SOME NEW AND SOME PREVIOUSLY UNREPORTED HYDROIDS, MAINLY FROM THE CALIFORNIAN COAST

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UNIVERSITY OF CALIFORNIA PUBLICATIONS IN ZOOLOGY
Volume 28, No. 7, pp. 167–172, 7 figures in text

UNIVERSITY OF CALIFORNIA PRESS
BERKELEY, CALIFORNIA
1925

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This series contains the contributions from the Department of Zoology, from the Marine Laboratory of the Scripps Institution for Biological Research, at La Jolla, California, and from the California Museum of Vertebrate Zoology in Berkeley.

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SOME NEW AND SOME PREVIOUSLY UNREPORTED HYDROIDS, MAINLY FROM THE CALIFORNIAN COAST

BY
C. McLEAN FRASER

In material collected by the United States Bureau of Fisheries Steamer "Albatross," and by the University of California, mainly from the Californian coast, sent to me for examination by Dr. C. A. Kofoid, there are seven species that appear to be new. Unfortunately, in no case was the gonosome present. Of necessity, then, some of the species can be only provisionally placed in the genus assigned. Five of the species were found in material from the Californian coast, one from off the Oregon coast, and one, rather out of place in such a collection, was taken at a "Fishhawk" station, off the Florida coast.

Besides these new species, four species, not previously reported from the Pacific coast of North America, were obtained, all from the San Francisco Bay region. As these will be described later, in a key to the hydroids of the Pacific coast of the United States, and as they have already been well described in one or more papers, only the distribution of the specimens in the collection is given here.

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? **Coryne corrugata** sp. nov.

Figure 1

Trophosome.—Colony reaching a height of 3.5 cm., much branched, the branches coming off with a definite knee joint at a very acute angle with the stem; the secondary branches arise from the primary branches in the same manner; many of these secondary branches, while terminating in a hydranth, give off numerous branchlets that have no hydranths; perisarc thick, with deep annulations, that may be considered as corrugations, throughout the whole length of the

stem and branches; hydranths capable of great extension and usually appearing rather long and slender; tentacles 20–30, not arranged in very definite verticils.

Gonosome.—Unknown.

Distribution.—San Diego, near jetty.

Since no gonosome was present in the material examined it is not possible to say definitely whether the species is a *Coryne* or a *Syncoryne*. It bears considerable resemblance to *Coryne brachiata* Nutting, but differs from it materially in the mode of branching, and it lacks the special processes below the hydranth to which *C. brachiata* owes its name.

? **Bimeria pusilla** sp. nov.

Figure 2

Trophosome.—Colony small, straggling, less than 5 mm. high; from one to three main branches that are similar in size and appearance to the main stem; secondary branches vary in length and are irregularly placed; these may bear hydranths or may divide again to form pedicels for hydranths; the angle that the small branches make with the larger, and that the larger make with the stem, is very variable; the perisarc is thin, nowhere annulated or wrinkled, but there is a slight tendency to waviness that prevents complete smoothness; this waviness appears in the small branches as well as in the larger and the stem; hydranths with 12–14 tentacles.

Gonosome.—Unknown.

Distribution.—Lime Point, San Francisco Bay.

? **Bimeria tenella** sp. nov.

Figure 3

Trophosome.—Stem simple or with a slight tendency to fasciculation, reaching a height of 15 mm.; stem and branches slender, the branches making a wide angle with the stem, and the pedicels of the hydranths making a wide angle with the stem or branches; the pedicels attached to the stem in general much longer than those

Figures 1–7

1. *Coryne corrugata* sp. nov. **Hydranths and mode of branching.** × 5.

2. *Bimeria pusilla* sp. nov. **Main portion of colony.** × 10.

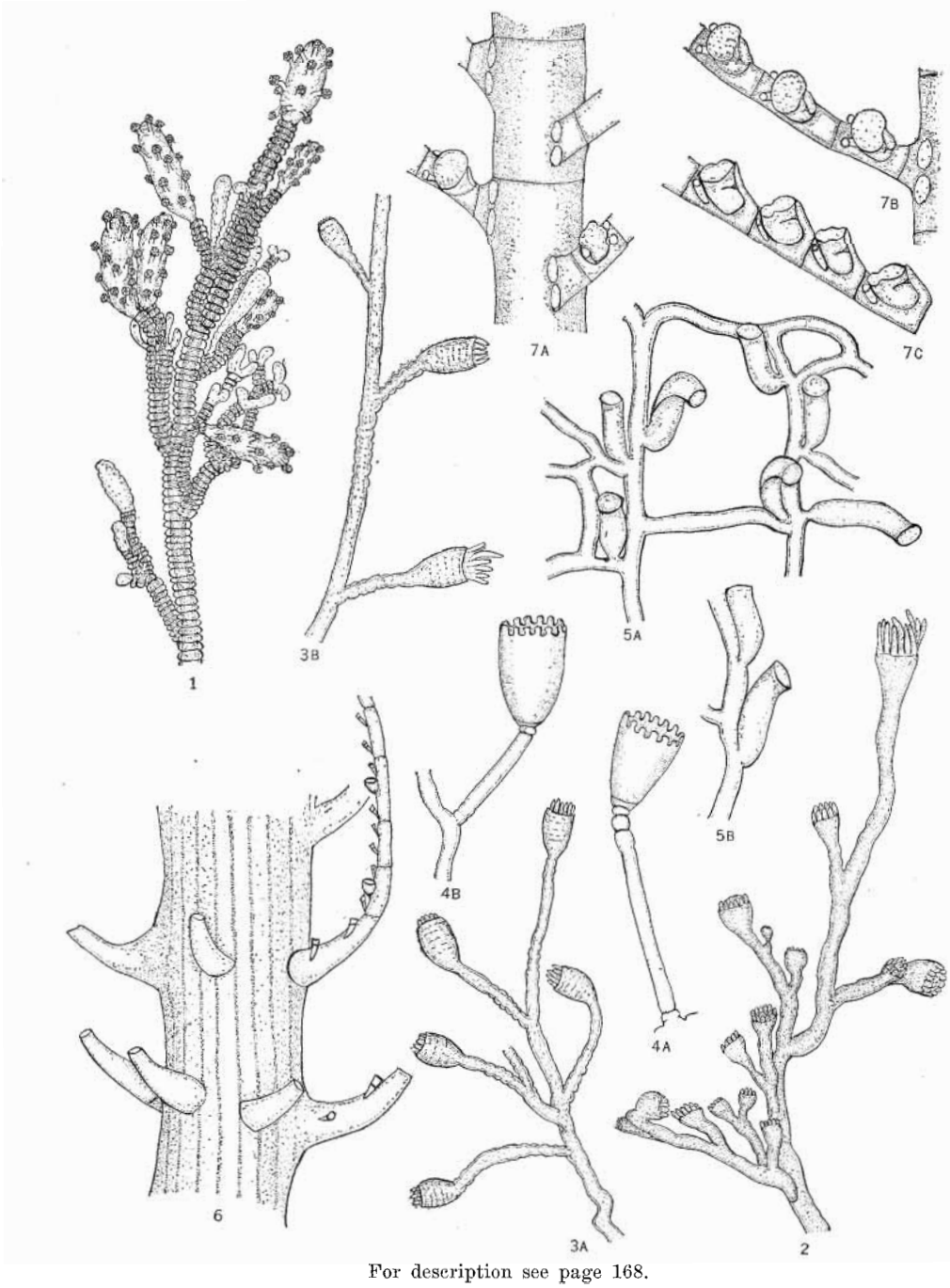
3. *Bimeria tenella* sp. nov. × 10. ***a* and *b*, two portions of colony.**

4. *Campanularia castellata* **sp. nov.** × 10. ***a* and *b*, two hydrothecae.**

5. *Lafœa adnata* sp. nov. × 10. *a*, portion of colony showing network; *b*, separate portion of network showing two hydrothecae.

6. ***Antennularia verticillata* sp. nov. Main stem** showing arrangement of hydr**ocladia.** × 10.

7. ***Halicornaria sinuosa* sp. nov.** × 10. ***a*, portion** of main stem; *b*, side view of hydrocladium; *c*, face view of hydrocladium.



For description see page 168.

attached to the branches; the main stem and branches mainly smooth, but there may be a wrinkling or even an annulation for short distances; pedicels annulated extensively at the base or more rarely annulated or wrinkled throughout the whole length; the perisarc surrounding the base of the hydranth is heavy and somewhat rough or wrinkled; hydranths with 10 tentacles.

Gonosome.—Unknown.

Distribution.—Several points near the entrance of San Francisco Bay in the neighborhood of Southampton Light, Angel Island, and Alcatraz Island. Depth, 9–22 fathoms.

This species bears close resemblance to *Bimeria vestita* Wright, the most important difference being in the much smaller number of tentacles in the hydranth, 16 in *B. vestita.* There is some resemblance to *B. gracilis* (Clark), also, but that species is strongly fascicled and the branches and pedicels pass out at a very narrow angle so that they are almost parallel with the stem.

? Campanularia castellata sp. nov

Figure 4

Trophosome.—Stem unbranched, forming the hydranth pedicel, from 0.8 mm. to 4.0 mm. in length, terminated below the hydrotheca in a ball-shaped joint, but otherwise only slightly annulated, if at all; in some cases there is a slight waviness near each extremity; stolon not annulated; hydrotheca large, 0.6 to 1.0 mm. in length and 0.4 to 0.6 mm. in greatest width, tapering but slightly from the margin to near the base, the base nearly hemispherical; the 12–14 teeth are deep, the same width throughout or slightly broader near the tip, which is just noticeably rounded; the hydrothecal wall is uniform in thickness, without lines or ridges; the space between the diaphragm and the base is shallow.

Gonosome.—Unknown.

Distribution.—Near Alcatraz Island, entrance of San Francisco Bay, 10–17 fathoms, growing on *Sertularia desmoides.*

This species bears close resemblance to *Campanularia grœnlandica* Levinsen, but as *C. grœnlandica* has such very distinct lines running vertically along the hydrotheca from the spaces between the teeth and these specimens have no indication of anything of the kind, they cannot well be included with that species.

Lafœa adnata sp. nov.

Figure 5

Trophosome.—Hydrothecae attached to a reticulate stolon, with no definite pedicels, although there is a definite constriction at the base of each; in nearly all cases the wall of the hydrotheca is attached

to the stolon for a part of its length but the proportion varies very materially; except for the tapering to the constriction the hydrotheca is of uniform diameter; there may or may not be a slight flare at the margin; the hydrotheca is always curved but the amount of curvature varies; in extreme cases the distal extremity is at right angles to the proximal; there is no diaphragm present; in the specimens examined the hydranth has 8 tentacles.

Gonosome.—Unknown.

Distribution.—Near Farallon Islands in 33–35 fathoms, on algae, bryozoa, and other hydroids.

Antennularia verticillata sp. nov.

Figure 6

Trophosome.—A fragment of a stem 2.5 cm. long is stout and uniform, diameter 1.0 mm. The canaliculated appearance of the coenosarc is very regular, there being 24 vertical, parallel grooves showing at the surface; hydrocladia arranged in very regular whorls of six, the individual hydrocladia in one whorl opposite the spaces between the hydrocladia in the whorl above and the whorl below, so that there are really 12 vertical series, and thus two coenosarcal canals for each series; the basal hydrocladial internode is long, curved, and so much stouter than the remainder of the hydrocladium that it might be considered a process of the stem, bearing the hydrocladium, particularly, since it is at the distal extremity of the internode that the hydrocladium breaks off the most readily; this basal internode bears two nematophores; and next to it there is a hydrothecate internode, with one nematophore below the hydrotheca and two above it; a non-hydrothecate internode with two nematophores follows; the hydrothecate and non-hydrothecate internodes then alternate throughout the hydrocladium.

Gonosome.—Unknown.

Distribution.—31.7 miles N 75° E of Heceta Head Light, Oregon coast, 84 fathoms.

In the regular and alternating whorls of hydrocladia and in the nature of the proximal internodes of the hydrocladia, this species is distinctly marked off from other species that have been described.

No species of the genus *Antennularia* has previously been reported from the Pacific coast of North America.

Halicornaria sinuosa sp. nov.

Figure 7

Trophosome.—Colony unbranched, largest obtained 12 cm. in length; stem simple, divided into regular internodes, each of which bears two hydrocladia, placed on the one side of the stem at an angle of 135° or less, the one higher than the other on the internode, but the two on the one internode nearer together, in a vertical direction,

than the nearest two in succeeding internodes; hydrocladia divided into short internodes, all hydrothecate; hydrothecae with length and breadth nearly equal or slightly deeper than broad, but slightly curved, hence running almost parallel to the axis of the hydrocladium; the margin, which is sinuous, not toothed, making an angle of about 45° with the axis; the intrathecal ridge is strongly marked; mesial nematophore straight, just reaching the margin of the hydrotheca; the two supracalycine nematophores reaching the margin of the hydrotheca; two large cauline nematophores on the face of the stem at the base of each hydrocladium, and one, also large, at the back of the same process.

Gonosome.—Unknown.

Distribution.—Fishhawk Station 7511, 2⅛ miles SSE of Fowey Rock **Light, Gulf Stream off Cape Florida, 45 fathoms.** With the hydroids *Aglaophenia rigida* and *Schizotricha tenella.*

Turritopsis nutricula McCrady

Oceania nutricula McCrady, Proceedings Elliott Soc., **1856,** 1–56.
Turritopsis nutricula McCrady, Gymnoph. Charleston Har., **1857,** 25.
Turritopsis nutricula Fraser, Hydroids of Beaufort, **1912,** 345.
Distribution.—Oakland, California.

Pennaria tiarella McCrady

Pennaria tiarella McCrady, Gymnoph. Charleston Har., **1857,** 51.
Pennaria tiarella Fraser, Hydroids of Beaufort, **1912,** 355.
Distribution.—San Francisco Bay at entrance of San Pablo Bay, 4 fathoms.

Obelia bicuspidata Clarke

Obelia bicuspidata Clarke, Trans. Conn. Acad. Sci., **3,** 1876, 58.
Obelia bicuspidata Fraser, Hydroids of Beaufort, **1912,** 361.
Distribution.—Generally distributed throughout San Francisco Bay, from 7 to 12 fathoms; at the entrance to Carquinez Strait, at the entrance to San Pablo Bay, near Southampton Light and Alcatraz Island, and near Shag Rock in the lower bay.

Cryptolaria pulchella Allman

Cryptolaria pulchella Allman, Challenger Hyd., **23,** 1888, 40.
Distribution.—Off Goat Island, San Francisco Bay, 10 fathoms.

UNIVERSITY OF BRITISH COLUMBIA,
DEPARTMENT OF ZOOLOGY,
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Transmitted September 24, 1925.

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