho and Seo, 1985, 1986, 1990; Seo, 1992; Song and Won, 1992), the four families Membraniporidae, Electridae, Flustridae and Calloporidae, 8 genera and 16 species belonging to this superfamily have been reported in Korean fauna. These species are as follows: *Antropora granulifera, Callopora lineata, Crassimarginatella crassimarginata, Electra tenella, Ellisina canui, Membranipora albida, Membranipora crenulata, Membranipora kumatae, Membranipora perfragilis, Membranipora savartii, Membranipora serrilamella, Membranipora striata, Membranipora tuberculata, Membranipora vibraculoides, Tegella incrustans* and *Terminoflustra sagamiensis*.

The specimens examined were collected from fishing nets, and bleached or burned for observation with a stereomicroscope. Both species are illustrated with photographs derived from observation with

a scanning electron microscope.

Type specimens of the new species are currently stored in the Department of Biology, Woosuk University, Korea. Holotypes will be deposited in the Korea Natural History Museum, Seoul, which construction is being planned.

SYSTEMATIC DESCRIPTIONS

Suborder Anasca Levinsen, 1909 무낭아목

Superfamily Membraniporoidea Busk, 1854 막이끼벌레상과(신칭)

Family Membraniporidae Busk, 1854 막이끼벌레과

Genus *Conopeum* Gray, 1848 세망이끼벌레속(신칭)

***Conopeum hexagonum* n.sp.** 육각이끼벌레(신칭) (Pl. 1)

Type specimens. Holotype: Several fragments from fishing nets were collected from Oryukdo (off the coast from Pusan) in the Korea Straits, on 18 April 1976 by B.J. Rho. The depth was approximately 100 m deep. The substratum is unknown.

Description. Colony encrusting. Zooids 0.48-1.18 mm x 0.32-0.45 mm, arranged alternatively, elongate-hexagonal. Frontal membrane occupying frontal area entirely, three fourth of which occupied by opesia, completely bordered by a granular and subdenticulate cryptocystal rim. Distal half of zooidal mural rim slightly beaded. Cryptocyst developed proximally than distally and laterally, sloping laterally and distally towards basal side of zooid. No gymnocyst. Free edge of operculum somewhat thickened. Spines and kenozooids absent. Mural porechambers on lateral wall multiporous.

Remarks. The genus *Conopeum* is recorded in Korean fauna for the first time. Generally this genus has marginal spines and a small area of gymnocyst proximally. However this new species hasn't any spines or gymnocyst. Also it is peculiar that the zooids are not oval but hexagonal in shape. The specimens of this new species were collected from fishing nets in fragments. Thus their substratum and colonial form were not cleared.

Etymology. The specific name, hexagonum, is derived from hex, Greek, and gonia, Greek, thus hexagonal, six-angled, referring to the shape of the autozooid.

Family Flustridae Lamouroux, 1821 꼬인이끼벌레과

Genus Gregarinidra Barroso, 1949 무리이끼벌레속(신칭)

***Gregarinidra corbula* n.sp.** 바구니이끼벌레(신칭) (Pl. 2)

Type specimens. Holotype: One colony was collected by fishing nets from the seas surrounding Chujado near Piyangdo in the Korea Straits, on 6 February 1986 by J.W. Lee and the author. The depth was known to be about 100 m. The substratum is unknown. Paratypes: 8 colonies, same data as holotype.

Description. Colony erect from ancestrular root or one part of mother colony, branching, bilamellar. Zooids 0.69-0.85 mm x 0.15-0.18 mm, arranged longitudinally, very long and slender rectangular, bordered by 10-15 pairs of marginal spines, which overarching opesia except opercular and avicularian region. Spines shape triangular, 0.07-0.1 mm long, directed horizontally. First two pairs of spines shorter, slightly erect, and remaining spines overlapping a little at middle line of frontal

area. Avicularium interzooidal, shaped as long triangular with acute end, directed obliquely. Mandible also acute. Ovicell endozooidal, occurring beneath proximal end of distal zooid or avicularium.

Remarks. The genus *Gregarinidra* is reported in Korean fauna for the first time. This new species is distinguished from *Gregarinidra serrata* easily by the serrated rostrum and six to seven pairs of spines. Moreover in the types of spines, *G. serrata* (Gordon, 1984, 1986) has robust suboral spines which flare into 2-3 apical spikes, and a pair of spines, which are short and distal to the orifice. Also specimen from Japan (Okada and Mawatari, 1936; Mawatari, 1952) has 6-8 pairs of short marginal spines and a distal pair, which is larger, serrated or bifurcated. Usually the colonial growth form of Flustridae is encrusting and unilamellar. However Gordon (1984) demonstrated that *G. serrata* from Hauraki Gulf (New Zealand) can produce erect unilamellar or bilamellar lobes. All of the specimens studied herein are bilamellar, except a few young colonies. The bilamellar lobes of this specimen are not connected to each other in the basal side. Thus lobes look like folded sheets. The ends of both sides of the lobes are composed of one or two rows of kenozooids.

This new species is similar to *Spiralaria strictocella* collected from Morocco (Canu and Bassler, 1925) in the shapes of colony and zooid. However, the present species is distinguished from the *S. strictocella*, which has 10-12 pairs of spines and no avicularium.

Etymology. The specific name, corbula, is derived from corbula, diminutive of corbis, Latin, a basket, referring to the closely spaced spines.

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Explanation of Plates

Plate 1. *Conopeum hexagonum* n. sp.
Fig. 1. Arrangement of zooids
Fig. 2. Zooids in detail

Plate 2. *Gregarinidra corbula* n. sp.
Fig. 1. Arrangement of zooids
Fig. 2. Interzooidal avicularium

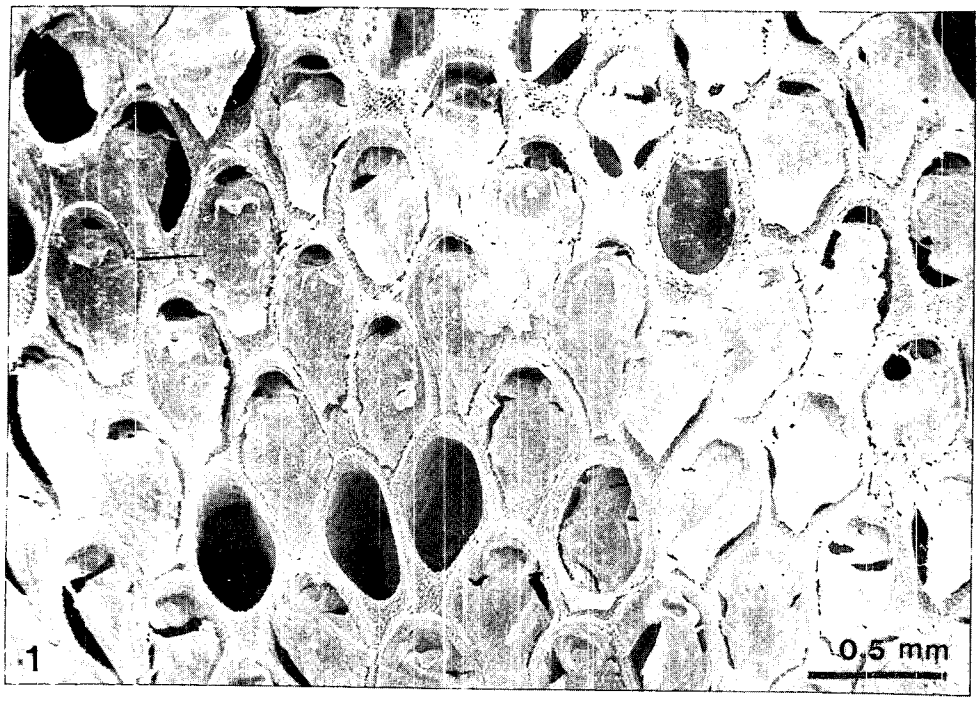
한국산 막이끼벌레상과(태형동물문, 순구목)의 2신종

서 지 은
(우석대학교 생물학과)

요 약

한국산 막이끼벌레상과의 2신종, *Conopeum hexagonum*과 *Gregarinidra corbula*을 보고한다. 이 두 속은 한국에서는 처음으로 보고되는 속이다. 전자는 개충의 모양이, 후자는 극의 수가 특징적이다.

PLATE 1



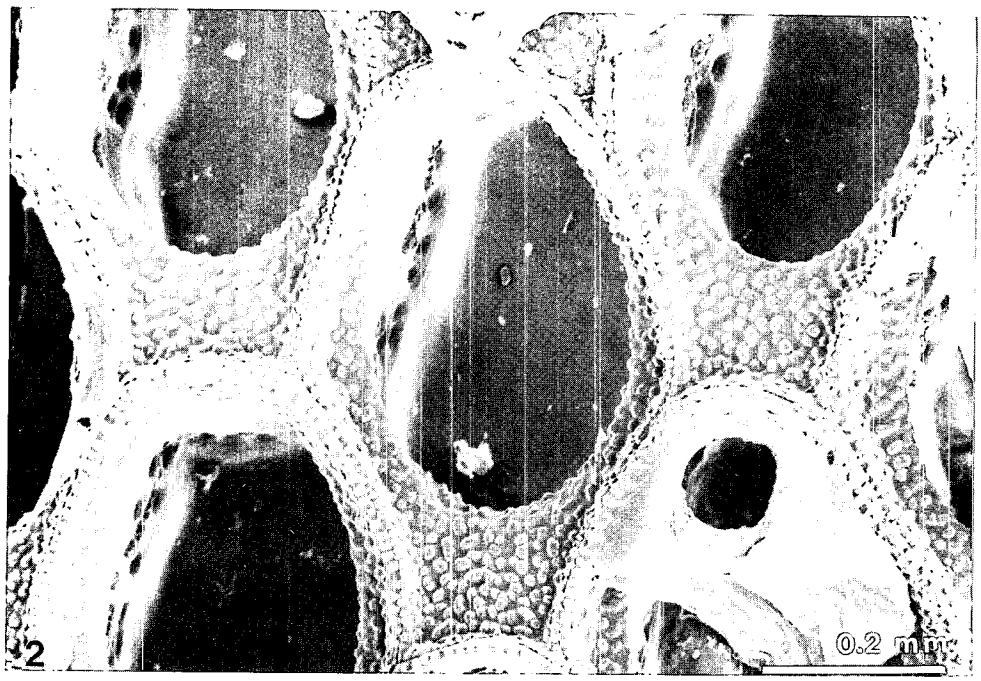


PLATE 2