

A Taxonomic Study on the Marine Hydroids in Korea

5. Athecate Hydroids

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韓國產 海產 히드로蟲類의 分類學的 研究

5. 민킵히드로蟲類

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(Received October 5, 1979)

摘 要

본인들은 남한의 西海와 南海 沿岸에서 採集된 민킵히드로蟲類의 표본들
을 同定한 結果 다음과 같은 4種의 韓國未記錄種을 얻었기에 報告한다.

Hydrichthella epigorgia Stechow, *Solanderia misakinensis* (Inaba),
Hydrissa sodalis (Stimpson), *Eudendrium tenellum* Allman.

The present investigation is an extensive work for the faunistic and ecological study on the marine hydroids in Korea.

On the fauna of the athecate hydroids in Korean waters, Kamita & Sato (1941) reported two species from Incheon Bay, and then one of the present author (Rho, 1969) added one species from four localities in the coast of South Korea.

The authors have examined the specimens which were collected by the authors from the western coast (Hongdo I. and Geomun I.), the southern coast (Mipo, Chungmu and Yogji I.) and Jeju Island (Seogwipo) of South Korea.

The material examined were found to be 4 species belonging to 4 genera of 4 families.

In the results the Korean athecate hydroidal fauna so far has been composed of 7 species belonging to 6 genera, 6 families.

The authors briefly described and prepared the plate figures.

Description of Species

Order Hydroida 히드로충 목

Suborder Athecata 민꺾히드로충 亞目

Family Ptilocodiidae 날개히드라 科

Hydrichthella epigorgia Stechow, 1909 꽃총산호히드라

(Pl. 1, Figs. 1-5)

Hydrichthella epigorgia: Stechow, 1909, 31, taf, 3, Figs. 7-9; 1913, 48-49, Fig. 4; 1923a, 2; Bedot, 1925, 249; Yamada, 1959, 13.

Material examined: Seogwipo (Jeju I.), Aug. 5, 1970; *ibid.*, July 13, 1973; *ibid.*, April 14, 1975; *ibid.*, Feb. 15, 1976; *ibid.*, Nov. 30, 1978.

Diagnosis: Hydranth with capitate tentacles. Colony consists of zooids and gonophore arising from the gonozooid.

Description: The present species was originally described by Stechow (1909) from Sagami Bay and Enoshima Bay, in 15-20 m. depths.

The present colony attached on a gorgonid, *Acanthoplexaura dimorpha* Kükenthal, consisting of gastrozooids, dactylozooids and gonozooids.

Zooids are small, less than 1 mm. in height, arise from the stolons which resemble the stolons of *Hydrissa*.

The gastrozooid without any tentacles, elliptical or thumbshaped, terminated with a large mouth. There are two kinds of dactylozooids of which the one with 4-9 capitate tentacles arranged in a whole at distal end and the other without any such tentacles. The gonozooid small, without tentacles, with a sporosac for each gonozooid.

Gonophores were found in February, April and November.

Distribution: Korea (Seogwipo), Japan (Sagami Bay, Enoshima Bay).

Family Solanderiidae 산호불이히드라 科

Solanderia misakinensis (Inaba, 1892) 큰산호불이히드라

(Pl. 2, Figs. 1-5)

Dendrocoryne misakinensis: Stechow, 1909, 39-40, taf. 2, fig. 3; 1923a, 2; Bedot, 1918, 116; 1925, 165; Yamada, 1959, 14.

Solanderia misakinensis: Vervoort, 1962, 524-526.

Material examined: Mipo, April 27, 1978; Hongdo I. (Yellow Sea), July 7, 1978.

Diagnosis: Hydranth with capitate tentacles. Hydrophore absent and the colony shrub-shaped.

Description: The colonies are large, reached 11-21 cm. in height, more or less densely ramified and branches are small. Stems and branches are covered with ectoderm.

The hydranth elliptical, with capitate tentacles and milky-white color.

The gonophore is oval-shaped, short stalks, without tentacles. They are distributed on the whole colony except sparingly on the thick branches, found in April and July.

The color of the specimens preserved is brown.

The present species resembles *Solanderia secunda* (Inaba, 1892), but differs from characters which are no hydrophores and darker in color.

Distribution: Korea (Hongdo I., Mipo), Japan (Misaki, Sagami Bay, Hirudo Strait, Muroran, Tobishima, Kyushu).

Family Hydractiniidae 축히드라 科

Hydrissa sodalis (Stimpson, 1859) 집게히드라

(Pl. 3, Figs. 1—7)

Hydractinia sodalis: Stechow, 1907, 192—193; 1909, 21—25, taf. 1, Figs. 1—8, taf. 4, Figs. 1—6; Bedot, 1910, 318; 1912, 308; 1916, 133; 1918, 164; 1925, 246.

Hydrissa sodalis: Stechow, 1923a, 4; Yamada, 1959, 23.

Material examined: Chungmu, June 3, 1978; Yogji I., June 6, 1978; Mipo, Dec. 6, 1978.

Diagnosis: Hydranth with filiform tentacles. Hypostome cone-shaped.

Description: The colony growing on a snail shell occupied by *Pagurus* sp., consists of gastrozooids, dactylozooids and gonozooids arising from the spines and hydrorhizal plate.

It is characteristic that the present species forms a well developed hard chitinous skeleton, namely spine and hydrorhizal plate. The spines arise from the hydrorhizal plate which is covered with a snail shell.

The gastrozooid with filiform tentacles which were arranged at the base of hypostome, cylindrical-shaped and terminated with a mouth.

The dactylozooid with less filiform tentacles than gonozooid, funnel-shaped.

The gonozooid with about eight sporosacs, found in June.

Distribution: Korea (Chungmu, Yogji I., Mipo), Japan (Hakodate, Sagami Bay, Jogashima, Yokohama).

Family Eudendriidae 꽃히드라 科

Eudendrium tenellum Allman, 1877 실꽃히드라

(Pl. 1, Figs. 6—9)

Eudendrium tenellum: Allman, 1877, 8, pl. 4, Figs. 3—4; Kramp, 1911, 365;

Bedot, 1912, 291; 1916, 104; 1918, 132; 1925, 190; Stechow, 1923b, 80—81;

Yamada, 1954, 17—18, Fig. 15; 1959, 26; Itô & Inoue, 1962, 448, pl. 6, Figs.

30—31; Hirohito, 1977, 12—13, text-Fig. 3.

Material examined: Geomun I., July 17, 1977.

Diagnosis: Hydranth with filiform tentacles arranged in a whorl. Hypostome

hemispherical or trumpet-shaped.

Description: The colony attached on algae, small and slender, reached about 6—8 mm. in height.

The stem irregularly branched, not fascicled and mostly smooth.

There are 3—5 annulations on the proximal part of stem, branch and pedicel of hydranth.

Periderm of pedicel not extending onto the hydranth.

Hydranth with about 20 tentacles and an annular groove on the proximal part.

The gonophore arises from an unreduced hydranth, found in July.

This species was described as 2 cm. in height by Yamada (1954), whereas the present specimens reached 6—8 mm. in height.

Distribution: Korea (Geomun I.), Japan (Sagami Bay), Pacific and Atlantic coast of North America, Spitzbergen, Greenland, Norway, Mediterranean, West Indies, The present species is cosmopolitan.

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Explanation of Plates

Plate 1

- Figs. 1—5. *Hydrichthella epigorgia* Stechow 꽃총산호히드라
1. Colony attached on a gorgonid, *Acanthoplexaura dimorpha* Kükenthal. $\times 6.3$.
 2. Dactylozoid with capitate tentacles. $\times 100$.
 3. Dactylozoid without capitate tentacles. $\times 100$.
 4. Gastrozoid with a large mouth. $\times 100$.
 5. Blastostyle. $\times 40$.
- Figs. 6—9. *Eudendrium tenellum* Allman 실꽃히드라
6. Colony attached on algae (natural size).
 7. Portion of branch. $\times 40$.
 8. Female gonophore. $\times 40$.
 9. Male gonophore. $\times 40$.

Plate 2

- Figs. 1—5. *Solanderia misakinensis* (Inaba) 큰 산호불이히드라
1. Colony (natural size).
 2. Portion of branch. $\times 40$.
 3. Hydranth with capitate tentacles. $\times 40$.
 4. Longitudinal section of branch. $\times 40$.
 5. Cross section of branch. $\times 40$.

Plate 3

- Figs. 1—7. *Hydrissa sodalis* (Stimpson) 접게히드라
1. Upper portion of the colony growing on a snail shell occupied by *Pagurus* sp. (natural size).
 2. Under portion of the colony growing on a snail shell occupied by *Pagurus* sp. (natural size).
 3. Blastostyle with sporosacs. $\times 40$.
 4. Dactylozoid with filiform tentacles. $\times 40$.
 5. Gastrozoid with filiform tentacles. $\times 40$.
 6. Cross section of spine. $\times 40$.
 7. Longitudinal section of spine. $\times 40$.

PLATE I

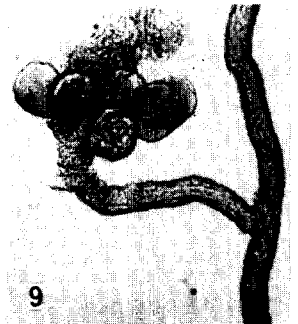
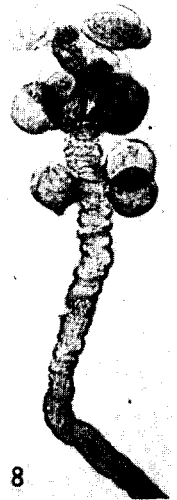
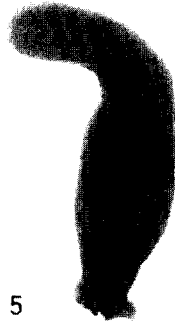


PLATE 2

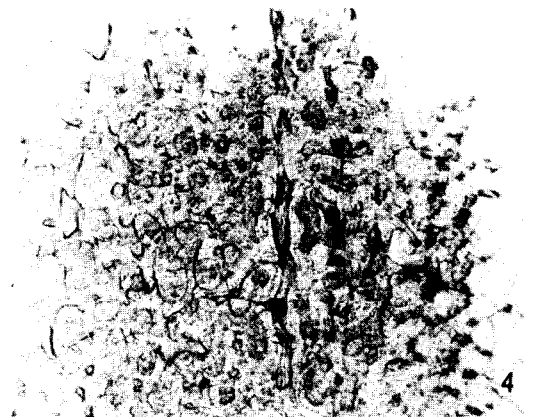
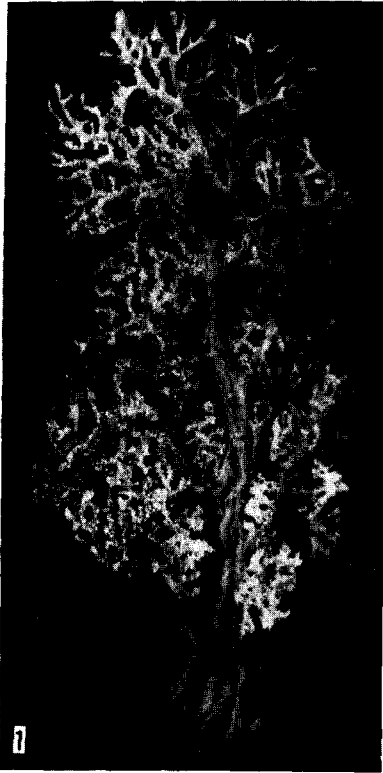


PLATE 3

