

TWO REMARKABLE CORALS FROM THE DEVONIAN OF  
NEW SOUTH WALES

(*Spongophyllum halysitoides*, and *Columnaria neminghensis*.)

BY

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(Plates vii.-ix.)

I.—A MONSEPTATE SPONGOPHYLLUM (*Spongophyllum halysitoides*.)

A peculiar and abnormal *Spongophyllum* of remarkably simple structure and septaless.

The specimen consists of a small corallum two and a quarter inches by one inch, evidently only a portion of a larger mass, and with the upper surface beautifully weathered. The corallites are polygonal and vary much in size, the average diameter being from four to six millimetres; they are firmly amalgamated laterally. The walls of the respective corallites, well defined and strong, are the striking feature of this coral.

In a transverse view each corallite looks as if its polygonal outline was composed of a string of minute shuttle-like figures, swelling and contracting alternately. Within each calice, and continuously throughout the successive visceral chambers in descending order, this structure is actually caused by the deep and regular fluting of the walls. Looking down on these walls from above, and shutting one's eyes to the interior vesicular structure, the resemblance to the meandering corallite lines in *Halysites* is truly astonishing, hence the specific name I have applied to this coral.

There is the usual tripartite structure, although the demarcation is ill-defined. Immediately within the fluted walls is (by comparison) a broad peripheral zone of variously shaped vesicles, some large, others small. This is followed by the intermediate zone, or cycle, which by rights should be septate. It is extremely narrow, not always present even, but when so, of a peculiar structure, to be referred to later. In some corallites certainly, a few rudimentary short septa do occur, slightly projecting into the central, and what in an ordinary Rugose coral would be the tabulate area; here, however, it is purely vesicular.

In a longitudinal section all that is necessary to notice particularly is the structure of what would be the septate zone and the central area; in passing, attention may be called to the very varied form of the peripheral vesicles. From Pl. viii., fig. 3, it will be seen that the intermediate zone is really a tabulate area, without any mural investment, but depending for its demarcation on the convex surfaces of the distal peripheral vesicles and the lateral surfaces of those of the central area. It is transversely divided by floors, mostly horizontal, but as they are parts of an area at times slightly septate, may be spoken of as dissepimental vesicles. Finally, the central area of each corallite of one or more ranges of egg-shaped vesicles, their longitudinal diameters being the greater.

I know of no Australian *Spongophyllum* with a structure at all approaching that of this coral, viz., the fluted condition of the corallite walls, and practically the lack of septa.

*Loc.*—Road near Beedle's Farm, Moonbi, Co. Inglis, New South Wales.

*Hor.*—Middle Devonian?