

THE RESULTS OF DEEP-SEA INVESTIGATION IN THE
TASMAN SEA.

I.—THE EXPEDITION OF H.M.C.S. "MINER."

2. THE COLONIAL RADIOLARIA OF THE TASMAN SEA.

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(Plate liii.).

The colonial Radiolaria collected during the two-days cruise of H.M.C.S. "Miner" in June, 1906, were mostly obtained at a distance of over fifty miles off the coast. Here, probably on account of the strong southward-flowing current, with a surface temperature of 65° C, surface life was very abundant and varied. Owing to the unfavourable weather it was impossible to do more than drag the tow-net for a time within a few feet of the surface, and the specimens obtained had to be somewhat summarily disposed of. The fixing solution employed—a copper sulphate and corrosive sublimate combination—though very efficient as regards most of the surface organisms, was not entirely successful in the case of the colonial Radiolaria, having had, apparently, a softening effect on the jelly which led to the disintegration of most of the colonies. Fragmentary though the specimens are, the individual zooids prove to be remarkably well preserved. To complete the observations here recorded, however, the study of further material preserved in other ways, and of living specimens will be necessary, and what follows can only be regarded as a preliminary account of the colonial Radiolaria of this region.

The points of more general interest, to which attention is directed, are: (1) The observation in a species of *Collozoum*, as well as in *Belonozoum atlanticum* and *Rhaphidozoum pandora* of bodies which appear to be zooids that have undergone conversion into masses of microspores; (2) The observation in *Collozoum arcuatum*, n. sp., of a special phase in the life-history of the *Xanthellæ*.

It is somewhat remarkable that so few Radiolaria have been recorded from the Tasman Sea. Of the colonial forms I find record of only three species having been found in that region, viz., *Sphaerouzoum octoceras*, Haeckel, *S. australe*, Haeckel, and *Collosphaera fragilis*, Haeckel. The reason for this is, doubtless, that so little plankton-net collecting has been done in the open sea. The Radiolaria, and more particularly the colonial forms, do