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RADIATES.

BY A. E. VERRILL.

ECHINODERMATA.

Pentacta frondosa Jæger (Gunner, sp.).

Cucumaria frondosa FORBES, Brit. Starfishes, 1841.—DUBEN and KOREN, 1844.

One large specimen, Godthaab, Greenland, August 11, 1878.

Strongylocentrotus Dröbachiensis A. Agassiz.

Penny Harbor, Gulf of Cumberland, reef at low-water, October, 4, 1877, lot 420.

Leptasterias Grönlandica Verrill.

Asteracanthion Grönlandicus STEENST.—LÜTKEN, Oversigt over Grönlands Echinodermata, p. 29, 1857.

Head of Gulf of Cumberland, Niantilie Harbor, lot 144; low-water, September 25, 1877, lot 179; Arctic Island, lot 66; Penny Harbor, lat. 66°, at low-water, October 4, 1877, lot 224; also same locality, lot 290.

Leptasterias Mulleri Verrill, 1866.

Asteracanthion Mulleri SÆRS, Fauna Litt. Norveg., i, p. 56, f. 38, 39; Oversigt af Norges Echinodermter, p. 88.

Annanactook Harbor, 4 fathoms, May 19, 1878, lot 580.

Stephanasterias albula Verrill.

Asteracanthion albus STIMPSON, Invert. of Grand Manan, p. 14, fig. 5, 1853.

Asteracanthion problema STEENSTRUP.—LÜTKEN, op. cit. p. 30.

Common in Cumberland Gulf. Gravel beach at the head of the gulf, etc. The only lot with the date remaining is 649, May 30, 1878. With lot 725 is the following note: "Dull lilac above, yellowish white beneath."

All the specimens are young, with the rays irregular in length and variable in number.

The genus *Stephanasterias*, proposed by me for this species several years ago, is characterized by a peculiar structure of the skeleton and spines as well as by its remarkable method of fission, so well elucidated by Dr. Lütken. When adult, there are usually six regular equal rays, such specimens becoming four or five inches in diameter. But in smaller specimens, still undergoing self division, there are usually two to four

longer rays, with three to five shorter reproduced rays on one side. The rays are rounded, and uniformly covered with small clustered spinules, arranged in divergent groups on each plate. The plates are regularly arranged, both transversely and longitudinally, and more closely united than in *Asterias* and *Leptasterias*. The plates of the ventral rows are directly united with the adambulacral, so as to leave no spaces between for the papule, which are, therefore, absent along the ventral surface next the adambulacral plates; on the dorsal surface they are usually arranged in pairs. The major pedicellariæ are arranged along the edges of the ambulacral grooves, and a few usually occur in the adoral angles, between the bases of the rays.

Ophioglypha nodosa Lyman.

Ophiura nodosa LÜTKEN, Addit. ad Hist. Ophiuridarum, p. 48, pl. ii, fig. 9, a-b, 1858.

Lot 249. Annapoosuk Harbor, low-water, October 7, 1877. "Color crimson."

HYDROIDA.

Sertularia argentea Ellis and Sol.

Gravel beach, head of Cumberland Gulf, low-water, May 28, 1878.

Halecium tenellum Hincks.

Gravel beach, head of Cumberland Gulf, low-water, lot 642, May 28, 1878.

Obelia, sp.

With last. Also from Penny Harbor, low-water, October 4, 1877, attached to *Acidiopsis complanata*.

ANTHOZOA.

Urticina crassicornis Ehrenberg, 1834.

Actinia crassicornis MÜLLER, Prodrömus, 1776.

Tealia crassicornis GOSSE, Ann. Nat. Hist.; Actinologia Brit., p. 209, pl. iv, fig. 1.

Rhodactinia Darisii AG.—VERRILL, Revision Polyps, in Mem. Boston Soc. Nat. Hist. vol. i, p. 18, (author's copies, 1864).

Head of Cumberland Gulf, low-water, lot 667, on roots of *Laminaria*. Annapoosuk Harbor, May 19, 1878.

Bunodes spectabilis Verrill.

Actinia spectabilis FABRICIUS, Fauna Grönlandica, p. 342, 1780.

Bunodes stella VERRILL, Revision of Polyps Eastern Coast of U. S., in Mem. Boston Soc. Nat. Hist. i, p. 16, pl. i, figs. 1-8, 1864.

A more extensive acquaintance with this species, and a careful comparison with the description of Fabricius had, some time ago, caused me to unite my *B. stella* with the Greenlandic species (see Check-list of

Marine Invertebrata), although it had not been recorded from any locality between the Bay of Fundy and Greenland. The numerous specimens in this collection serve to confirm that conclusion.

Common at low-water in the Gulf of Cumberland (lots 179, 237, 664), Penny Harbor, October 4, lot 237. Gravel beach, head of gulf, June 1, 1878.

PORIFERA.

Two or three species of sponges, not yet determined, are in the collection. The most interesting, as well as most common one, forms elongated, erect, rather flaccid tubes, two or three inches high and .25 to .35 in diameter, open at top.

It occurred on the gravel beach, head of the gulf, attached to stones, June 13, 1878, lot 770; also in lot 643.