

muscle fields (*w*) and tentacle sockets (*r*). The outer face of the bone is one step nearer *Astrophyton* than *Ophiochondrus*, having a large articulating shoulder (fig. 8, 4) without any articulating peg below. The inner face (fig. 9) shows the simplest form of the Ophiuran joint, and is largely occupied by the great umbo (1). In general, the position of this highly interesting genus was correctly laid down by me in 1872.<sup>1</sup> The original discoverer, Von Martens,<sup>2</sup> was, however, right in thinking it had a relationship, albeit a faint one, with the *Astrophytidæ*.

See Plate XLIII. figs. 7-10.

#### Species of *Hemieuryale* not herein described.

*Hemieuryale pustulata*, V. Mart. (Pl. XLIII. figs. 7-10).

*Hemieuryale pustulata*, Monatsb. König. Akad. Berlin, p. 484, 1867; Ljn., Dr. Goës, Oph. Öf. Kong. Akad., p. 617; Lym., Ann. Sci. Nat., vol. xvi., art. 4, p. 5; Bull. Mus. Comp. Zool., vol. iii., part 10, p. 268, pl. v. figs. 8-11.

*Ophiura cuspidifera* (?), Lmk., Hist. Anim. sans Vert., vol. iii. p. 226, 2nd ed., 1840; Encycloped. Meth., pl. cxxii. figs. 5-8.

West Indies; 74 to 180 fathoms; Senegal (?).

#### *Sigsbeia*.

*Sigsbeia*, Lym., Bull. Mus. Comp. Zool., vol. v., part 9, 1878.

Disk small, covered with very large radial shields and heavy plates or scales, and passing, without line of demarcation, into the stout arms, which can be rolled in a vertical plane. Teeth and small close-set mouth papillæ; no tooth papillæ. Arms bearing the usual plates, and in addition a large supplementary piece extending downward from the upper arm plate. Two very small genital openings in each interbrachial space, near the mouth shield.

This singular genus forms a peculiar group with *Hemieuryale*, from which it is distinguished by having ordinary upper arm plates, instead of a mosaic of small pieces.

It represents the maximum of lime deposit, both without and within. Nothing can be more unexpected than the ease with which the animal rolls up its arms incased as they are in thick, clumsy armour, and having an axis of massive arm bones. The radial shields are of great size and thickness, so that they cover nearly the whole upper disk and form a connected circle (Pl. XLIII. fig. 4, *l*). Attached to each is a short, wide, thick, swollen, irregularly wedge-shaped genital plate (*o*), with a thick, narrow,

<sup>1</sup> Ann. Sci. Nat., vol. xvi. art. 4, p. 5.

<sup>2</sup> Monatsb. König. Akad. Berlin, p. 484, 1867.