

After the elaborate paper¹ by Ehrenberg, on the phosphorescence of the sea, it is almost superfluous on my part to make any observations on the subject. I may, however, add that the same torn and irregular particles of gelatinous matter, described by Ehrenberg, seem in the southern as well as in the northern hemisphere to be the common cause of this phenomenon. The particles were so minute as easily to pass through fine gauze; yet many were distinctly visible to the naked eye. The water when placed in a tumbler and agitated gave out sparks, but a small portion in a watch-glass scarcely ever was luminous. Ehrenberg states that these particles all retain a certain degree of irritability. My observations, some of which were made directly after taking up the water, gave a different result. I may also mention that having used the net during one night, I allowed it to become partially dry, and having occasion twelve hours afterward to employ it again, I found the whole surface sparkled as brightly as when first taken out of the water. It does not appear probable in this case that the particles could have remained so long alive. On one occasion having kept a jelly-fish of the genus *Dianæa* till it was dead, the water in which it was placed became luminous. When the waves scintillate with bright green sparks, I believe it is generally owing to minute crustacea. But there can be no doubt that very many other pelagic animals, when alive, are phosphorescent.

On two occasions I have observed the sea luminous at considerable depths beneath the surface. Near the mouth of the Plata some circular and oval patches, from two to four yards in diameter, and with defined outlines, shone with a steady but pale light; while the surrounding water only gave out a few sparks. The appearance resembled the reflection of the moon, or some luminous body; for the edges were sinuous from the undulations of the surface. The ship, which drew thirteen feet of water, passed over, without dis-

¹ An abstract is given in No. IV. of the Magazine of Zoölogy and Botany.