

in time be similarly provided. The avicularia resemble those of *Bugula margaritifera* in their sessile mode of articulation, but differ in their pyriform shape, larger size, and position on the front of the zoecium below the aperture, and not upon the margin as in that species.

§ β.

(5) *Bugula reticulata*, n. sp. (Pl. VIII. fig. 3).

Character.—Zoarium composed of long, straggling, distant branches, connected by transverse, delicate, calcified, jointed tubes, which appear to issue from the upper and back part of a zoecium in one of two contiguous branches, and to attach themselves to one in the other branch, either by a discoid expansion of the tube or by tendril-like claspers. Zoecia elongated, subtubular below. The frontal aperture occupies from one-half to two-thirds of the length. Either with or without a marginal spine at each upper angle. A pedunculated avicularium of small size is articulated by a long flexible pedicel to a rounded opening close below the aperture in front. Oecia large, lofty cucullate.

Habitat.—Station 147, lat. 46° 16' S., long. 48° 27' E., 1600 fathoms, Diatom ooze. Station 320, lat. 37° 17' S., long. 53° 52' W., 600 fathoms, green sand. Station 299, lat. 33° 31' S., long. 74° 43' W., 2160 fathoms, blue mud. Station 303, lat. 45° 31' S., long. 78° 9' W., 1325 fathoms, Globigerina ooze.

Var. *a*, *unicornis* (Pl. IX. fig. 2).

Many of the zoecia have a tubular cylindrical spine arising from the back near the top.

Habitat.—Station 101, lat. 5° 48' N., long. 14° 20' W., 2500 fathoms, blue mud. Station 106, lat. 1° 47' N., long. 24° 26' W., 1850 fathoms, Globigerina ooze. Station 104, lat. 2° 25' N., long. 20° 1' W., 2500 fathoms, Globigerina ooze. Station 68, lat. 38° 3' N., long. 39° 19' W., 2175 fathoms, Globigerina ooze.

The peculiar dorsal hollow spine is probably only a modified or undeveloped connecting tube. A pedunculate avicularium, exactly like those seated on the zoecia, may sometimes be seen on one of the transverse connecting tubes above described.

(6) *Bugula bicornis*, n. sp. (Pl. IX. fig. 1).

Character.—Zoarium several inches high, composed of very long branches. Zoecia elongated, wide above and subtubular below, each arising from nearly the middle of the back of the preceding one. Aperture elliptical, occupying about two-thirds of the front; the sides produced at each upper angle into a large hollow, conical horn. Two avicularia