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Descriptions of two *Alcyonium* from Northern Japan

With 2 Text-figures

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A few alcyonarians have been reported from the coast of Hokkaido, Japan, but none from the coast of Honshu. Two alcyonarians are abundantly found at two tidal marks near the Akkeshi Marine Biological Station. In May and June, 1948, I collected many specimens on the shore of Akkeshi Bay and afterwards several hundred specimens from Minoran. The two species, except for the color, closely resemble each other in size and colonial form, but differ in certain features of the skeleton. They resemble members of *Alcyonium* from their colonial form, and in the lack of siphonous structures they belong, in all probability, to the genus *Alcyonium*. There have hitherto been described three species of *Alcyonium* from Japanese waters; namely *A. gracilimum*, *A. kishinouyei*, and *A. kishinouyei*, the first two from the middle coast of Japan and the last from the Okhotsk Sea.

Alcyonium pacificum n. sp.

The form of the colony is somewhat mushroom-like and slightly depressed. The short stalk attached to the substratum by a small basal portion and widens apically forming a capiculum. The capiculum is not lobed, rather convex, attaining 4 cm in diameter and 1 cm in height. The polyps are located on the outer surface of the capiculum and not on the stalk. They are large, attaining 1 cm in height with 8 tentacles, being capable of entire retraction. The basal part of the polyp is surrounded by 8 rows of spicules and a few spicules are

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(Communicated by T. UCHIDA)

A few alcyonarians have been recorded from the northwestern Pacific but none from the coast of Hokkaido. However, two alcyonarians are abundantly found at the tidal mark near the Akkeshi Marine Biological Station. In May and June, 1948, I collected many specimens on the shore of Akkeshi Bay and afterwards several materials from Muroran. The two species, except for the color, closely resemble each other in size and colonial form, but differ in certain features of the spicules. They resemble members of *Anthomastus* from their colonial form, and in the lack of siphonozooids they belong, in all probability, to the genus *Alcyonium*. There have hitherto been described three species of *Alcyonium* from Japanese waters; namely *A. agaricum*, *A. gracillimum*, and *A. kükenethali*, the first two from the middle coast of Japan and the last from the Okhotsk Sea.

Alcyonium pacificum n. sp.

The form of the colony is somewhat mushroom-like and slightly depressed. The short stalk attaches to the substratum by a small basal portion and widens apically forming a capitulum. The capitulum is not lobed, rather convex, attaining 4 cm in diameter and 1 cm in height. The polyps are located on the outer surface of the capitulum and not on the stalk. They are large, attaining 1 cm in height, with 8 tentacles, being capable of entire retraction. The basal part of the polyp is surrounded by 8 rows of spicules and a few spicules are

scattered in the other parts of the polyp. No siphonozooids are present. The color is bright orange in living specimens. The spicules are scattered in the coenencyme of the capitulum and the stalk, especially abundant on the surface of the former and the basal and the peripheral parts of the latter. They are of one type and double-star in form.

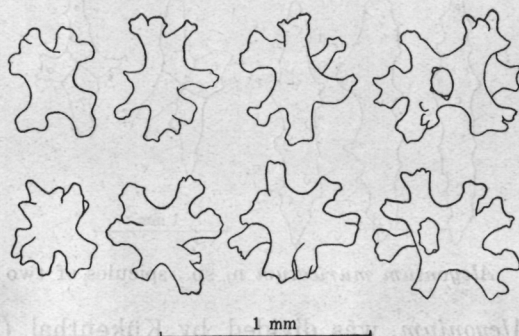


Fig. 1. *Alcyonium pacificum* n. sp., spicules.

The species is commonly found at the tide-mark at Daikoku-shima near Akkeshi, and Muroran, attached to rocks or stones.

This form distinctly differs from other species of *Alcyonium* by the capitulum which is not lobed and delimited from the short stalk, and also by the polyps which are confined to the capitulum.

Alcyonium muricatum n. sp.

The form of the colony is similar to that of the former species, somewhat mushroom-like and slightly depressed. The colony is composed of a short stalk and a rounded capitulum. The capitulum is not lobed, rather convex or capitate, almost similar in size to the former species. The polyps are present on the outer surface of the capitulum. They are fully retracted. The polyps are destitute of spicules even on their basal portion. No siphonozooids are present. The color is light purple in living specimens. The spicules are found on the coenencyme of the inner, not peripheral, part of the capitulum and the stalk. They are of two types; one composed of large warty spindles and the other of small crosses. They are present simultaneously in the coenencyme.

The species is found together with the former species at the tidal mark at Daikoku-shima attached to rocks or stones.

Though the new species here described are very closely related in the form of the colony, they are easily distinguishable from each other by their color, and by the form and arrangement of the spicules.

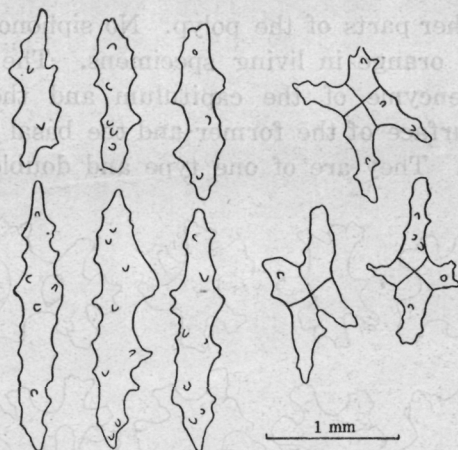


Fig. 2. *Alcyonium muricatum* n. sp., spicules of two types.

The genus *Alcyonium* was divided by Kükenthal (1906) into three subgenera; namely *Erythropodium*, *Metalcyonium* and *Alcyonium*. In *Alcyonium* s. st. the colony possesses a massive stalk and a capitulum which is more or less lobed. *Erythropodium* includes the forms flattened and membranously spreading, and *Metalcyonium* contains those which are cylindrical or club-shaped and unbranched. According to Kükenthal's system the two new species above described both belong to *Metalcyonium*. The new species are however, remarkable in the form of colony among members of *Alcyonium*.

I wish here to express my hearty thanks to Prof. Tohru Uchida for his kind guidance.

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