

DESCRIPTIONS OF HELIOLITIDÆ FROM THE UPPER SILURIAN, YASS, NEW SOUTH WALES.

BASED ON NOTES BY THE LATE R. ETHERIDGE, JUNIOR.

BY

W. S. DUN,

Honorary Palaeontologist, The Australian Museum.

(Plates xviii-xxi.)

Prior to his death, Robert Etheridge, the late Director of the Australian Museum, made notes on numerous specimens and sections of specimens of the Heliolitidæ in the collections of the Australian Museum and the Mining and Geological Museum, Sydney. These notes, from a re-examination of the sections, have been amplified and, in part, form the subject of the present paper.

The interpretation of structures is based on Lindstrom's "Remarks on Heliolitidæ"¹ and as to affinities the principles adopted by Nicholson in his "Tabulate Corals"² have been followed.

HELIOLITES YASSENSIS, *sp. nov.*

(Pl. xviii, fig. 1.)

Corallum massive, attaining a size of about 20 cm. in diameter, height 12-15 cm. Autopores very large, circular, very even in size, 1.5-1.75 mm. in diameter, closely and very regularly spaced, outer margin plain or slightly indented, area of junction of siphonopores .5-1 mm. Pseudosepta twelve, irregularly developed and frequently absent; when present short, straight and spine-like. Tabulæ complete, both horizontal and concave, never vesicular, spacing variable but in periods of regular growth from .75 to 1 mm. apart; inter-tabular spaces regularly oblong. Siphonopores large and regular in form, polygonal—quadrangular to heptagonal, from .25-.5 mm. in diameter and 1-3 in each autoporal interspace (usually two). The circum-autoporal circlet is composed of from 16 to 20 siphonopores slightly larger than the general series. The transverse structures in the siphonoporal tubes are usually regularly spaced as regards adjoining tubes, and may be transverse, concave, or even amalgamating (sub-dissepimental).

Compared with Australian Silurian types *yassensis* is distinguished by the possession of constantly large autopores with well defined margins, equal in size, relatively closely spaced, with narrow siphonoporal areas. The large size of the autopores is very distinctive, and in this respect it

¹G. Lindstrom—K. Svenska Vet. Akad., Handlingar, 1899, xxxii.

²Nicholson—On the Structure and Affinities of the Tabulate Corals of the Palaeozoic Period, 1879.