

New Records of Three Hydroid Species from Geojedo Island, Korea

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ABSTRACT

Three hydroid species from Geojedo Island, *Sertularella mirabilis* Jäderholm, 1896; *Sertularella sagamina* Stechow, 1921 and *Aglaophenia pluma* (Linnaeus, 1758) are recorded as new to the Korean fauna.

Key words: new records, hydroids, Geojedo Island, Korea

INTRODUCTION

The taxonomic study on the marine hydroids of Geojedo Island, Korea have been done by Rho and Chang (1974), Park and Rho (1986) and Park (1997, 1998). Resulting from the previous works, one subspecies and 27 species of nine families in two orders so far were known from Geojedo Island and its adjacent waters. They are as follows: *Hydrissa sodalis*, *Eudendrium capillare*, *Calycella syringa*, *Halecium beanii*, *Halecium tenellum*, *Lafoea fruticosa*, *Zygophylax biarmata*, *Obelia geniculata*, *Orthopyxis platycarpa*, *Rhizocaulus chinensis*, *Syntheicum tubithecum*, *Amphisbetia pacifica*, *Diphasia palmata*, *Dynamena crisioides*, *Sertularella gayi*, *Sertularella gotoi*, *Sertularella levigata*, *Sertularella miurensis*, *Sertularella polyzonias*, *Sertularella sinensis*, *Symplectoscyphus hozawai*, *Thuiaria argentea*, *Aglaophenia whiteleggei*, *Antennella secundaria*, *Lytocarpus philippinus*, *Plumularia filicaulis japonica*, *Plumularia setacea*, and *Pycnotheca mirabilis*.

Some hydroid specimens were collected from Geojedo Island and its nearby waters during the period from August 1994 to July 1996 with fishing nets and by scuba divers. Of these *Sertularella mirabilis*, *Sertularella sagamina*, and *Aglaophenia pluma* are new to the Korean fauna. Thus, the hydroid fauna of Geojedo Island, which were identified up to date, consists of one subspecies and 30 species of nine families in two orders.

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SYSTEMATIC ACCOUNTS

Order Thecatae 컵히드라충 목

Family Sertulariidae 테히드라 과

1. *Sertularella mirabilis* Jäderholm, 1896 멋진테히드라 (신칭) (Fig. 1A-C, Pl. 1, Fig. A)

Sertularella mirabilis Jäderholm, 1896, p. 9, pl. 2, fig. 1; Yamada, 1959, p. 50; Hirohito, 1983, p. 45; Hirohito, 1995, p. 195, fig. 54a-g, pl. 12, fig. 13.

Material examined. Daepo, 8 July 1996, J. H. Park.

Description. Colonies large; hydrorhiza polysiphonic and fused with one another. It is difficult to distinguish hydrocaulus, hydrocladium and second hydrocladium with one another. Hydrocaulus branched irregularly, not in one plane, anastomosing to network with some resemblance to sponge as a whole. Hydrotheca arranged alternately with long interval, not on one plane, tapering upward, with 6-7 transverse rings on wall; margin with four teeth, three intrathecal teeth and four flaps. Gonotheca arising from below hydrotheca, with distinct transverse rings on wall and short gonothecal pedicel.

Measurements (in mm)

Hydrothecae, total length	0.26-0.30
adcauline wall, length of adnate portion	0.24-0.28
length of free portion	0.20-0.21
maximum width	0.24-0.26
margin width	0.16
Gonothecae, total length	0.83-0.87
maximum width	0.60-0.74

Remarks. Though this species is similar to *Sertularella sinensis* reported by Jäderholm (1896) and Hirohito (1995) in the shapes of hydrotheca and gonotheca, the transverse rings on hydrothecal wall of *S. sinensis* are more distinct than those of *S. mirabilis*, and its gonothecae have distinct curved outward processes, while this species has no such processes in gonotheca.

Distribution. Korea, Japan (Sagami Bay), South China Sea.

2. *Sertularella sagamina* Stechow, 1921 사가미테히드라 (신칭) (Fig. 1D-G, Pl. 1, Fig. B)

Sertularella sagamina: Stechow, 1923, p. 177, fig. U; Yamada, 1950, p. 13, pl. 1, fig. 13-14; Yamada, 1959, p. 62; Hirohito, 1983, p. 47; Hirohito, 1995, p. 201, fig. 66a-f.

Material examined. Daepo, 9 July 1996, J. H. Park.

Description. colonies small, below 15 mm in height, arising from stolonial hydrorhizae creeping on seaweeds. Hydrocaulus monosiphonic, divided into regular internodes by oblique nodes; each internode with a hydrotheca. Hydrotheca arranged in two longitudinal rows, not opposite, barrel-shaped, with 3-4 transverse rings, four hydrothecal teeth and three intrathecal teeth in common; distal end narrowed and occasionally neck-like. Gonotheca borne on hydrorhiza, oval-shaped, with undulated wall, distal end narrowed and margin with 2-4 spines.

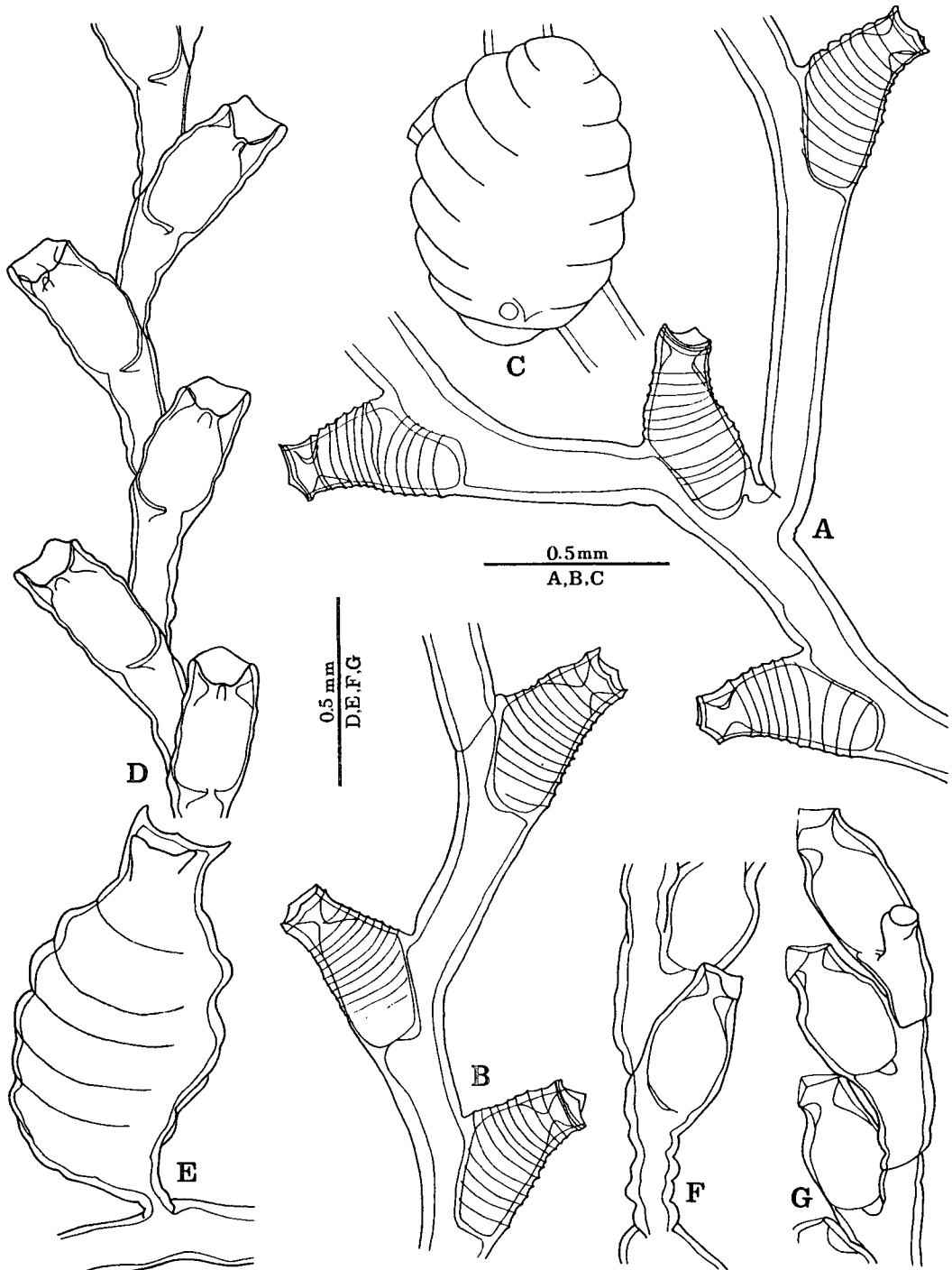


Fig. 1. A-C, *Sertularella mirabilis*: A, dichotomous branching pattern; B, branch with hydrothecae; C, gonotheca; D-G, *Sertularella sagamina*: D, middle portion of stem; E, gonotheca; F, basal portion of stem; G, apical portion of stem with hydrothecae.

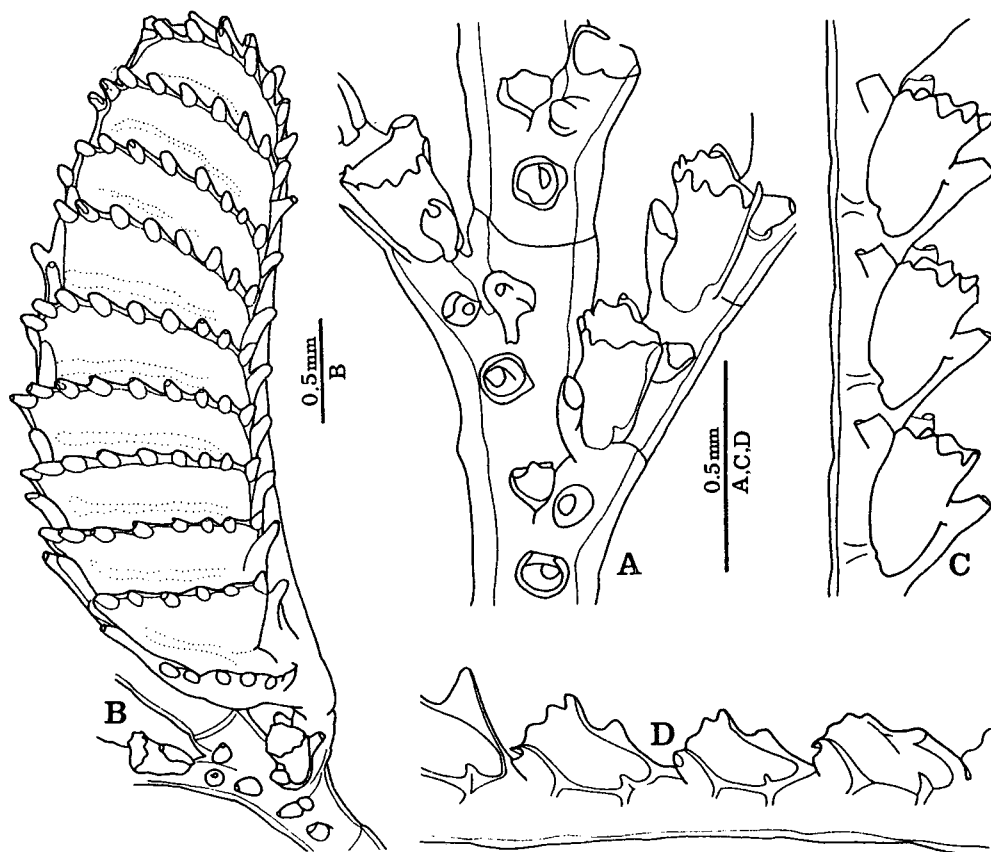


Fig. 2. *Aglaophenia pluma*: A, hydrocaulis with branches; B, corbula; C, apical portion of hydrocladium; D, basal portion of hydrocladium.

Measurements (in mm)

Hydrothecae, total length	0.36-0.42
maximum width	0.20-0.25
margin width	0.15
Gonothecae, total length	0.10-1.05
maximum width	0.53-0.67

Remarks. In this species, the spines of gonothecae are variable in the number and the shape.

Distribution. Korea, Japan (Sagami Bay).

Family Plumulariidae 깃히드라 과

3. *Aglaophenia pluma* (Linnaeus, 1758) 솜털깃히드라 (신칭) (Fig. 2A-D, Pl. 1, Fig. C)

Sertularia pluma Linnaeus, 1758, p. 811. (type locality: UK)

Aglaophenia pluma: Hincks, 1868, p. 286, pl. 63, fig. 379A-C; Bedot, 1919, p. 18, figs. 1-19; Vervoort, 1946, p. 335, fig. 8a-c; Millard, 1957, p. 235; Naumov, 1960, p. 488, fig. 23, 379A-C; Millard, 1975, p. 411, fig. 129D; Svoboda and Cornelius, 1991, p. 30, figs. 10f, 12, 13a-g, 19a-b, 24a-b; Medel and Vervoort, 1995, p. 17, fig. 6.

Aglaophenia chalabocarpa Allman, 1886, p. 150, pl. 21, figs. 1-4.

Material examined. Gulbido Island, 9 July 1996, J. H. Park.

Description. Colonies up to 50-140 mm in height, feather-shaped and dark brown-colored. Hydrocaulus monosiphonic, not branched, arising from tubular stolon and divided into regular internodes; each internode with an apophysis and three nematothecae. Hydrocladium born on apophysis, arranged alternately on one plane, divided into regular internodes; each internode with a hydrotheca and three nematothecae. Hydrotheca sac-shaped, with adcauline intrathecal septum, and eight marginal teeth. Corbula closed form, transformed hydrocladium, consisting of short pedicel with a hydrotheca and three nematothecae, 8-14 paired branchlets in common; each branchlet with marginal nematothecae.

Measurements (in mm)

Hydrocauli, length of internode	0.40-0.47
Hydrocladia, length of internode	0.34-0.36
Hydrothecae, length of adcauline wall	0.32-0.33
length of abcauline wall	0.33-0.34
margin width	0.18-0.22
width of middle portion	0.20

Remarks. According to Millard (1957), the feature of marginal second tooth of hydrotheca and branching pattern are variable. The second bifid hydrothecal tooth in the characteristic of var. *parvula*, and dichotomously branching pattern is the diagnostic character of var. *dichotoma*. However there are no such variations in our specimens of this species.

Distribution. Cosmopolitan

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요 약

거제도에서 채집된 히드라충류 가운데 3종, *Sertularella mirabilis* Jäderholm, 1896 멧진테히드라, *Sertularella sagamina* Stechow, 1921 사가미테히드라 그리고 *Aglaophenia pluma* (Linnaeus, 1758) 솜털깃히드라가 한국 미기록종으로 판명되어 재기재하고 보고한다.

PLATE 1

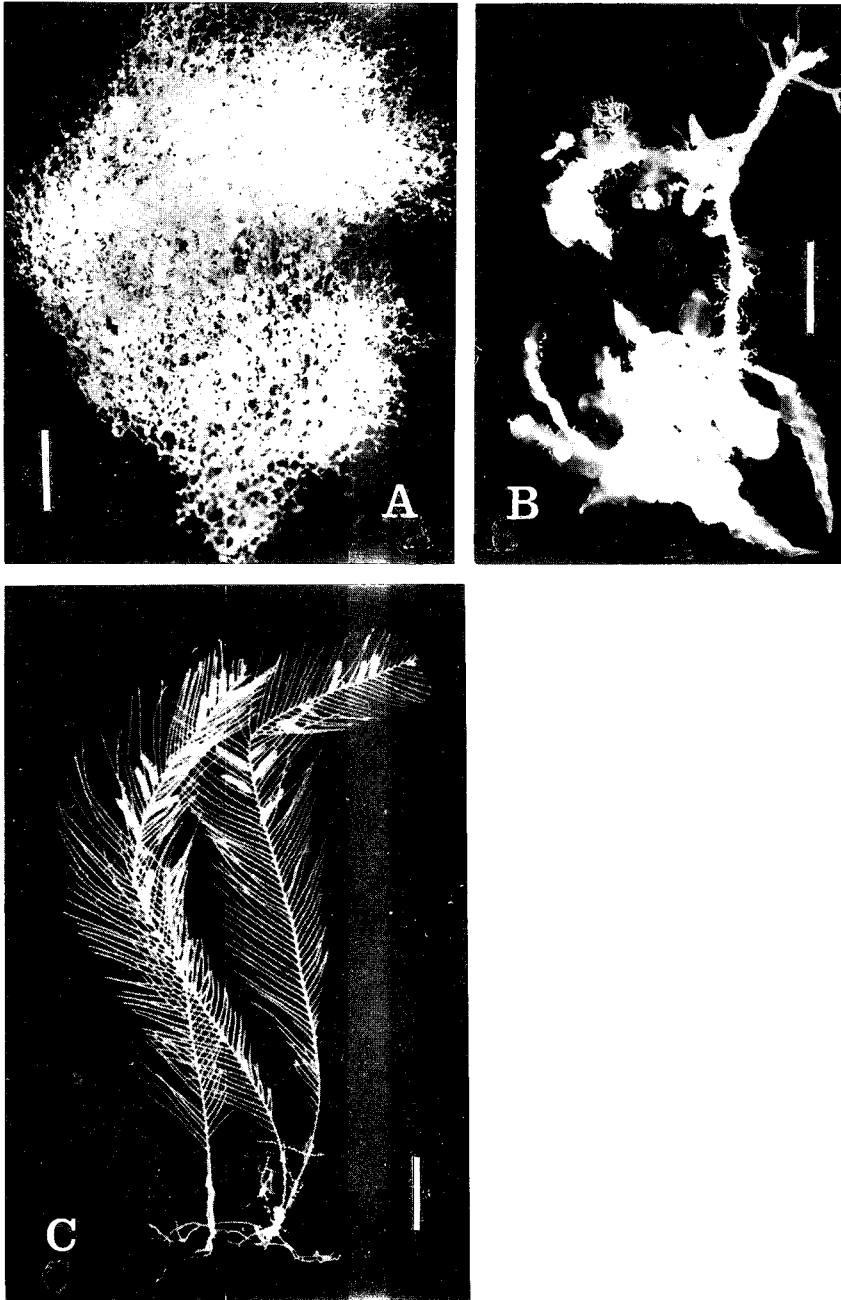


Fig. A. A part of colony of *Sertularella mirabilis*. Scale bar in 1 cm.

Fig. B. Colonies on seaweed of *Sertularella sagamina*. Scale bar in 1 cm.

Fig. C. Colonies of *Aglaophenia pluma*. Scale bar in 1 cm.