

Panama, north of the railroad-wharf, on sand at extreme low-water, abundant on one occasion only,—F. H. Bradley; Panama,—J. H. Sternbergh, Capt. J. M. Dow, T. Rowell, Esq.; Pearl Islands, dredged on muddy bottoms, 4 to 6 fathoms,—F. H. Bradley; Acapulco, San Salvador,—F. H. Bradley; Zorritos, Peru, dredged on muddy bottom,—F. H. Bradley.

The single white specimen, referred to above, was found at Panama with the ordinary variety. The frond, apparently owing to injury or disease and subsequent restoration, is divided into three nearly equal lobes by two deep lateral notches and the sinus. The polyps are not retracted and appear a little larger than usual. The spicula are pure white and apparently somewhat smaller than in other specimens. This species has but little resemblance to *R. reniformis* of the southern Atlantic coast of the United States, being much larger, with smaller, more crowded, and far more numerous polyps, while the frond is broader than long, instead of longer than broad. The color is also much deeper and brighter, and the under surface rougher. It resembles *R. patula* Verrill, from Cumana, Venezuela, more than any other species, but can scarcely be confounded even with that, since it differs considerably in form and color and in the size of the polyps, and has a thicker frond.

Family, PENNATULIDÆ.

Leioptillum undulatum Verrill.

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Basal portion smooth, pointed at the end, swelling into a large bulb just below the pinnæ. Posterior part of the body, except along a narrow median band, covered with large verruciform rudimentary polyps forming rounded papillæ, some of which are a tenth of an inch in diameter. Pinnæ large, very broad and rounded, with narrow bases, the edges thrown into undulations or frills. Polyps rather large, arranged in three alternating rows along the edges of the pinnæ. Axis very slender, about two inches long, extending from about an inch above the basal end to about the middle of the pinnate portion. The naked base, of a specimen 4.25 inches long, is 1.75; the largest pinnæ .75 long and 1.12 wide. This specimen has twenty-five pinnæ on each side.

Pinnacati Bay, Gulf of California,—Mr. Stone. (Smithsonian Institution).