

ON THE RECENT DISCOLOURATION OF THE WATERS
OF PORT JACKSON.

BY THOMAS WHITELEGGE.

(Plate xxviii.)

TOWARDS the latter end of last March, the citizens of Sydney were astonished and alarmed by the sudden discolouration of the water in Port Jackson. The water in the harbour in many places presented the appearance of blood, and the Board of Health immediately requested Mr. W. M. Hamlet, the Government Analyst, to report on the matter. He found that the red colour was due to the presence of a minute organism, which he thought might be the *Englena sanguinea*, Ehrenberg. Immediately after the publication of this report, quite a number of people gave their views of this somewhat mysterious discolouration. It was suggested that it was due to *zoospores* of some marine *Algae*; to the *Trichodesmium* which discolours the Red Sea; and to the young of *Medusæ*; whilst others maintained that it was caused by blood and other refuse turned into the harbour from the abattoirs.

On the 31st March I proceeded to Dawe's Point and procured a bottle full of water, in which there was a good supply of the organism in question. After a careful examination I satisfied myself that it belonged to the family *Peridiniidae*, and I published a letter in the *Daily Telegraph* to that effect. At the time I thought it was a species of the genus *Peridinium*, but further research led me to the conclusion that it was a new species of the closely allied genus *Glenodinium*; in the former genus the cuirass is marked by the presence of facets, whilst in the latter the cuirass is smooth. After the publication of my first letter on the subject, I was requested by Dr. E. P. Ramsay, Curator of the Museum, to make a detailed examination of the shores of the harbour, and to ascertain what effect the organism had had on the fauna generally.

The result of my investigation was embodied in a preliminary report furnished to the Department of Fisheries; this report was published in the Sydney daily papers, and also in the "Records of the Australian Museum," No. 7. During my investigation I visited the head of Tarban Creek, Hunter's Hill on the Parramatta River, Mossman's Bay, Little Sirius Cove, Farm Cove, Darling Harbour, Woolloomooloo Bay, Watson's Bay, Manly, Coogee, Maroubra, and Middle Harbour. I found the organism at all the above-mentioned places in larger or smaller