

and then, contracting a little, forms a rudely rectangular figure round the bivium. The paired ambulacral grooves in the male are shallow, not much deeper than the anterior ambulacrum (Fig. 45); in the female the pore-plates of the paired ambulacra

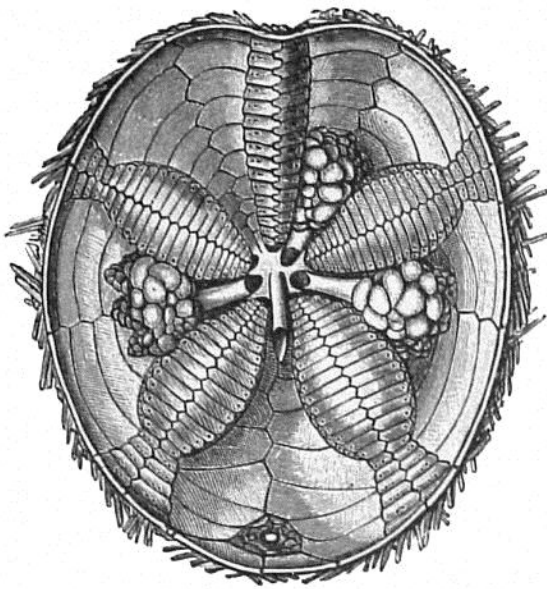


FIG. 44. — *Hemiaster Philippii*. The apical portion of the test of the female seen from within. Slightly enlarged.

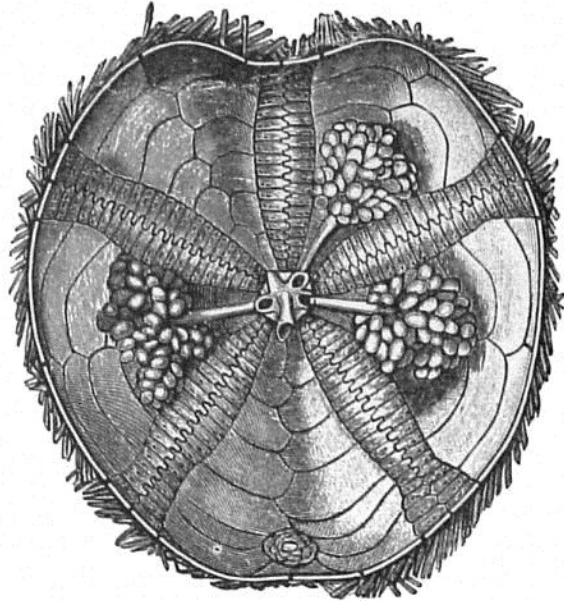


FIG. 45. — *Hemiaster Philippii*. The apical portion of the test of the male seen from within. Slightly enlarged.

are greatly expanded and lengthened, and thinned out and depressed so as to form four deep, thin-walled, oval cups sinking into and encroaching upon the cavity of the test, and forming very efficient protective marsupia (Fig. 44). The ovarial openings are, of course, opposite the interradian areas; but the spines are so arranged that a kind of covered passage leads from the opening into the marsupium; and along this passage the eggs, which are remarkably large, upward of a millimetre in diameter when they leave the ovary, are passed, and are arranged very regularly in rows on the floor of the pouch, each egg being kept in its place by two or three short spines which bend over it (Fig. 46).

Among the very many examples of this *Hemiaster* which we dredged in Accessible Bay, and afterward in Cascade Harbor, Kerguelen, there were young in all stages in the breeding-pouches; and although from the large size and the opacity of