

Limopsis.

3. *Limopsis minuta*, Philippi. Station 75 ; 450 fathoms.
4. *Limopsis pelagica*, Smith. Station 106 ; 1850 fathoms.
5. *Limopsis lata*, Watson. Station 169 ; 700 fathoms.

The animal of *Limopsis* has not yet been described in detail. For the most part it resembles that of *Pectunculus*.

One point is remarkable about the gill. Here, as in all the Arcidæ, there are two branchial plates formed by the filaments corresponding to the lamellæ of the Nuculidæ. But, as in these last (*Nucula*, *Yoldia*, *Malletia*), the branchial axis is fixed by a supporting membrane to the mantle near its posterior extremity.

In *Limopsis*, on the contrary, as in all the other Arcidæ, the axis is free over all the part of it posterior to the posterior adductor muscle (Pl. II. fig. 1, *h*). This axis, which is thus the support of the gill, becomes comparatively solid and resisting, and in *Limopsis* much more than in *Arca* and *Pectunculus* it is greatly developed in size (Pl. II. fig. 1).

In this figure representing *Limopsis pelagica*, Smith, the axis and the whole gill are greatly contracted. In Pl. II. fig. 2, a sketch of *Limopsis minuta*, Philippi, shows these organs very nearly as they are arranged in the living animal. The branchial support in *Limopsis* is chiefly formed by muscular fibres.

Arca.

Several species from great depths have been examined, notably—

6. *Arca pteroessa*, Smith. Station 246 ; 2050 fathoms.

Their structure is like that of the littoral species, especially as regards the form of the gills.

PECTINACEA.

The littoral species have pigmented ocelli on the edge of the mantle. It would be interesting to know whether these organs are present in the deep-sea species.

Two genera have been examined, *Pecten* and *Amusium*.

Pecten.

7. *Pecten philippii*, Recluz. Station 75 ; 450 fathoms.
8. *Pecten subhyalinus*, Smith. } Station 310 ; 400 fathoms.
9. *Pecten vitreus*, Chemnitz. }

In the three species there exist pigmented ocelli of proportionately the same size as in the littoral species. The gills are similar to those of the latter.