Zoology Part LXIII: Report on the TETRACTINELLIDA. By Professor W. J. Sollas. Bound in Volume 25,1888.

Although the specimens of the Challenger collection are in a dried state, I cut and stained sections of them; these showed that the tubular processes are lined by reticulation of collenchyma, but nothing further (Pl. XXXVII. fig. 24). The specimens from Professor Agassiz were also cut, and the character of the slices is shown in fig. 23, Pl. XXXVII. They are sufficiently unpromising; nevertheless, in some of the larger patches of tissue I was able to make out the presence of flagellated chambers, as shown in fig. 25, Pl. XXXVII., and also of oval granular cells embedded in a stained collenchyma, similar to the prevailing tissue of *Azorica pfeifferæ*. The ectosomal desmas tear away in the process of cutting along with the outer layer of skin. Schmidt states that the pores of *Siphonidium ramosum* are generally distributed over the surface of the sponge; neither in Professor Agassiz's nor in the Challenger specimens, however, could I find any traces of pores, and I am still in doubt whether the tubular processes may not some perform an incurrent and others an excurrent function.

The development of the desma is illustrated by figs. 9–15, Pl. XXXVII., commencing with the crepidial strongyle (fig. 9), which in fig. 14 is seen enclosed within the epirabd. The zygosis of two desmas of the normal kind is shown in fig. 21, which is also intended to illustrate the mode of occurrence of small desmas which arise as an aftergrowth, filling up the meshes of the chief skeleton. The secondary desma is seen at the left hand lower corner of the illustration pointing towards the number 21.

Suborder II. ANOPLIA.

Lithistida in which special ectosomal spicules and microscleres are absent.

Family I. AZORICIDÆ.

Anoplia in which the desmas are monocrepid.

Genus 1. *Azorica*, Carter.

The pores and oscules are simple, and are borne on opposite surfaces of the plate-like sponge.

Azorica pfeifferæ, Carter (Pl. XXXVI.).

Azorica pfeifferæ, Carter, Ann. and Mag. Nat. Hist. 1, ser. 4, vol. xii. pp. 438, 442, 1873; vol. xviii. p. 466, 1876.
„ „ Zittel, Abhandl. d. k. baier. Akad. d. Wiss., Bd. i. pp. 103, 121, 1878.

Sponge (Pl. XXXVI. fig. 1).—A thin plate, erect, much folded, with a rounded upper margin. Surface generally hispid, with long, slender, oxeate spicules; inner sur-

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