

Stichopus challengeri, n. sp. (Pl. X. fig. 21).

Body elongated, cylindrical, more tapered posteriorly than anteriorly, slightly flattened. Mouth ventral, surrounded by nineteen tentacles. Anus terminal. Ventral surface with three longitudinal series of cylindrical pedicels, the two lateral series composed of two rows, the middle broader one of two to four rows. Dorsal surface with elongated, conical processes scattered over the ambulacra and interambulacra; an arrangement of them in rows is scarcely to be found elsewhere than along the sides of the body, where they evidently belong to the lateral ventral ambulacra. Body-wall thin and pliable, with scattered deposits, composed of three to four arms and a central column terminating in a few small teeth; the arms are mostly bifurcate at the ends, but sometimes perforated. As a rule, the deposits are not very symmetrical. The pedicels and processes are supported by numerous spinous, slightly curved rods, and the former bear a well-developed terminal plate. Colour in alcohol, grey inclining to violet; tentacles yellowish. Length, 160 mm. or more.

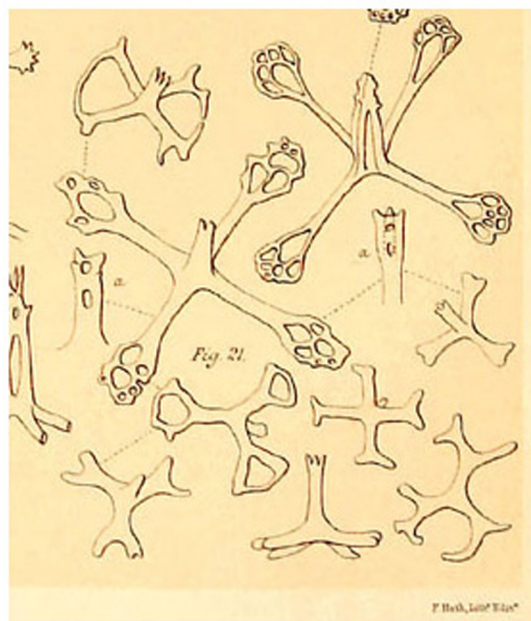
Habitat.—Station 148A, January 3, 1874; lat. $46^{\circ} 53' S.$, long. $51^{\circ} 52' E.$; depth, 550 fathoms; hard ground, gravel, shells; a single slightly macerated specimen.

The dorsal processes have a length of about 7 mm.; the largest are to be found round the anterior extremity of the body. Excepting four-armed bodies like those in the body-wall itself, but considerably larger and with the enlarged ends of the arms perforated, the processes contain numerous simple, or, more seldom, branched spinous spicules, which often have the ends perforated by a small hole. The top of the processes is supported by small irregularly branched and spinous spicules forming a kind of terminal plate. The cylindrical, wide pedicels, about 5 mm. long, form an alternating double row along each side of the ventral surface, and, also, a median series, composed, apparently, of about four rows of pedicels on the posterior half of

the body; anteriorly, the odd ambulacrum carries only two rows of pedicels. The pedicels have a well-developed terminal plate, numerous spinous, curved rods, often with the ends perforated, and, besides, a number of four- or three-armed deposits. The form of the deposits of the body-wall (Pl. X. fig. 21) will be best understood from the figures; their diameter is about 0.056 mm., while the central column has a length of about 0.08 mm. In the dorsal processes the deposits often attain a diameter of about 0.28 mm. The central column mostly terminates in three or four short tops, and it is often, especially in the dorsal processes, pierced with one or two holes near the free end; a true "spire" is never to be found. I have observed two C-shaped deposits, but they probably belong to another animal.

The calcareous ring is well developed, of the usual shape, without posterior prolongations. Two Polian vesicles are present, of which one has a length of 25 mm., while the other is rudimentary. The single dorsal madreporic canal is attached to the dorsal mesentery. A bundle of very long, slender genital tubes, two or three times dichotomously branched, is situated on each side of the dorsal mesentery. A single respiratory tree with two branches is present, and does not seem to have any intimate connection with the pseudhæmal vessels.

PLATE X.



21, STICHOPUS CHALLENGERI, n. sp.

Fig. 21. *Stichopus challengeri*, n. sp. Diverse views of tables. α, ends of the spires.