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TRANSACTIONS OF THE SOCIETY.

IX.—Notes on some Sponges belonging to the *Clionidae* obtained at Madeira.

By JAMES YATE JOHNSON, CORR. M.Z.S.

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PLATE VI.

The following five forms of boring Sponges were met with, at different times extending over a long series of years, in going over adhering masses of *Ostrea cochlear* and *Cliona gryphoides*, as well as various corals brought up by the lines of the fishermen from deep water off the coast of Madeira. The sponges were all examined in the dry state. As they appear to be undescribed, I now give the result of my examination of them.

*Acca* \* *G. n.*

Spicules of one form only, acerate.

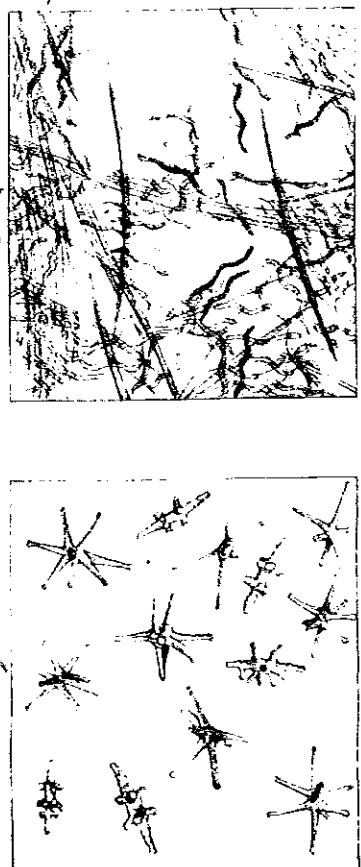
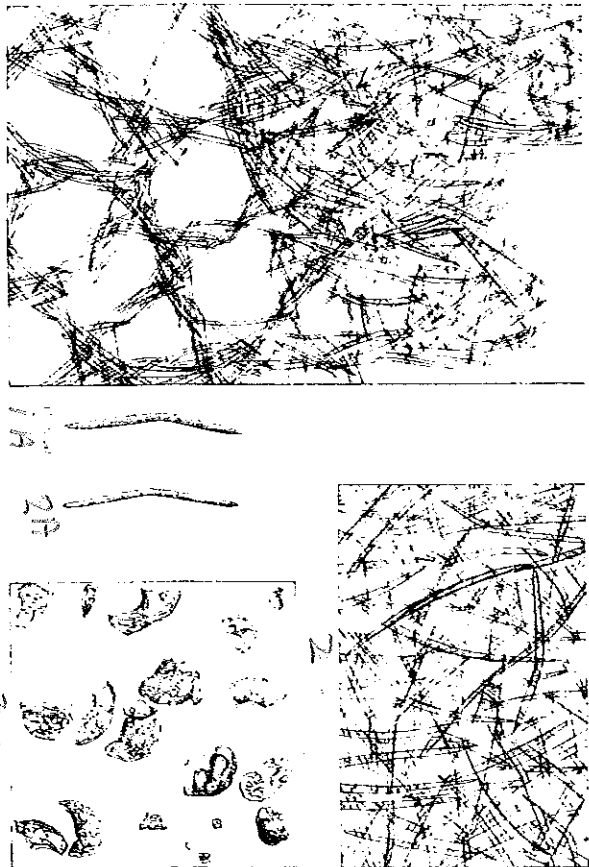
1. *Acca insidiosa* sp. n., plate VI, figs. 1 and 1a.

Found upon shells of *Ostrea* and *Cliona*, lining holes with round mouths about 1.5 mm. in diameter, and issuing as tubes from them. The walls of the tubes are composed of short acerate slender spicules.

EXPLANATION OF PLATE VI.

- Fig. 1.—*Acca insidiosa*, part of the network of spicules over the end of a tube, and part of its wall, X 100. Fig. 1a, Spicule, X 200.  
 2.—*Acca rotunda*, part of the wall of a tube, X 200. Fig. 2a, Spicule, X 200.  
 3.—Particles of coral produced by the action of *Accei rodens*, X 200.  
 4.—*Accei insidiosa*, showing the arrangement of the spicules in the wall of a tube, X 100. Fig. 4a, Spicule, X 200.  
 5.—*Scantilla spiralis*, fragment of a specimen with its acerate and spiral spicules, X 200. Fig. 5a, Spiral form, X 300.  
 6.—*Nisella verticillata*, spicules, X 200.

\* *Accei*, *Scantilla*, and *Nisella* are female names to be found in the poetry or prose of ancient Rome.



Mounting spicules (containing) from Madeira.

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crossing one another at all angles. In specimens mounted in balsam may be seen the dark sinuous bands of similar spicules arranged in bundles, but not forming a network. The tops of the tubes are covered over with a sieve-like reticulation formed of spicules in bundles. The spicules are short, cylindrical, acerate, slender, slightly curved. Colour of the sponge when dry, pale brown.

2. *Acera rodens* sp. n., plate VI. figs. 2 and 2a.

Found in a cavity in the stem of a coral (*Dendrophyllia ramesis*). It is closely allied to the preceding species, but is apparently distinct. The entrance to the cavity is a round hole about 1 mm. in diameter, and from it projects a ring wall of sponge. The spicules are short, slender, acerate, curved, are more slender than those of the last species, and the bend at the middle is angular. They are densely matted together at all angles.

From the same cavity was extracted a quantity of minute particles, both rounded and angular, like fine sand, apparently produced by the gnawing action of the sponge on the coral. Some of these particles are represented on pl. VI. fig. 3.

3. *Acera infesta* sp. n., plate VI. figs. 4 and 4a.

Found upon shells attached to a sponge. It forms a cylindrical but somewhat contorted tube, about 1 mm. in diameter and from 2 to 6 mm. long, issuing from round cavities in the shell. The sides of the tube are composed of short curved acerate spicules in two layers, in one of which the spicules are placed close together side by side, and in the other they are laid transversely to those of the first layer, but in an irregular manner, and not close together, nor in bundles. The upper end of the tube is covered over by a reticulation of spicules arranged in bundles. The spicules are shorter and stouter than those of the two preceding species.

When fresh from the sea this sponge has a pale yellow colour. Placed in fresh water it threw off much clear slimy matter.

SCANTILLA G. N.

Spicules of two forms, viz. acerate, and undulating cylindrical rods.

*Scantilla spiralis* sp. n., plate VI. figs. 5 and 5a.

Pale brown, found in cavities about 1.5 mm. in diameter in shell of *Ostreia cochlear* from the coral zone. The spicules are of two forms:—(1) acerate, slender, slightly curved, the shorter ones lying in all directions irregularly; the longer ones are laid in bundles, which are sinuously consecutive, but do not form a network; (2) slender,

cylindrical smooth loosely spiral rods of two or three turns, with the ends blunt or rounded. These are abundant.

NISELLA G. N.

Spicules of two forms, viz. a slender shaft with six long rays at the middle, and a fusiform shaft with two whorls of three short rays at the middle.

*Nisella verticillata* sp. n., plate VI. fig. 6.

A specimen of the alcyonarian coral *Pleurocorallium johnsoni* (Gray) had the solid stony stem broken away from the base, and the fracture crossed several small cavities, unconnected with each other. Out of these were picked fragments of a dark brown sponge of close texture with the spicules placed irregularly in all directions. When treated with nitric acid it yielded two interesting forms of spicule. The most abundant is normally a slender straight shaft, from the middle of which radiate six equally slender arms, which are half as long as the shaft, so that the whole forms an eight-rayed star. The arms and the two halves of the shaft taper slightly, and the ends are knobbed. There is, however, a good deal of irregularity in the position of the arms. Sometimes they are arranged in a spiral manner, and sometimes there are two whorls of three rays each. The second form of spicule is a fusiform shaft with two whorls of three short rays each at the middle. The shaft is roughened or finely ringed, and its ends as well as the ends of the rays are knobbed. The latter form of spicule connects this species of sponge with Carter's *Alectonia Millari*\* in which a fusiform spicule is found with two rings, each of three tubercles at the middle in place of two whorls of rays, along with acerate spicules. In a small dark brown sponge, picked out of cavities in the stem of another coral (*Dendrophyllia ramesis*) not only were the two forms above described abundant, but a third form of spicule was sparingly present, viz. a slightly curved fusiform-acerate shaft more than twice as long as No. 2 with an annular swelling at the middle. This may have been an intruder.

The soft parts of *Nisella verticillata* seen under some circumstances to be transformed into a hard structureless homogeneous cake of a dark brown colour. Such a cake is compact enough to crack across when drying after immersion in water. Imbedded quite irregularly in one mass of this kind, not only the forms of spicule Nos. 1 and 2, above described were found, but also (a) numerous slender forgeries, (b) stout spinulose spikes tapering from the truncate end to the other, (c) bilaminate C-shaped, with simple acute ends, (d) smaller two-pronged laminate or equi-anchornite. All these must be considered as belonging to other sponges.

\* Journ. R. Micr. Soc., ii (1879) p. 497, pl. xvii.