THE

VOYAGE OF H.M.S. CHALLENGER.

ZOOLOGY.

REPORT on the Copepoda collected by H.M.S. Challenger during the years 1873-76. By George Stewardson Brady, M.D., F.R.S., F.L.S.

The Copepoda noticed in this Report were taken almost entirely from surface-net gatherings made during the cruise; some few collections were made in the tow-net, at various depths below the surface, and a still smaller number by the "tow-net at trawl"; and lastly, a few specimens were found entangled on the swabs of the dredge. But where nothing of this kind is specified, it may be taken for granted that the captures were made at the surface. The material so obtained was mostly preserved in rectified spirit, a method which hardens the animals, rendering them opaque, destroying, usually, every trace of the natural colour, and obscuring almost entirely the internal anatomy.[1] In addition to these spirit-specimens, there was a comparatively small series mounted for the microscope in Canada balsam or glycerine, and from some of these details of structure were got which were unattainable in other cases.

The entire series of tow-net gatherings brought home from the different areas worked over by the Challenger was carefully examined. A list of the most important of these, with the names of the Copepoda found in each, is given hereafter (p. 7 *et seq.*). In many cases no Copepoda at all were found.[2] This, however, cannot be considered a point of any importance, for there can be no manner of doubt that the sea, from the equator to the

[1] A really good preservative solution—one not only protecting from mould and decay, but also preserving the natural transparency and colours of the tissues, while giving them a serviceable firmness—is yet to be discovered. Alcohol, in other respects perfect, has the great disadvantage of destroying both colour and transparency, and glycerine, though almost free from these defects, is a most unpleasant medium, on account of its density and stickiness. On the whole, a saturated solution of boracic acid in glycerine, diluted with three or four parts of water, has given in my hands the best results; but my preparations so made have not yet had sufficient time for fair trial.

[2] This statement refers to the preserved specimens sent to Dr. Brady. As a matter of fact, Copepoda were rarely, if ever, absent from the tow-net gatherings when examined on board ship.—J. M.