

# A REVISION OF THE AUSTRALIAN CONULARIAE.

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(Plates xxiv-xxvi.)

## Introduction.

THE present paper is a revision of the known species of *Conularia* found in Australian rocks, with descriptions of new species.

The actual position in the animal kingdom which this remarkable genus occupies is still doubtful. It has usually been regarded by authors as having pteropod affinities, although opponents to this theory have assigned the genus to many other groups. Miss Slater, in 1907,<sup>1</sup> revising the British Conulariae, stated that on zoological evidence the inclusion of *Conularia* among the Pteropods must be abandoned. After an exhaustive examination of their characters, Miss Slater concludes that the genus should be regarded as "an extinct group, equivalent to the Cephalopods, and derived with them from the same simple-shelled ancestor".

Members of the genus are found distributed among the European rocks from the Upper Cambrian to the Trias and Lias, with a maximum development in Middle, Upper Ordovician, and Silurian times. In Australian rocks the genus is by no means common. Species have now been recorded from the Cambrian, Upper Silurian, Carboniferous, and Permian rocks. The maximum development is in the Permian horizons, where the shells attained large size, a striking feature common to the Permian fauna of Australia.

The specimens used as a basis for this paper have been collected over a period of many years, and as a result localities and horizons may in occasional instances be in some doubt. It is essential, however, that all the Australian groups of fossils should be revised and new species founded when necessary. It is only in this way that a foundation will be laid for workers on this subject. Palaeontology has been neglected to some extent in the past in Australia, and it is most important that more intensive fossil collecting should be done. Collecting must be carried out scientifically, with complete field data, when possible, of stratigraphical sequence in any particular geological horizon. It is only in this way that the palaeontologist can hope to assist the stratigrapher. Süssmilch<sup>2</sup> stressed this point when he stated: "Our present fossil lists are based largely upon material collected and described many years ago; this material was probably not always localized, while many of the descriptions and determinations now possibly need revision."

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<sup>1</sup> Slater.—"A Monograph of the British Conulariae", Palaeontograph. Soc., 1907, pp. 9-12.

<sup>2</sup> Süssmilch.—Aust. and New Zealand Assoc. Adv. Sci., xxii, p. 116.