

MOLLUSCA FROM THE CONTINENTAL SHELF OF
EASTERN AUSTRALIA.

BY

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(Plates xli-xliii, and map.)

INTRODUCTION.

Our knowledge of the fauna of the continental shelf is so imperfect that any additional data are acceptable. This year, Mr. C. W. Mulvey, manager of the New State Fish and Ice Company, Sydney, has interested himself in assisting the Australian Museum by presenting specimens trawled by his fleet, and has given facilities for members of the Museum staff to collect. The results of Mr. Mulvey's activities form the basis of this report.

The oldest material from the continental shelf consists of a few hauls made by the "Challenger," which, curiously enough, were overlooked and mixed with Atlantic material, and, when reported upon, caused a lot of trouble which, even now, needs rectification. Simultaneously the "Gazelle" made a haul or two, from which a few species were described. The "Thetis" trawled along the coast in depths up to eighty fathoms, and the study of the material by Hedley instigated further research and he continued the work until the arrival of the "Endeavour." This ship explored the shelf from end to end, but, unfortunately, through the tragic ending of the enterprise, the results are comparatively unknown. A brief account, culled from some notes left by the lamented Dannevig, was published under Hedley's direction. In that paper a scanty résumé of the nature of the continental shelf was presented, but nothing relating to the fauna. Only a few large molluscs were recorded from Dannevig's collection, all from the south-east corner of this State, but I find a small series of smaller molluscs in the Australian Museum, and I have utilised some of these in this report.

In the introduction to his report on the "Thetis" mollusca, written over twenty years ago, Hedley concluded: "The above facts suggest certain inferences. Firstly, that such beds as the Eocene of Muddy Creek, Victoria, represent a fauna of the hundred fathom zone; and that, if the age of the Tertiary beds are to be calculated by Lyellian percentages, an exploration of the hundred fathom zone in existing Australian seas must precede an estimation of the dates of Australian Tertiaries. Secondly, that some living representatives of the Eocene Mollusca of Victoria now dwell six or seven degrees north of where their predecessors lie; a conclusion agreeable to the hypothesis that the Eocene climate was warmer than the present."