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# Marine Hydroids from the Vladivostok Region<sup>1)</sup>

By

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(With 1 Text-figure)

I had an opportunity to examine a small collection of hydroid specimens from the Vladivostok region on the Pacific coast of U.S.S.R. The specimens were secured together with many marine algae by Mr. A. Kuznetsov in 1926 and 1927 in Vladivostok and its vicinity, and were preserved at the herbarium of the University of California, Berkeley, U.S.A.

Concerning the hydroid fauna of the Vladivostok region Marenzeller (1902) first reported 4 species, namely *Calycella plicatilis*, *C. syringa*, *Obelia flabellata* and *Lafoea fruticosa*, and later Linko (1912) and Kudelin (1914) described 3 species in "Faune de la Russie", namely *Obelia longissima*, *Diphasia costata* and *Kirchenpaueria curvata*. Although the materials examined were entirely dried up in a bad condition, I can enumerate 6 species of hydroids in the present collection, of which 4 are newly recorded from the region.

I wish here to express my cordial thanks to Prof. Tohru Uchida for his kind guidance and to the authorities of the herbarium of the University of California, Berkeley, for placing the materials at my disposal.

## *Obelia plana* (M. Sars)

*Obelia flabellata*: Marenzeller, 1902, p. 2.

*Obelia plana*: Stechow, 1923, p. 7, no. 68; Yamada, 1950, p. 7, pl. 1, fig. 5.

**Locality.** Near the breakwater at depths of ca 1 and 4 m, and on the wall of the breakwater, in Patrokl Bay; July 9, 1926. Near the breakwater, in Patrokl Bay; June 15, 1927.

Comparing the specimens with those from Akkeshi Bay, the present colonies are smaller, 3-7 cm in height. Although the hydrothecae are entirely lost owing to dryness, the specimens agree in characters of stem and branches with my previous description (1950). The gonosomes are lacking. The colonies are growing on *Zostera* and *Sargassum*.

The species is widely distributed in the North Atlantic and also has been reported from the North Pacific. The species was reported by Marenzeller (1902)

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from the vicinity of Vladivostok under the name, *Obelia flabellata*.

***Grammaria immersa* Nutting (Fig. 1)**

*Grammaria immersa*: Nutting, 1901, p. 178, pl. 21, figs. 5, 6; Jäderholm, 1907, p. 4, pl. 2, fig. 4; Broch, 1909, p. 161, 211, pl. 3, fig. 6; Linko, 1911, p. 138; Stechow, 1913, p. 121; Stechow, 1923, p. 11, no. 107; Fraser, 1937, p. 117, pl. 24, fig. 124.



Fig. 1. *Grammaria immersa* Nutting.  $\times 2/3$ .

*Locality.* On crab-nets at a depth of ca. 60 m, in the vicinity of Ascold Island; October 13, 1926. In Crab-nets; November 10, 1926.

The colony is large, attaining 16 cm in height, and is rather stout, consisting of a stem and branches. The main stem is fascicled and much branched. The branches are straight, forming a rather large angle, often attaining nearly a right angle or more with the stem or branch. The hydrothecae are smaller, almost wholly immersed in the stem or branch and the short free portion of the distal end is nearly at right angle to the stem or branch. The gonosomes are not found.

The distribution of this species ranges widely over the boreal region of the world. In the North Pacific the species has been recorded from Bering Sea, Alaska and Japan. An only record from Japan is due to Stechow (1913), by whom the species was described based on the specimens from Uraga straits near Tokyo Bay.

### ***Sertularella miurensis* Stechow**

*Sertularella indivisa*: Stechow, 1913, p. 134, figs. 106-107.

*Sertularella miurensis*: Stechow, 1923, p. 13, no. 134; Yamada, 1950, p. 11.

*Locality.* At a depth of over 1 m, at Patrokl Bay; July 1, 1926.

A considerable number of colonies growing on *Sargassum* were collected. The colony is 2-2.5 cm in height. The trophosome and the gonosome of the specimens closely agree in each character with my description (1950) on this species from Akkeshi Bay. The gonosomes are found in numerous number, provided with 4-5 remarkable annular rugosities and 3 or 4 conspicuous horn-like projections.

The species is very commonly found attached on algae in the tidal coasts along Japan, throughout Honshu and Hokkaido.

### ***Sertularella gigantea* Mereschkowsky**

*Sertularella polyzonias gigantea*: Linko, 1912, p. 126, fig. 19.

*Sertularella gigantea*: Stechow, 1923, p. 14, no. 142; Yamada, 1950, p. 11, pl. 1, fig. 10; Yamada, 1955, p. 18, fig. 2.

*Locality.* In crab-nets; April 7, 1926. Sobol Bay; April 21, 1926.

Some fragments of the colonies were collected. The stem is dichotomously branched. The branches are irregularly alternate, resembling the main stem in form, themselves frequently dividing dichotomously. The hydrothecae are cylindrical, with smooth walls. Duplications of the hydrothecal margin are not found in the present specimens. The gonosomes are lacking.

The species is widely distributed over the circumboreal region of the Pacific and the Atlantic. The species has been reported from Kamtschatka by Kirchenpauer (1884), from the Okhotsk Sea, the Japan sea and some arctic regions by Linko (1912) and from Akkeshi Bay by the present author (1950, 1955).

### ***Abietinaria costata* (Nutting)**

*Thuiaria costata*: Nutting, 1901, p. 187, pl. 26, figs. 4-9.

*Diphasia costata*: Kudelin, 1914, p. 411, figs. 125, 142, pl. 3, fig. 9.

*Abietinaria costata*: Nutting, 1904, p. 122, pl. 36, figs. 9-12; Yamada, 1950, p. 14, pl. 1, fig. 15.

*Locality.* On the shore after a storm, Patrokl Bay; July 31, 1926. Cast on the shore, Sobol Bay; July 17, 1926. Sobol Bay; August 2, 1926.

A considerable number of colonies were collected. The colonies attain 10 cm in height. The proximal part of the main stem is often branched. Some colonies bear gonosomes, each of which is provided with conspicuous longitudinal ridges. The species almost agrees with my description on this species from Akkeshi Bay.

The species has been reported from Vladivostok by Kudelin (1914). It seems that this species is distributed from Alaska and Kamtschatka to Hokkaido and Vladivostok.

### *Sertularia cupressoides* Clark

*Sertularia cupressoides*: Kudelin, 1914, p. 200, figs. 46-48; Yamada, 1950, p. 15, pl. 1, figs. 17-19.

*Locality.* Sobol Bay; May 21, 1926. In crab-nets at a depth of ca. 60 m and in the vicinity of Ascold Island; October 13, 1926.

The colony is plumose in appearance, attaining 16 cm in height in the largest specimen. The main stem is almost straight; not branched. The branches are alternately or subalternately present on the main stem. The gonosomes are found in a row on each upper side of the branches, provided with two characteristic horn-like shoulder spines.

The species has been reported from the Okhotsk Sea by Kudelin (1914) and from Akkeshi Bay by the present author (1950).

It is a great pleasure to dedicate to Professor T. Uchida in commemoration of his 60th birthday.

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