New Records of Three Hydroids (Cnidaria: Hydrozoa) in Korea

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ABSTRACT

Some hydroid specimens were collected by SCUBA diving from 10-25 m deep at Uljin (Nagok) and Jejudo Island (Munseom, Beomseom, Supseom). Among the identified species, three species *Eudendrium racemosum* (Gmelin, 1791), *Sertularella diaphana* (Allman, 1886) and *Schizotricha divergens* Naumov, 1960 are new to the Korean fauna.

**Key words:** taxonomy, hydroids, Hydrozoa, Korea

INTRODUCTION

As results of previous taxonomic studies on hydroids in Korea up to date, 146 species/subspecies of 19 families in three orders have been reported.

Some hydroid specimens were collected by SCUBA diving from 10-25 m deep at Uljin (Nagok) and Jejudo Island (Munseom, Beomseom, Supseom) during Aug. 2007 to Jan. 2008. Among the identified species, three species *Eudendrium racemosum* (Gmelin, 1791) of the family Eudendriidae, *Sertularella diaphana* (Allman, 1886) of the family Sertulariidae and *Schizotricha divergens* Naumov, 1960 of the family Plumulariidae were turned out to be new to the Korean fauna.

The pictures of parts of colony were taken under the light microscope (Nikon ECLIPSE 80i). The whole colonies were taken with camera (Canon EOS 300D).

As a result of this taxonomic study, 149 hydroid species/subspecies of 19 families in three orders have been known in Korea waters.

SYSTEMATIC ACCOUNTS

Phylum Cnidaria
Class Hydrozoa
Order Anthoatidae
Family Eudendriidae

*Eudendrium racemosum* (Gmelin, 1791) (Fig. 1A-D)

*Eudendrium racemosum*: Stechow, 1913, p. 63; 1923, p. 83; Yamada, 1954, p. 5, fig. 4a-c; Millard and Bouillon, 1973, p. 33; Hirohito, 1988, p. 84, fig. 29a-e.


Description. Colony large, reaching about 9 cm high, branching in one plane and formed into fan shape. Main stem and branches polyposphonic and hydranth pedicel only monosphonic. Hydranth pedicel arising from all directions and with some annulations on its proximal and on other places in irregular intervals. Hydranth large, on around hypostome with a whorl of filiform tentacles, 18-25 in number. Gonophores have not been observed.

Remarks. The polyposphonic stem and branches, large colony and branching in one plane of this species are distinct characteristics among the species of the genus *Eudendrium*. Any gonophores have not been observed in specimens from Korean waters. According to Hirohito (1988) male gonophores one- to three-chambered, bored on completed reduced hydranth. Female gonophores bored reduced or sometimes completely unreduced hydranth. Hydranth with female gonophores completely atrophied when the development proceeded.

Distribution. Korea, Japan, Australia, Seychelles, Mediterranean.

Order Thecateae
Family Sertulariidae

*Sertularella diaphana* (Allman, 1886) (Fig. 2A-E)

*Sertularella diaphana*: Yamada, 1959, p. 63; Millard, 1975, p. 285, fig. 93A-D; Hirohito, 1995, p. 192, fig. 62b-d, pl. 12, fig. A.

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Material examined. Beomseom, Munseom (Jejudo), 28 Aug. 2007 (S.H. Kim); Supseom, 9 Sep. 2007 (S.H. Kim) by SCUBA diving from 10-22 m deep.

Description. Colony large, reaching about 12 cm and branch- ed irregularly. Stem and branches divided into regular internodes, each internode bearing 3 hydrothecae and 1 hydro-
cladium. Hydrocalidium arising from just below hydrotheca. Branches and hydrocladia not placed in one plane, but shifted anterior surface. All adcauline wall of hydrotheca adnated, surface smooth, with 4 teeth and operculum of 4 valves. No intrathecal teeth. Gonothecae born on anterior surface of hydrocladia, tubular- shaped, truncated above, tapering to-
Fig. 2. *Sertularella diaphana*. A, whole colony; B, gonothecae; C, hydrothecae; D, basal portion of stem; E, apical portion of stem. Scale bars=2 cm (A), 500 μm (B, D, E). 200 μm (C).

ward below and with distinct several longitudinal ridges on surface.

Remarks. This species is similar to *Sertularella distans* (see Park and Rho, 1986) in the shape of hydrotheca and colony. But this species is distinguished from *S. distans* by the tubular-shaped gonothecae.

Distribution. Korea, Japan, Philippine, Hawaii, Indonesia, Australia, West Indies.

Family Plumulariidae

1a *Schizotricha divergens* Naumov, 1960 (Fig. 3A-E)

*Schizotricha divergens* Naumov, 1960, p. 470, fig. 358.

1a*갈래붓죄현드라*(신흥)

Description. Colonies arising from filamentous hydrorhiza, attaining about 5-7 cm long. Stem monosiphonic, divided into regular internodes, each internode bearing a process for hydrocladium in common, but sometimes three hydrocladia in one internode. Hydrocladia arranged in alternate, ramified in 1-3 times, at distal end of hydrothecal internode diver-
gened, divided into regular internodes. First internode short, not bearing hydrotheca and nematotheca, following one long and bearing one hydrotheca on its distal end, one mesial nematotheca at below of hydrotheca and a pair of lateral nemaththecae at both sides of hydrotheca, and following internode short, without hydrotheca and nematotheca. They arranged in alternate. Hydrotheca bowl shaped, diameter of mouth and length of abcauline wall similar.
Nematotheca very small, mesial nematotheca not reached to hydrotheca, and lateral nematothecae reached to margin of hydrotheca. Gonotheca arising from below of hydrotheca of hyrocladium, elongate and large comparing to hydrotheca, widening towards to distal end, margin waved, with four longitudinal foldings and grooves from its margin to about 2/3 below.

Remarks. This species is similar to S. unifurcata (see Allman, 1883) in the shapes of colony and hydrotheca, but it is distinguished from the latter by monosiphonic stem and hyrocladium bifurcated in one to three times.

Distribution. Korea, Berring Sea, near Medny Island.

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REFERENCES


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