

always occupy the whole internal space, but lies sometimes, as it were, at the bottom of a hollow hemisphere or up at the mouth-opening in a conical sac. The shields of lime can be dissolved by the weakest acids, and the cell then remains as an insignificant mass with undefined boundaries. Still, these shields are very characteristic, and have been found in such enormous quantities in the deposits on the ocean-bottom that they aroused the attention of scientists long before the algæ themselves were known. The commonest forms (*Coccolithophora*, *Pontosphaera*) have an almost globular lime-covering, and are therefore without special suspension-organs, though their surface is big in proportion to their bulk, if we consider their extraordinarily minute dimensions (5 to 20 μ



FIG. 237.—*PYROCYSTIS NOCTILUCA*. (From Chun.)

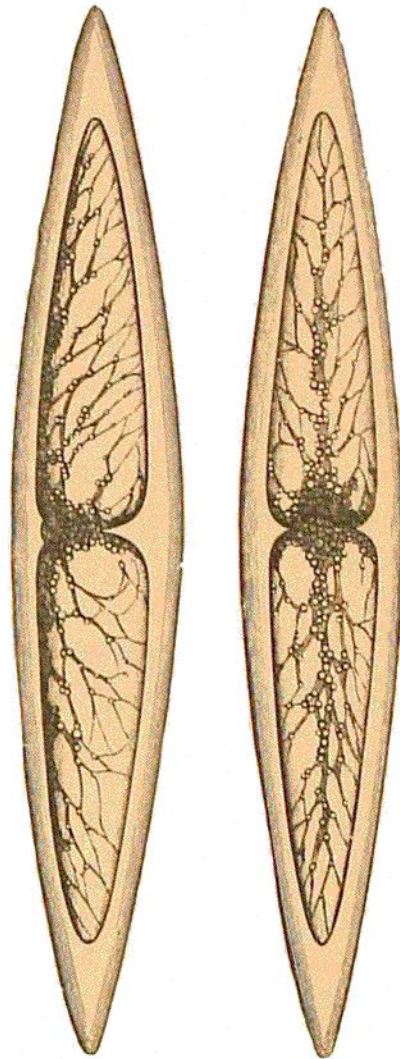


FIG. 238.
PYROCYSTIS FUSIFORMIS (1890).
(From "Challenger" Narrative.)

in diameter). But in forms like *Rhabdosphaera* the calcareous shields have each a more or less large spike in the middle. In *Discosphaera* we find trumpet-shaped spines, in *Scyphosphaera* barrel-shaped outgrowths, and during the "Michael Sars" Expedition I succeeded in discovering even stranger forms. *Ophiaster* has a tuft of slightly spiral flexible calcareous filaments. *Michaelsarsia* carries in the front of its cell a sort of parachute or pappus of hollow jointed calcareous tubes arranged in a