

Remarks.—The fragments which I received from Professor Agassiz, and which are now, by his permission, placed in the British Museum, were parts of the dead skeleton of the sponge, so that I am not able to supplement Schmidt's description with an account of the smaller spicules.

The resemblance of the desmas to those of the fossil *Siphonia* (in which we suppose *Jerea* to be included) is much closer than in the case of *Neosiphonia superstes*. A similar resemblance exists in the outer form and the general arrangement of the canal-system, so that with much plausibility we may regard *Neosiphonia* as a lineal descendant from the Mesozoic *Siphonia*.

The additional localities for the sponge were kindly communicated to me by Mr Walter Fewkes, who states that all the specimens, of which there are four, are "dry." This confirms my impression that they are also deciduous.

Genus 5. *Rimella*, O. Schmidt.

Generic characters partly included in the description of the single species, partly unknown.

Rimella clava, O. Schmidt.

Rimella clava, O. Schmidt, Spong. Meerb. Mexico, p. 21, pl. i. fig. 2, pl. ii. figs. 5, 7, 11, 1879.

Sponge.—Small, more or less clavate, attached by a flat expanded base, growing out at regular intervals on alternate sides into protuberances, which may enlarge into short branches; the soft parts being removed, a number of somewhat deep longitudinal furrows are seen descending from the summit of the sponge to the lateral protuberances, and from them to the base.

Spicules.—I. Megascleres. 1. *Desma*, various in form, sometimes regularly tetradine, sometimes wholly irregular, bearing large tubercles, which are not confined to the ends of the cladi, but extend over their sides, frequently up to the actinal centre, often confined to one side of a cladus. The tubercles when fully grown present a short cylindrical pedicle, constricted in the middle, so that the sides are concave in outline; and an expanded cushion-like tylus, which is sometimes faintly lobed; height of the tubercle 0.039 mm., diameter of the pedicle 0.032 mm., of the tylus 0.045. The axial fibre of the crepis seldom exceeds 0.09 to 0.115 mm. in length, while the total length of an epactine and cladus is usually 0.23 to 0.32 mm.; in one or two instances only was the axial fibre observed to extend to the extremity of an epactine, which in this instance measured 0.19 mm. in length. In another instance the fibre was seen to dichotomise at the end of the epactine where the protocladi originate; the axial fibre of the epactine measured 0.084 mm., of the protocladus 0.013 mm. in length. Zygois occurs not only at the