

Distribution
of diatoms.

fresh and salt water, and they are found not merely as floating forms, but also along the coasts, some of them attached to the bottom or to other algæ and animals; some are capable of motion, gliding over the mud in enclosed bays or among grains of sand near the seashore. The coast forms, however, are essentially different from the pelagic forms in their structure.

Littoral forms.

Littoral diatoms are apt to have a comparatively thick and extremely silicated cell-wall with the characteristic patterns, ribs, and pores, that have made them such an attractive object of study to amateur scientists. Bilateral symmetry prevails, especially amongst forms that are capable of motion, which are as a rule pointed at the ends like the bows of a boat. Diatoms of

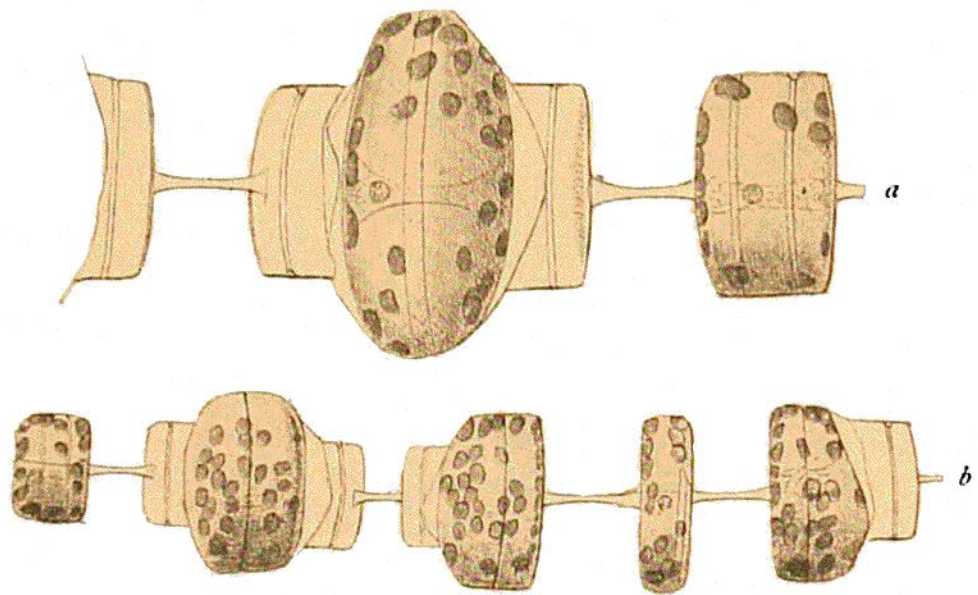


FIG. 214.—AUXOSPORE-FORMATION OF *THALASSIOSIRA GRAVIDA*.

a, Showing in the centre a newly-formed auxospore, the old cell-walls still lying outside (a^{a}); *b*, showing on the left a cell before auxospore-formation, succeeded by an auxospore during its first cell-division, the chain of five cells having originated from an auxospore (a^{a}).

Attached
forms.

this kind have a highly organised locomotion apparatus, which is differently constructed in the different genera, such as *Navicula* and *Nitzschia*. Attached forms show more variation. Symmetry with them depends upon the mode of attachment. *Licmophora* and *Gomphonema* are fastened at one end to a gelatine-like stalk, and their cells are wedge-shaped, narrow at the bottom and widening out towards the top. Others, like *Epithemia*, are convex on the one side and straight on the other, the straight side being the one by which they are attached. And there are others again that consist of more or less highly organised and often ramifying colonies, composed of series of cells, or sheaths of mucilage, within which the cells are able to move past one another.