

general fluid contents of the cell, and burdened with yellow granules and compound granular masses and minute oil-globules and refractive particles; and near the centre there is always a large, well-defined nucleus of a somewhat denser material and

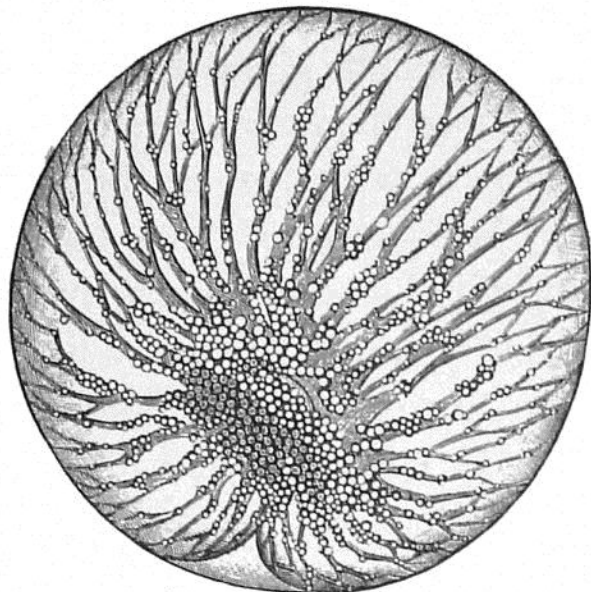


FIG. 21. — *Pyrocystis noctiluca*, MURRAY. From the surface in the Guinea Current. One hundred times the natural size.

of a grayish color, which dyes freely with carmine. This little organism, to which Mr. Murray has given the name of *Pyrocystis noctiluca* (Fig. 21), seems hitherto to have escaped notice, or, if observed, it has probably passed for the encysted condition of *Noctiluca miliaris*, which at first sight it greatly resembles. It certainly has nothing whatever to do with the true *Noc-*

*tiluca*, which, according to our observations, appears to be confined to the neighborhood of land.

Another species, *Pyrocystis fusiformis* (Fig. 22), which seems not to be quite so abundant, although it is almost constantly associated with the preceding, is very regularly spindle-shaped; and a third, which may possibly present generic differences, has the form of a truncated cylinder. In this last we have observed the process of endogenous multiplication by the division of the protoplasmic nucleus and the development of two secondary cells within the parent. We are at present inclined, though with some doubt, to relegate these forms to the Diatomaceæ.

We took with the towing-net on the surface in the Guinea Current several of the *Plagusia*, the young flounders described by Professor Steenstrup in a remarkable paper, in which he contended, though somewhat erroneously, that in passing from the young symmetrical to the adult distorted condition, one of the eyes of the Pleuronectidæ passed right through the head