

**Stichopus parvimensis**<sup>1</sup> sp. nov.

The specimens of this apparently new species agree with each other remarkably well in all particulars. They are about 200 mm. long but pressure from each other and from other specimens has so distorted them that their appearance in life is not easy to infer. The pedicels are very numerous both dorsally and ventrally, and there is no indication, even on the lower surface, of arrangement in longitudinal series. Along each side of the body are a few (3-6) big tubercle-like papillæ and there is at least one row and probably two of similar papillæ on the back. Judging from other species of the genus, the body in life is more or less quadrangular and there is a series of these big papillæ along each angle. There are twenty tentacles. The calcareous ring is well-developed and not peculiar. The gonads are in large equal tufts, one on each side of the dorsal mesentery. The color is light chestnut-brown, much paler below than above. Most of the pedicels, but not all, are very dark brown, and thus appear in the preserved specimens like small blackish spots.

The really characteristic feature of this species is to be found in the calcareous deposits. Like its previously-known fellow species of the Pacific coast of America, this new form has both "tables" and "buttons" in the body-wall. The buttons are about 90  $\mu$  in length and have three or four pairs of holes. They are not usually very symmetrical and hardly any two are exactly alike. As compared with the buttons of *S. californicus* and *S. johnsoni*, these deposits are very small and have a small number of holes, for in *californicus*, the buttons are 140-165  $\mu$  long and have frequently 10-12 holes, while in *johnsoni*, the buttons are 165-190  $\mu$  in length with 10-16 holes. Similar peculiarities mark the tables; in *parvimensis*, the disk is only about 45  $\mu$  across and rarely has more than four perforations, though occasionally two or three other small ones alternate externally with the primary ones; the crown of the spire has 8-10 teeth and is less than 20  $\mu$  across. In *californicus*, the tables are larger and more variable, the disk measuring from 50 to 90  $\mu$  in diameter and having 8 to 18 perforations, while the spire is crowned with 12 or more teeth and measures about 25  $\mu$  across. In *johnsoni*, the tables are again much larger, 120-170  $\mu$  in diameter with 25-40 holes in the disk and the spire with 20-25 teeth on the crown which is nearly 50  $\mu$  across.

Type.—Cat. No. —, U. S. N. M.

It is curious and a little perplexing that *johnsoni* which is geographically intermediate between the other two species is not so structurally but has the most highly specialized calcareous particles. Of course, it may be that we shall find the three species have broadly overlapping ranges and future study made show that all are forms of a single variable species. But I have compared the specimens of *parvimensis* before me with the type of Théel's species (*johnsoni*) and with specimens of *californicus* from Monterey Bay, California, and from Puget Sound, and I find no reason whatever for not recognizing each as a valid species.

The label with the three specimens of *parvimensis* says they were taken

<sup>1</sup> *parvimensis* = with small tables.

"in sea-weed, in 3½ ft." near shore on the east side of Cedros Island, west coast of Lower California, March 12, 1911. As the specimens have many fragments of eel-grass attached to them, it is evident that the "sea-weed" referred to is probably eel-grass. Such bottoms are favorite resorts of *Stichopus* in the West Indian region.

### **Holothuria lubrica.**

Selenka, 1867. *Zeits. f. w. Zool.*, Vol. 17, p. 329.

It is unfortunate that there is no clue to the locality where these specimens were taken, for that might throw some light on the northern limit of this Panamic species. It has not previously been reported from north of Mazatlan. These specimens are all adult and in good condition. Eight specimens.

### **Holothuria impatiens**

*Fistularia impatiens* FORSKÅL, 1775. *Desc. Anim.*, p. 121.

*Holothuria impatiens* GMELIN, 1788. *Linné's Sys. Nat.* ed. 13, p. 3142.

With the eight specimens of *lubrica* was a single, small, poorly preserved holothurian which I refer to this species, not because I believe it to be *impatiens* but because it is one of those specimens, with papillæ all over the body and with tables and buttons in the skin, which have hitherto been referred to that East Indian species regardless of whether they came from the east or west side of Mexico and Central America. Were there more specimens and from a definite locality, they would probably serve as the basis for a new species, but as the specimen is poor and the locality unknown, no further comments on it are necessary.