

LIST OF ANTHOZOA* DREDGED BY THE "ALBATROSS" IN 1883.

ALCYONARIA.

- Pennatula aculeata* Kor. & Dan. Figs. 7, a, b.
B. range, 97 to 1,255 fathoms, 1883. Abundant locally.
- Pennatula aculeata*, var. *rosea* Kor. & Dan.
B. range, 157 to 410 fathoms (197 fathoms, 1883). Rare.
- Pennatula (Ptilella) borealis* Sars. Figs. 8, 8a.
B. range, 192 to 1,255 fathoms (204 to 1,255 fathoms, 1883). More common off Nova Scotia.
- Benthoptilum sertum* Verrill. Fig. 4.
B. range, 843 to 1,073 fathoms (843 fathoms, station 2115, off Cape Hatteras, 1883). Rare.
- Balticina Finmarchica* (Sars) Gray. Figs. 11, 11a.
B. range, 164 to 858 fathoms (197 to 858 fathoms, 1883). Not rare; common off Nova Scotia.
- Anthoptilum grandiflorum* Verrill. 1879. Fig. 9.
B. range, 302 to 1,731 fathoms (1,098 to 1,731 fathoms, 1883). Scarce and local; common off Nova Scotia.
- Anthoptilum Murrayi* Kölliker.
B. range, 640 to 1,362 fathoms (843 to 1,362 fathoms, 1883). Common locally.
- Funiculina armata* Verrill. 1879.
B. range, 252 to 1,362 fathoms (1,050 to 1,362 fathoms, 1883). Not uncommon.
- Kophobelemnon tenue* Verrill. 1884. Fig. 5, a.
B. range, 1,362 to 2,369 fathoms, 1883. Not common; local.
- Kophobelemnon scabrum* Verrill. 1883.
B. range, 499 to 788 fathoms, 1883. Not common; abundant locally in 1884.
- Umbellula Bairdii* Verrill. 1884. Fig. 2.
B. range, 1,731 to 2,033 fathoms, 1883. Not common; local.
- Umbellula Guntheri* Kölliker. Fig. 3.
B. range, 1,731 to 2,033 fathoms, 1883. Not common; local.

* The following paper on the "Blake expedition" Anthozoa contains descriptions and figures of many of the deep-sea species by the writer:

Report on the Anthozoa, and on some additional species dredged by the "Blake" in 1877-'79, and by the U. S. Fish Commission steamer "Fish Hawk" in 1880-'82. From the Bulletin of the Museum of Comparative Zoölogy, vol. xi, No. 1, July, 1883.

Many species are also described by the writer in "Brief Contributions to Zoölogy from the Museum of Yale College" in the American Journal of Science, 1878 to 1884; and others in the Proc. U. S. National Museum, vol. ii, pp. 165-205, 1879.

Protoptilum aberrans K lliker.

B. range, 861 to 1,290 fathoms (1,098 to 1,290 fathoms, 1883). Rare.

Distichoptilum gracile Verrill. 1882.

B. range, 780 to 1,050 fathoms (1,050 fathoms, 1,883). Rare.

Soleroptilum gracile Verrill. 1884. Fig. 6.

B. range, 1,467 to 2,369 fathoms, 1883. Abundant locally.

Renilla reniformis Cuv.

B. range, shore to 15 fathoms, off Cape Hatteras, 1883.

Acanella Normani Verrill. 1878.

B. range, 105 to 1,731 fathoms, 1883. Very common and abundant.

Lepidisis caryophyllia Verrill. 1883.

B. range, 1,098 to 1,735 fathoms, 1883. Common.

Keratoisis ornata Verrill. 1878.

B. range, 150 to 300 fathoms off Nova Scotia; 858 fathoms, 1883, off Cape Sable; dead joints. Northern; not rare off Nova Scotia.

Lepidogorgia gracilis Verrill. 1884. Fig. 10.

B. range, 858 to 1,735 fathoms, 1883. Locally abundant.

Dasygorgia Agassizii Verrill. 1883.

B. range, 1,346 fathoms, 1883. Rare and local.

Paramuricea borealis Verrill. 1878.

B. range, 101 to 855 fathoms, 1883. Not rare; common northward.

Acanthogorgia armata Verrill. 1878.

B. range, 407 to 640 fathoms (407 fathoms, 1883). More common off Nova Scotia, in 150 to 300 fathoms.

Primnoa reseda (Pallas) Verrill.

B. range, 101 to 131 fathoms, 1883. Northern; not taken south of Brown's Bank, Nova Scotia.

Anthomastus grandiflorus Verrill. 1878. Fig. 12.

B. range, 75 to 1,395 fathoms, 1883. Local; common off Nova Scotia.

Gersemia longiflora Verrill. 1883.

B. range, 858 to 1,917 fathoms, 1883. Locally abundant.

Eumephythya L tkeni (Marenz.) Verrill.

B. range, 858 to 1,497 fathoms, 1883. Not common; chiefly northern.

Alcyonium multiflorum Verrill. 1879.

B. range, 130 to 300 fathoms, off Nova Scotia (131 to 239 fathoms, 1883). Common off Nova Scotia.

Alcyonium carneum L. Agassiz.

B. range, 8 to 55 fathoms (13 fathoms, 1883). Abundant locally in 15 to 30 fathoms.

Cornulariella modesta Verrill. 1874.

B. range, 80 to 150 fathoms (80 fathoms, 1883, off Cape Sable). Entirely northern.

ACTINARIA.

- Adamsia sociabilis* Verrill. 1882. Fig. 26.
B. range, 79 to 410 fathoms (98 fathoms, 1883). Abundant locally.
- Sagartia abyssicola* (Kor. & Dan.) Verrill. Fig. 177.
B. range, 69 to 640 fathoms (131 to 487 fathoms, 1883). Abundant.
- Sagartia Acanella* Verrill. 1883. Fig. 25.
B. range, 252 to 1,608 fathoms (407 to 1,608 fathoms, 1883). Abundant on Acanella.
- Sagartia spongicola* Verrill. 1883.
B. range, 79 to 317 fathoms (81 to 179 fathoms, 1883). Abundant on spongy bottom.
- Synanthus mirabilis* Verrill. 1879.
B. range, 150 to 333 fathoms. Common off Nova Scotia.
- Urticina crassicornis* Ehr.
B. range, 16 to 141 fathoms (49 to 141 fathoms, 1883, George's and Brown's Banks). Abundant northward in shallow water.
- Urticina perdix* Verrill. 1882. Fig. 19, a.
B. range, 62 to 192 fathoms (62 fathoms, 1883). Common locally.
- Actinauge longicornis* Verrill. 1882. Fig. 21.
B. range, 100 to 325 fathoms (142 to 197 fathoms, 1883). Not uncommon.
- Actinauge nexilis* Verrill. 1883. Figs. 22, 22a.
B. range, 168 to 245 fathoms (197 fathoms, 1883). Common.
- Actinauge nodosa* (Fabr.) Verrill. Fig. 20.
B. range, 86 to 1,098 fathoms (122 to 1,098 fathoms, 1883). Abundant and generally diffused.
- Actinauge consors* Verrill. 1882. Fig. 161.
B. range, 164 to 458 fathoms. Local; not common.
- Actinostola callosa* Verrill. 1882. Fig. 24.
B. range, 55 to 640 fathoms (99 to 239 fathoms, 1883). Common.
- Actinernus nobilis* Verrill. 1879. Figs. 23, 23a.
B. range, 1,068 to 1,582 fathoms, 1883. Rare; common off Nova Scotia in 200 to 300 fathoms.
- Bolocera Tuedia* Gosse.
B. range, 37 to 1,106 fathoms (65 to 1,106 fathoms, 1883). Generally distributed and abundant.
- Cerianthus borealis* Verrill. 1873.
B. range, 60 to 264 fathoms (99 fathoms, 1883). Not uncommon; but adults are rarely dredged.
- Epizoanthus Americanus* Verrill. 1864.
B. range, 26 to 547 fathoms (35 to 547 fathoms, 1883). Generally diffused and very abundant.

Epizoanthus Americanus Verrill (encrusting variety).

B. range, 49 to 906 fathoms, 1883. Abundant.

Epizoanthus paguriphilus Verrill. 1882. Fig. 28.

B. range, 252 to 640 fathoms (499 fathoms, 1883). Abundant locally.

This large species, in all cases observed, has formed the carcinoëcia of

Parapagurus pilosimanus. The surface is smooth and glaucous, dark bluish gray in alcohol, and often partly covered with fine mud.

Epizoanthus abyssorum Verrill. 1885. Fig. 27.

B. range, 1,555 to 2,033 fathoms, 1883. Common.

This species generally forms the carcinoëcia of *Parapagurus pilosimanus*, but sometimes consists of two or three large obconic polyps arising from a grain of sand. In the former case there are four to six divergent marginal polyps, usually with an odd one above and beneath. The polyps are large, usually clavate in contraction, with twenty-four convergent ridges at the summit. The surface is closely covered with small foraminifera, mixed with some sand grains. Color grayish white, purple or orange tinted at summit. Length of largest polyps, in contraction, 10 to 13^{mm}; diameter, 9 to 11^{mm}.

MADREPORARIA.

Flabellum Goodei Verrill. 1878. Fig. 14.

B. range, 75 to 888 fathoms, 1883. Common.

Flabellum angulatum Moseley. Fig. 15.

B. range, 906 to 1,467 fathoms, 1883. Not common; local.

Caryophyllia communis (Seguenza) Moseley. Fig. 16.

B. range, 1,022 to 1,106 fathoms, 1883. Not common; local.

Paracyathus granulosus Verrill. 1885.

B. range, 1,091 fathoms, 1883. Not common.

Dasmosmilia Lymani Pourt. 1871. Fig. 17.

B. range, 65 to 179 fathoms, 1883. Common locally.

Oculina implicata Verrill. 1864.

B. range, 14 fathoms, off Cape Hatteras, 1883.

SPECIES PREVIOUSLY DREDGED BY THE "FISH HAWK" 1880 TO 1882, BUT NOT OBTAINED IN 1883.

Pennatula aculeata, var. *alba* Verrill. 1883.

B. range, 216 fathoms, 1882. Very rare.

Virgularia Ljungmani Köll. ? (young.)

B. range, 487 fathoms, 1880. Rare.

Anthothela grandiflora (Sars) Verrill.

B. range, 255 fathoms, station 1031, 1881. Local; common off Nova Scotia.

Actinernus saginatus Verrill. 1882.

B. range, 458 fathoms, station 1029, 1881. Rare.

Bolocera multicornis Verrill. 1882.

B. range, 33 to 90 fathoms, 1879, 1881. Local, northward, off Cape Cod.

Edwardia farinacea Verrill. 1866.

B. range, 146 fathoms, station 1038, 1881. Not common; frequent in shoal water northward.

Bathyaectis symmetrica (Pourt.) Moseley.

B. range, 225 to 252 fathoms, 1880. In 32 to 2,900 fathoms, "Challenger" expedition.

ADDITIONAL DEEP-SEA SPECIES DREDGED BY THE "ALBATROSS" IN
1884.

Stylatula, sp.

Station 2171, in 444 fathoms. Rare.

Stenogorgia casta Verrill. 1883.

Station 2220, in 1,054 fathoms; "Blake" expedition, 337 fathoms, off Georgia.

Phellia, sp.

B. range, 991 to 2,516 fathoms.

Desmophyllum cristagalli Edw. & Haime.

B. range, 1,054 to 1,060 fathoms. Rare.

Lophohelia prolifera Edw. & Haime.

B. range, 100 to 300 fathoms, off Nova Scotia; 1,060 fathoms, dead, 1884. Rare.

PARTIAL LIST OF DEEP-WATER HYDROIDA.

The following list includes only the more conspicuous and common forms. Many others have been taken, but the collection has not yet been carefully examined:

Monocaulus glacialis (Sars) Allman.

Corymorpha pendula Agassiz.

Occasionally taken on muddy bottoms in 30 to 182 fathoms.

Eudendrium, sp.

Not uncommon.

Dicoryne flexuosa Sars.

Not rare on stones and shells in 20 to 80 fathoms.

Tubularia indivisa L. (?)

Abundant in 65 to 158 fathoms, on hard bottoms of sand and gravel, among sponges.

Tubularia (?) sp.

Simple, cornucopia-shaped, yellow stems. B. range, 1,525 to 1,731 fathoms, on Gorgonians.

Hydractinia echinata Johnst.

Common from low water to 60 fathoms.

Nemertesia antennina Lx.

Not uncommon in 90 to 125 fathoms.

Oladocarpus flexilis Verrill, sp. nov. Fig. 29.

Common in 65 to 130 fathoms, on hard bottoms, with sponges.

Plumularia gracillima G. O. Sars.

Not rare in 70 to 125 fathoms.

Thuiaria, sp.

Not common.

Sertularia cupressina Linné.

Common in less than 100 fathoms.

Calicella plicatilis (Sars) Hincks. Fig. 30.

Common in 100 to 351 fathoms.

Cuspidella grandis Hincks.

Not common.

Opalorhiza parvula Allm.

Not common.

Halecium Beanii ? Johnst.

Not rare.

Halecium flicula Allm.

Not common.

Halecium sessile Norm.

Rather rare.

Lafoëa dumosa Sars.

Common at moderate depths.

Olytia Johnstoni Hincks.

Common at moderate depths and at the surface.

Campanularia, sp.

Not common.

Campanularia, sp.

A very slender form. Station 2037, in 1,731 fathoms.

Obelia dichotoma ? Hincks.

Not common.

Obelia longicyatha ? Allm.

Not uncommon on worm-tubes, &c., in 100 to 200 fathoms.