

No. 6.—*Review of the Corals and Polyps of the West Coast of America.* By A. E. VERRILL.

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RECENT explorations of the west tropical coast of America, principally by Mr. F. H. Bradley for the Museum of Yale College, have contributed so much to the knowledge of the Polypi of that region and have so increased our store of specimens, that a new and much more complete catalogue of the species has become indispensable for a proper understanding of the geographical distribution of the animals of this class. The Smithsonian Institution has contributed the species collected by John Xantus, Esq., at Cape St. Lucas.

In a paper published two years ago,* the writer enumerated nearly all the species then known from Panama and called attention to the remarkable contrast between the polyp-fauna of the Atlantic and Pacific coasts of Central America, and the bearing of these facts upon the supposed former connection between the two oceans, across the Isthmus of Panama.

The additional forms now presented make these contrasts still greater and more remarkable, and add greater force to the evidence then brought forward to show that no deep or extensive water connection, sufficient to modify the ocean currents, can have taken place since the existence of the species now living upon each coast.

The Panamanian fauna proves to be remarkably rich in *Gorgonacea*, no less than 43 species having already been obtained. The genus *Muricea* appears to attain here its greatest development, since 15 species, besides several peculiar varieties, perhaps distinct, are in our collection from Panama Bay, and others from Acapulco and Peru, while from the West Indies there are but four well-ascertained species. The occurrence of two peculiar, gigantic species of *Pavonia*, a genus of corals hitherto known only in the Indo-Pacific fauna, is noteworthy, and also the presence of a peculiar new form of *Dendrophyllia*.

The classification here followed is that proposed by the writer three years ago† with a few changes that have become necessary by a better knowledge of the anatomy of some groups and the discovery of new forms.

* Proceedings of the Boston Society of Natural History, vol. x, p. 323, 1865.

† Proceedings of the Essex Institute, vol. iv, p. 145, 1865. See also Memoirs of the Boston Society of Natural History, vol. i, 1864.