## iv <br> DEPTHS AND DEPOSITS OF THE OCEAN 155

origin is attributed to both forms of magnetic spherules, which are supposed to have been thrown off by meteorites, or falling stars, in their passage through our atmosphere.

The secondary products entering into the composition of Secondary deep-sea deposits are (I) clay, (2) manganese nodules, (3) barium products. and barium nodules, (4)


Fig. 124.
K'rithe producta, Brady. From the bottom-deposits (mingnified).
 glauconite, (5) phosphatic concretions, and (6) zeolites.
-The clayey matter in Clay. the deposits near land may have been transported by rivers, etc., from the land, but most of the clayey matter present in the deposits far from land is believed to have been derived from the decomposition under the action of water of eruptive and metamorphic rocks and minerals, especially pumice and volcanic glass. The deep-sea clays, some of which are mostly made up of these decomposing volcanic materials, are usually coloured a reddish-brown by the oxides of manganese and iron-


Fig. 125.
Cythere dictyon, Brady. From the bottom-deposits (magnified). products of the decomposition of the same rocks that gave rise to the clayey matter-and a comparatively small amount of clay may give a clayeycharacter to the deposit.

The oxides of iron Manganese and manganese are ${ }^{\text {nodules. }}$ widely distributed in marine deposits, and especially in deep-sea deposits. They occur in minute grains, and act as colouring matter in nearly all deep-sea clays, and in certain abyssal regions of the ocean they form concretions of larger or smaller size, which are among the most striking characteristics of the oceanic Red clay. Sometimes the oxides cover consolidated masses of tufa, fragments of rocks, portions of the deposit, branches of coral and other

