

In both of these last deep dredgings, the dredge brought up a large number of extremely beautiful *Polycystina*, and some forms apparently intermediate between *Polycystina* and Sponges, which will be described shortly. These organisms did not seem to be brought from the bottom, but appeared to be sifted into the dredge on its way up. They were as numerous adhering to the outside of the dredging-bag as within it. During the soundings taken near this locality quite a shower of several beautiful species of the *Polycystina* and *Acanthometrina* fell upon the chart-room skylight from the whole length of the sounding-line while it was being hauled in.

We were now steaming slowly back towards the coast of Ireland; and on Monday, July 26, we dredged in depths varying from 557 to 584 fathoms (Stations 39-41) in ooze, with a mixture of sand and dead shells. In these dredgings we got one or two very interesting alcyonarian zoophytes, and several ophiurideans, including *Ophiothrix fragilis*, *Amphiura ballii*, and *Ophiacantha spinulosa*. Many of the animals were most brilliantly phosphorescent, and we were afterwards even more struck by this phenomenon in our northern cruise. In some places nearly everything brought up seemed to emit light, and the mud itself was perfectly full of luminous specks. The alcyonarians, the brittle-stars, and some annelids were the most brilliant. The *Pennatulæ*, the *Virgulariæ*, and the *Gorgoniæ* shone with a lambent white light, so bright that it showed quite distinctly the hour on a watch; while the light from *Ophiacantha spinulosa* was of a brilliant green, coruscating from the centre of the disk, now along one arm, now along