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Three New Records of Thecate Hydroids from Korean Waters

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ABSTRACT

Obelia tottoni (Leloup, 1935), *Sertularella polyzonias* (Linnaeus, 1758) and *Symplectoscyphus turgidus* (Trask, 1857) of the identified thecate hydroid species from Anmyŏndo, Kŏjedo and Chejudo were turned out to be new to the Korean fauna. Up to date the Korean thecate hydroid fauna consists of six subspecies and 109 species in eight families.

Key words: new records, thecate hydroids, Korea

INTRODUCTION

The systematic studies of Korean marine hydroids were done by Kamita and Sato (1941), Rho (1967, 1969), Rho and Chang (1972, 1974), Rho and Park (1979, 1980, 1983, 1984, 1986), Park and Rho (1986) and Park (1988, 1990, 1991, 1992, 1993, 1995). Resulting from these previous systematic studies, six subspecies and 119 species of 17 families were known in Korean waters. Of which six subspecies and 106 species in eight families are thecate hydroids: two species in Campanulinidae, one subspecies and two species in Hebellidae, nine species in Haleciidae, one subspecies and five species in Lafoëidae, 15 species in Campanulariidae, one species in Syntheciidae, 44 species in Sertulariidae and four subspecies and 28 species in Plumulariidae.

Specimens dealt with in this work were collected from Anmyŏndo (Pangp'ohaesuyokchang), Kŏjedo (Taep'o) and Chejudo (Kap'ado and Mundo) with fishing nets and by hand. The identification was done on the basis of the external morphological characters.

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DESCRIPTION

Order Thecatae 컵히드라충 목

Family Campanulariidae 종히드라 과

1. *Obelia tottoni* (Leloup, 1935) 토톤혹히드라(신칭) **(Fig. 1A-F)**

Laomedea tottoni: Vervoort, 1968, p. 17, fig. 6; Leloup, 1973, p. 21, fig. 17A-D.

Material examined. Chejudo (Mundo), Nov. 30, 1978 (B. J. Rho).

Description. Colonies arising from stolonial hydrorhiza creeping on surface of bryozoans. Stem polysiphonic and branched irregularly. Hydrorhiza connected with each other forming network. Branches monosiphonic in common and give rise to hydrothecal pedicels. Hydrothecal pedicel with annulations througtout, or on apical and basal portion. Hydrothecae deep tumbler-shaped, with pointed teeth. No gonothecae have been examined.

Measurements (mm) as follows.

Colony, total length ····· 100
Hydrothecal pedicel, total length ····· 0.5-0,9
width, proximal portion ····· 0.07-0.08
middle portion ····· 0.08-0.10
distal portion ····· 0.09-0.10
Hydrothecae, total length ····· 0.54-0.71
margin width ····· 0.27-0.34
base width ····· 0.07-0.08

Remarks. The specimens of Leloup (1973) from Caribbian Sea are smaller than ours in the size of hydrothecae and the length of hydrothecal pedicels.

Distribution outside Korea. Dry Tortugas, Chile, Caribbian Sea.

Family Sertulariidae 테히드라 과

2. *Sertularella polyzonias* (Linnaeus, 1758) 다역테히드라(신칭) **(Fig. 2A-D)**

Sertularella polyzonias: Hincks, 1868, p. 235, pl. 46, fig. 1; Stechow, 1923, p. 194, fig. D'c; Broch, 1933, p, 65, fig. 24a-d; Vervoort, 1946, p. 224, fig. 96; Ralph, 1961, p. 834, fig. 24h-i; Millard, 1975, p. 300, fig. 98F-H; Hirohito, 1995, p. 199, fig. 65d.

Material examined. Anmyŏndo (Pangp'ohaesuyokchang), Jun. 25, 1995 (J.H. Park); Kŏjedo (Taep'o), Feb. 6, 1996 (W.J. Lee).

Description. Colonies small, up to 10-13mm in height, arising from hydrorhiza creeping on calcareous tube of annelids and seaweeds. Stem unfascicled, branched irregularly or unbranched and with 2-3 annulations at proximal portion. Branches similar with stem, divided into regular internodes; each internode with undistinct annulations at base, tapering toward basally and distally and with a hyrdrotheca. Hydrothecae arranged alternately in two longitudinal rows, with more or less sinous abcauline wall, below half adcauline wall adnate, slightly narrowing upward, margin with four low teeth and without inner teeth. Gonothecae very large, arising from opposite sides of base of hydrothecae, with short pedicel and short neck, margin smooth or with 3 low processes and sinous

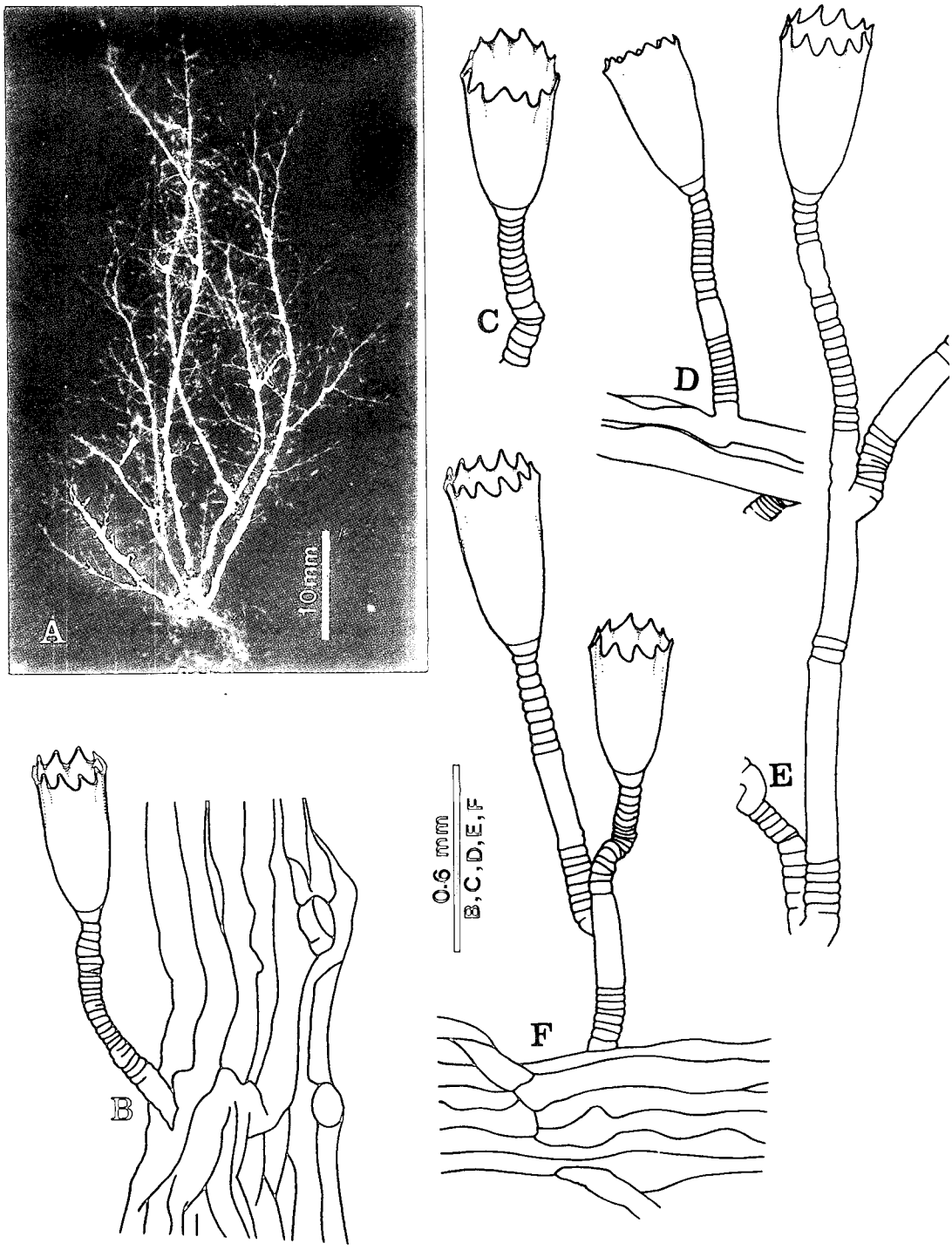

Fig. 1. *Obelis tottoni*. A, photograph of colonies; B, polysiphonic stem with polyp; C-F, various forms of hydrothecae, stems and branches.

wall.

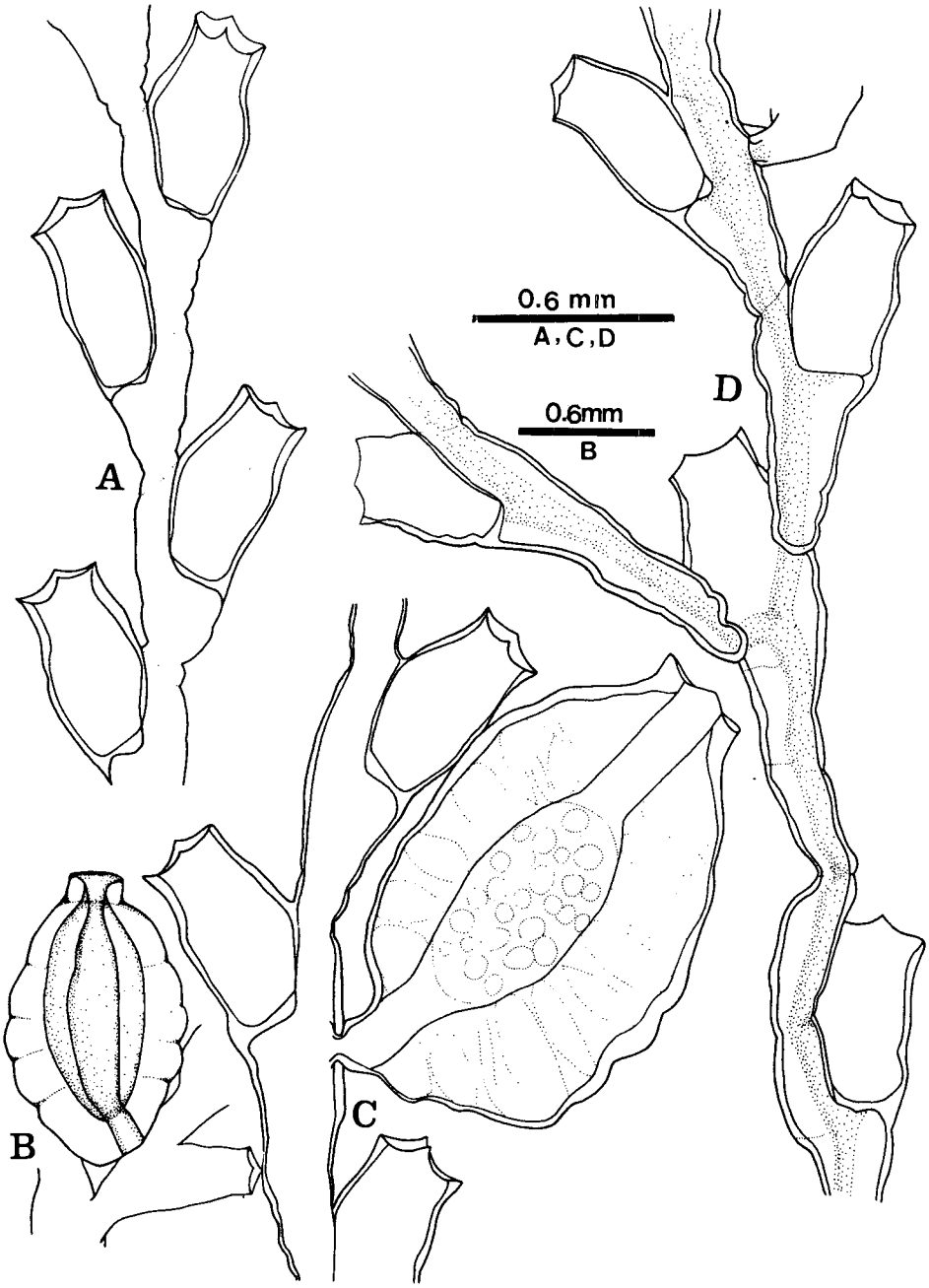

Fig. 2. *Sertularella polyzonias*. A, apical portion of stem with hydrothecae; B, male gonotheca; C, female gonotheca; D, branching portion of stem in lower part of stem.

Measurements (mm) as follows.

Internodes, length	0.50-1.03
maximum width	0.25-0.30
minimum width	0.12-0.15
Hydrothecae, total length	0.50-0.58

margin width 0.24-0.28
Gonothecae, total length 1.45-1.70
maximum width 0.19-0.97

Remarks. Millard (1975) divided this species into four subspecies, *S. p. polyzonias, S. p. falsa, S. p. gigantea and S. p. xantha. S. p. falsa* is distinguished from one anothers in small hydrothecal teeth. *S. p. gigantea* in having large hydrothecae, *S. p. xantha* in having small hydrothecae and polysiphonic stem.

Distribution outside Korea. Widely distributed in cold and temperate waters of the world.

3. *Symplectoscyphus turgidus* (Trask, 1857) 부푼주름컵테히드라(신칭) (Fig. 3A-B)

Sertularia turgidus Trask, 1857, p. 11, pl. 4, fig. 1.

Sertularella turgidus: Stechow, 1913, p. 113, fig. 105; Hartlaub, 1901, p. 67, fig. 30, pl. 3, figs. 21, 22; Torrey, 1902, p. 64, pl. 7, figs. 59-62, pl. 8, figs. 63-69.

Symplectoscyphus turgidus: Stechow, 1923, p. 12; Yamada, 1959, p. 58; Hirohito, 1983, p. 56, fig. 62a-f; Hirohito, 1995, p. 225, fig. 77a-c.

Material examined. Chejudo (Kap'ado), Jun. 16, 1985 (B. J. Rho).

Description. Colonies arising from seaweeds, below 5 cm in height. Stem monosiphonic, branched

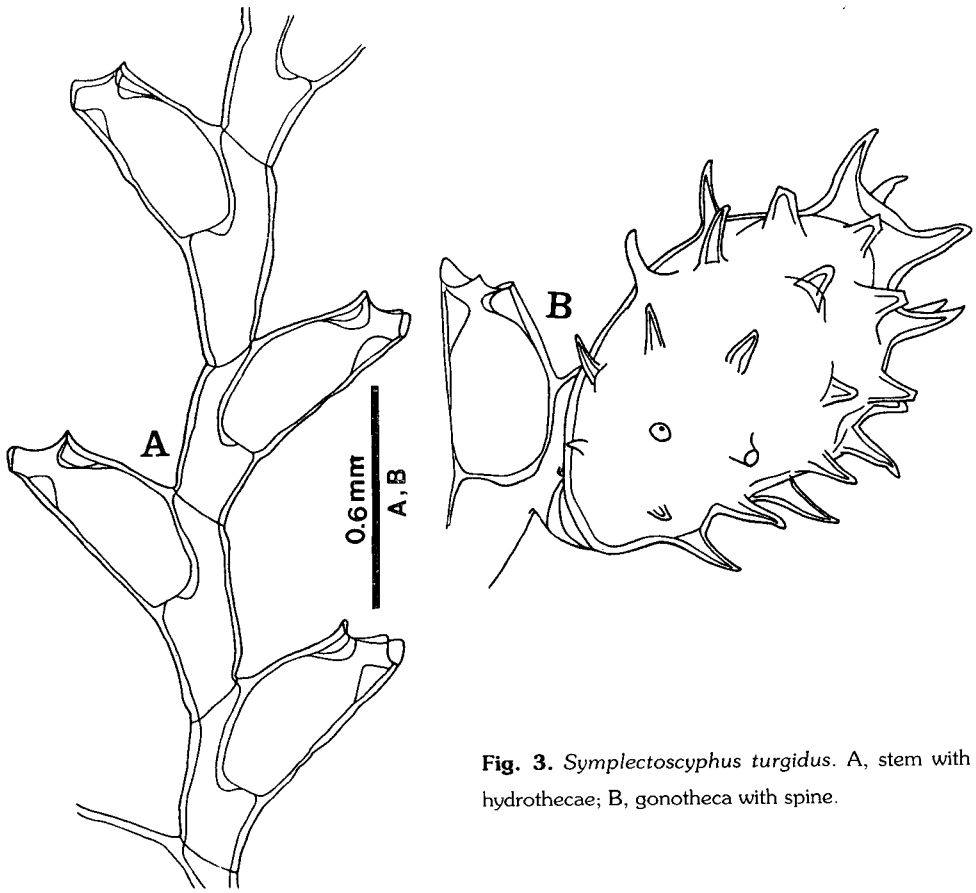

Fig. 3. *Symplectoscyphus turgidus*. A, stem with hydrothecae; B, gonotheca with spine.

or unbrsanched, divided into regular internodes by oblique nodes, each internode with a hydrotheca distally. Hydrothecae tubular-shaped, arranged in two longitudinal rows, tapering upward, with 2 intrathecal teeth in adcauline wall and 1 in abcauline wall, margin with 3 distinct teeth and operculum. Gonothecae arising from opposite side of hydrothecae, bottle-shaped, with short neck and corrugated wall, usually with many sharp spines obliquely upwards on surface throughout.

Measurements (mm) as follows.

Internides, length 0.37-0.50
maximum width 0.27-0.30
Hydrothecae, abcauline wall length 0.52-0.58
adcauline wall, length of adnate wall 0.27-0.30
length of free wall 0.40-0.43
margin width 0.20
base width 0.12
maximum width 0.30
Gonothecae, total length 1.50
maximum width 0.75
length of neck 0.15-0.23
margin width 0.20-0.25

Remarks. This species is similar with *Sertularella gotoi* on the shape of gonothecae with curved spines. However while this species has no transverse rings on hydrothecal walls, the hydrothecae of *S. gotoi* have distinct transverse rings on its walls throughout.

Distribution outside Korea. Japan (Sagami Bay, Oshima, Nijima, Misaki), Pacific coast of North America.

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요 약

안면도, 거제도 및 제주도산의 동정된 컵히드라충류 가운데 3종, 토톤혹히드라(*Obelia tottoni*), 다역테히드라(*Sertularella polyzonias*), 부푼주름컵테히드라(*Symplectoscyphus turgidus*)가 한국 미기록종으로 판명되어 재 기재하고 보고한다. 그러므로 지금까지 동정된 한국산 컵히드라충류는 8과 109종 6아종이 된다.