

small Crustacea, especially Isopoda and Amphipoda, and the similarity of these species with northern forms is on the whole very striking. A small Cumacean of the genus *Leucon* seems hardly to be distinguishable from the well known northern species, *Leucon nasicus* of Kröyer."

The Phyllocarida.—“Of Phyllocarida a new species of *Nebalia* has been described by v. Willemoes Suhm from the Bermudas (see p. 150). Another large and very interesting deep-sea Phyllocarid, apparently nearly related to *Nebalia*, was met with at two different localities. Of one of the specimens only the carapace and a fragment of the anterior part of the body have been secured. It seems to be this imperfect specimen that the late Dr. v. Willemoes Suhm mentioned in one of his letters to Professor v. Siebold¹ as a gigantic Ostracode. Fortunately another more perfect, though smaller, specimen was afterwards collected in the South Pacific when the dredge had been down to the considerable depth of 2550 fathoms, showing clearly that it is a Phyllocarid, and not, as first suggested, an Ostracode. The most striking characters of this form are the distinctly sculptured carapace, the rudimentary eyes, and the remarkably feeble structure of the branchial legs, distinguishing it from *Nebalia* as a distinct genus, *Nebaliopsis*, G. O. Sars.”

The phosphorescent light emitted by the species of the Euphausiidæ was frequently under observation during the cruise. If one of these be taken up by a pair of forceps when newly caught, a pair of bright phosphorescent spots will be observed directly behind the eyes, two other pairs on the trunk, and four other spots situated along the median line of the tail. These can all be quite well seen with the naked eye. The pair close to the eyes are first and most brilliantly illuminated, and then the light, which is bluish white, spreads to the other organs on the trunk and tail. After a brilliant flash has been emitted from the organs they glow for some time with a dull light. The light is given out at will by the animal, and usually, but not always, when irritated. The most brilliant flashes occur when freshly taken from the sea. Subsequent flashes become less and less bright, till the animal appears to lose the power of emitting light. If the organs be removed with the forceps the points will glow brightly for some time, and when the animal is dying the whole body is frequently illuminated by a diffused light. These phosphorescent organs appear under the microscope as pale red spots with a central clear lenticular body. The phosphorescent light comes from the red pigment surrounding the lenticular space. In August 1880 Mr. Murray observed at night on the surface of the sea in the Færøe Channel large patches and long streaks of apparently milky white water. The tow-nets caught in these immense numbers of *Nyctiphanes* (*Thysanopoda*) *norvegica*, M. Sars, and the peculiar appearance of the water seemed to be due to the diffused light emitted from the phosphorescent organs of this species.

¹ Brief II., *Zeitschr. f. wiss. Zool.*, Bd. xxiv. p. xiii., 1874.