I.—STUDY OF THE STRUCTURE OF VARIOUS DEEP-SEA MOLLUSCS.

I. GASTROPODA.

VOLUTIDÆ.

1. *Guivillea alabastrina*, Watson. Station 147; 1600 fathoms.

A single male specimen, mutilated, the entire visceral sac absent, and probably left in the recess of the shell. Only the cephalic region, the foot, and the anterior margin of the mantle were left, but nothing of the gill.

I refer, in part, to the description given by Watson,[1] and can entirely confirm his statement that *Guivillea* is "a typical *Voluta*" (Pl. I. fig. 1). The foot (*e*), the proboscis (*a*), the pallial respiratory siphon (*h*), with its appendage (*j*), the cephalic velum (*b*), bearing the two tentacles (*c*), and with the penis (*f*) at its right extremity, have indeed the same characters as in *Voluta*.

The integument, especially on the head and tentacles, is tuberculated.

The eyes, said by Watson to be absent, are present (*d*), but uncoloured, that is, without any pigment. They form two symmetrical projections at the external base of the tentacles, and are distinguished by their size from the integumentary tubercles.

In fact, these eyes are in structure quite rudimentary, and could not be functional.

Transverse sections cut across these organs reveal the following structure (Pl. I. fig. 2):—

The general epithelium of the cephalic region (*a*) is continued across the ocular prominence, but is more delicate than on the surrounding parts. Below the epithelium the entire optic prominence is covered by a homogeneous structureless layer (*b*), more transparent than the surrounding tissues. This layer is separated by reticulated connective tissue (*c*) from the central portion, which forms the principal part of the optic prominence.

This central mass (*e*) is homogeneous, structureless, staining but slightly with reagents, and is continued with the same characters into the depth of the cephalic

[1] Zool. Chall. Exp., part lvii. p. 261.