ART. VII.—*Notice of recent Additions to the Marine Fauna of the Eastern Coast of North America, No.* 6; by A. E. VERRILL. *Brief Contributions to Zoology from the Museum of Yale College.* No. XLIII.

POLYZOA.

Bugula decorata, sp. nov.

Zoarium rather large with thick, much branched stems, producing densely branched, somewhat plumose tufts, two inches or more high. Branches unequally dichotomous, often somewhat spirally arranged. Zoœcia in two alternating rows, large, broad, prolonged proximally. Frontal area, large, elongated, sunken and wrinkled in the dry state. The distal angles are prolonged into a single stout, often short spine on each side, frequently absent on the inner angle. Avicularia on the middle of the front side of the zoœcia, toward the base; they have a short, broad, swollen head, with a short strongly curved beak; the pedicels are short and thick, rapidly enlarged from the base upward. Oœcia large, globose, brilliantly iridescent, elegantly sculptured, with a series of raised curved lines passing up over each side and converging to the middle of front side, while their concave interspaces are covered with microscopic transverse lines. Dredged at Eastport, Me., by the writer, and also in the Gulf of Maine, 110 fathoms, near George's Bank, by Dr. A. S. Packard and Mr. C. Cooke, in 1872 (U. S. Fish Com.). The other species of *Bugula* found on the New England coast are as follows:

Bugula cucullata, sp. nov. Off Maine. Remarkable for the small, hood-like, upturned oœcia, widely open in front. Zoœcia in two rows; usually two spines on each angle; avicularia lateral.

Bugula turrita (Desor) Verrill. Florida to Casco Bay.

Bugula avicularia (L.) Oken. Long I. Sound to Spitzbergen.

Bugula fastigiata (L.) Alder (= *B. plumosa* Busk). Mass. Bay to Labrador; Europe. Perhaps a variety of the last.

Bugula flustroides (Lamx.) (= *B. flabellata* Gray). Long I. Sd. to Maine; Europe.

Bugula Murrayana Busk. Long I. Sd. to Europe.

B. Murrayana, var. *fruticosa* (Packard).

Bugula flexilis Verrill and *Bugula umbella* Smitt, belong to the genus *Kinetoskias* Dub. and Kor. Both occur in deep water off Maine and Nova Scotia.

Notwithstanding the very numerous restrictions which the ancient genus *Cellularia* has undergone, it is still made to include heterogeneous species by several recent writers, while others restrict it to groups not originally included by Pallas. In the excellent memoirs of Smitt on the Arctic Bryozoa, five species still remain in the genus *Cellularia*. These belong to three well-marked groups, and their synonymy is very

complicated. Having had occasion to revise this family, I offer the following summary of the New England species.

I. *Cellularia* Pallas, 1766, (restricted). Zoœcia unilateral, in two alternating rows, mostly protected by lateral spines, either simple or dilated. Vibracula and lateral and median avicularia present. Type *C. scruposa.**

a. Subgenus *Cellularia.* (=*Scrupocellaria, pars*, Gray, Busk). Lateral spines all simple.

b. Sub-genus *Cellarina* Van Ben. (incl. *Tricellaria* Flem., 1828.) One of the lateral spines usually more or less dilated, and often expanded in a shield-like form in front of the zoœcia. Two New England species: *C. scabra* Van Ben.; and *C. ternata* (Sol.) with varieties *gracilis* and *duplex* (Smitt).

The name *Tricellaria* (given to *ternata*), might have been adopted for this subgenus, but is very inapplicable to the group, and even to the type-species, as now known.

II. *Scruparia* Oken (restricted), (= *Scrupocellaria, pars*, Gray; *Canda* Busk, *non* Lamx.). Lateral avicularia and vibracula absent. A lateral spine develops into a protective (often frondose) shield. Type *S. reptans* (Linné), not yet found on the American coast.

III. *Bugulopsis* Verrill (= *Cellularia, pars*, Busk, *non* Pallas). Characterized by the simple, unarmed zoœcia, arranged in alternating rows, and destitute of avicularia, vibracula and shields. Type *B. Peachii* (Busk). Gulf of Maine and Bay of Fundy. European seas, north to Spitzbergen.

As no species of the last group was originally included in *Cellularia*, it is inadmissible to restrict that name to it. Therefore either *reptans* or *scruposa* should be taken as the type of *Cellularia*, both having been originally included by Pallas, as well as by most subsequent authors. *Scruparia*† Oken (1815) originally included not only the group that had previously been named *Eucratea* by Lamouroux (1812), but also *S. reptans*. Therefore there seems to be no good reason why it should not be restricted, as above, rather than be displaced by the much later and more objectionable name, *Scrupocellaria*. *Menipea*, used by Busk and others for *Cellarina*, is inadmissible, in that sense, for the original group thus named by Lamouroux is a valid and very distinct genus. *Canda* (Lamx., 1816), adopted by some for *Cellularia reptans*, cannot properly be so used, for the original type is a distinct genus.

Porellina stellata, sp. nov.

A large, handsome species, forming radiating patches on shells, etc. Zoœcia arranged in quincunx, large, broad, mod-

* This species has been recorded from the Gulf of St. Lawrence by Packard and others, but I have myself seen no American examples.

† This name has recently been given to a new genus, in a new sense, by Hincks, in accordance with a practice that is nearly always unsafe, as well as confusing.

erately convex, white, shining, mostly imperforate and smooth, the marginal ones more or less perforate in front. Apertures nearly semi-circular, the proximal edge straight or nearly so, often with two spines on the distal border, median pore, a short distance from the aperture, large, nearly circular, provided with numerous, slender, convergent spinules, which nearly reach the center, giving the pore a stellate appearance. Avicularia near the lateral margin, about opposite the median pore, varying in size and form: in the same colony some are short triangular, others long triangular, while others with a long and acute, erect tip show the transition toward vibracula. Length of zoœcia, ·60 to ·70mm; breadth, ·50 to ·60mm; breadth of apertures, ·12 to ·15mm; of median pore, ·05 to ·06mm. The zoœcia are about twice as large as those of *P. ciliata.*

Casco Bay, Maine. (U. S. Fish Comm., 1873).

In the nearly circular form of the median pore this species approaches the genus *Porina*, as restricted by Smitt, (Florida Bryozoa), but in all other respects, except size, it agrees so closely with *P. ciliata*, made the type of *Porellina* by Smitt, as to forbid a generic separation, although the latter has a crescent-shaped pore. It would belong to *Microporella* Hincks, if that name be adopted.