

all perforated, but the orifices are often indistinct, owing perhaps, as in some of the larger Arenacea, to their being filled with loosely-packed sand or mud.

The minute structure of the test varies according to the external conditions under which the animal has lived. The wall is constructed of angular sand-grains accurately fitted to each other, and firmly compacted by a cement of dark reddish-brown colour. Its general characters, as revealed by a magnifying power of 100 diameters, are well illustrated by the drawings:—fig. 16 is taken from a small thin-shelled specimen; fig. 17 from a larger, stoutly-built, somewhat rough test; and fig. 18 from one of the smoother-shelled varieties, in which very fine sand has been employed as building material.

Finally, the range in size is not less considerable than in other particulars; a number of specimens which have been measured have been found to vary in diameter from $\frac{1}{110}$ th to $\frac{1}{15}$ th inch (0·23 to 1·7 mm.).

The distribution of *Thurammna papillata* is world-wide, and is governed apparently by the depth of the sea-bottom rather than by latitude or climate. It is at home only in deep or moderately deep water, and the presence of a single specimen in the dredging off Loch Scavaig, on the west coast of Scotland, 45 to 60 fathoms, is manifestly exceptional. In the North Atlantic the species occurs at eight "Porcupine" Stations, lying north-west of Ireland, the depths ranging from 630 to 1476 fathoms; at three points in the Farøe Channel, both in the warm and cold areas, 540 to 560 fathoms; and nearer the equator, at three Challenger Stations, 390 to 2740 fathoms. In the South Atlantic it appears at six Stations, the depths ranging from 350 to 2350 fathoms; in the Southern Ocean, south-east of the Cape of Good Hope, 1570 fathoms, and south of Australia, 2600 fathoms; in the South Pacific, 1825 fathoms; in the North Pacific, 2050 fathoms, and again, just under the equator, 2425 fathoms.

It has already been stated that Dr. Uhlig has discovered specimens pertaining to the genus *Thurammna* in beds of Jurassic age in Austria and Wurtemberg. Since these sheets have been in the hands of the printer Dr. Haeusler has published a description of a remarkable series of specimens of the present species from the Jurassic formations of Switzerland. These were found at various horizons, but, as stated by the author, "in greatest number in the deposits of true deep-sea character, much more rarely and less typical specimens in those formed at moderate depths."

Thurammna albicans, H. B. Brady (Pl. XXXVII. figs. 2-7).

Thurammna albicans, Brady, 1879, Quart. Journ. Micr. Sci., vol. xix., N. S., p. 46.

Test spherical, or nearly so; with few, usually about six, mammillate orifices, equidistant and regularly disposed. Walls somewhat thicker than those of the type; texture very finely arenaceous; colour nearly white. Diameter about $\frac{1}{70}$ th inch (0·28 mm.)