

(3) *Amathia brasiliensis*, n. sp. (Pl. VII. fig. 2).

*Character*.—Zoarium several inches high (?), irregularly branched; branches frequently terminating in two long jointed filaments, which occasionally throw out one or two isolated zoecia or stunted branches at the nodes. The branches sometimes also commence with two or three barren internodes. Stems about 0·3 mm. in diameter, wall white and delicate. Zoecia disposed in a more or less complete spiral, which in the younger internodes occupies only the upper part, but in the older nearly their entire length; very distinct, subcylindrical, tapering from the base upwards, about 0·6 × 0·1 mm.; neck long and slender.

*Habitat*.—Off Bahia, 10 to 20 fathoms, mud.

The striking peculiarity of this form is the tendency of the branches to terminate in two long jointed tags (terminals), usually barren, but sometimes giving off one or two scattered isolated cells in the manner of some of the Vesiculariæ, &c. The comparative distinctness of the zoecia in the spiral series shows a tendency in the same direction.

(4) *Amathia spiralis*, Lamouroux (Pl. VI. fig. 2).

*Amathia spiralis*, Lamx., Polyp. Flex., p. 161, pl. iv. fig. 2.; Expos., p. 10, pl. lxxv. figs. 16–17; Encyclop., p. 44.

*Serialaria convoluta*, Lamarck, Schweigger.

? *Serialaria spiralis*, Woods, Proc. Roy. Soc. N.S.W., vol. xi. p. 84, 1877.

? *Amathia bicornis*, Woods, Trans. Roy. Soc. Vict., vol. xvi. p. 102, 1880.

*Character*.—Zoarium very thick, branched subdichotomously or irregularly, several inches high. Zoecia subcylindrical, of uniform diameter, very closely connate, 1·0 mm. long, by 0·2 mm. in diameter (at base); the exerted neck thick and very strongly wrinkled; transversely disposed in an apparently continuous spiral from one internode to another, though in reality probably discontinuous at each internode.

*Habitat*.—Station 161, off entrance to Port Philip, 33 fathoms, sand. Station 162, off East Monceur Island, Bass Strait, 38 fathoms, sand and shells. Station 163A, off Twofold Bay, 150 fathoms, green mud.

[Bass Strait and Australia, *ubique* (?), Lamx., &c.]

(5) *Amathia tortuosa*, Woods, (Pl. VI. fig. 1).

? *Amathia tortuosa*, Woods, Proc. Roy. Soc. Vict., vol. xvi. p. 89, fig. 6.

*Character*.—Zoarium 3, 4 or 5 inches high, in thick tufts, when spread out; divaricate, with long subalternate branches; rooted by radical fibres. Dull olive green colour. Stem 0·5 to 0·6 mm. in diameter. Zoecia slender, about 1 mm. × 0·15 to 0·2 mm., disposed spirally round the internodes, but not always forming quite one turn.