

TASMANIAN GRAPTOLITE RECORD.

By

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(Communicated by P. B. Nye.)

In 1902 the late Dr. T. S. Hall commented on the graptolite records of Tasmania (1). After weighing the evidence regarding their reliability, he expressed a conviction that *Diplograptus* sp. had been found at a locality given by the finder, Mr. Thureau, as approximately 10 miles from Strahan, on the old Mt. Lyell Road close to an old road maker's camp and stable near a spring of water.

Incidentally he stated (2) that he had examined the collection belonging to Mr. Thomas Stephens and found traces of graptolites on a piece of hard, jointed, blue black slate with a silky sheen. The specimen was handed to Mr. Stephens by Mr. G. A. Waller, then Assistant Government Geologist, who found it on the Ring River, on the North-East Dundas railway. About the same time Mr. Waller forwarded to Dr. Hall two slabs of slate from a locality on the same railway line 12.35 miles from Zeehan and apparently from the same bed. On one of these Dr. Hall definitely recognised graptolites (3).

Mr. P. B. Nye, Government Geologist of the Tasmanian Geological Survey, has kindly submitted for re-examination two of the slabs examined by Dr. Hall, sent to him by Mr. Waller and now in the possession of the Survey, and Mr. Clive Lord, Director of the Tasmanian Museum, Hobart, has been good enough to add a third, i.e., that formerly in Mr. Stephens's collection. Realising what a keen and accurate observer Dr. Hall was, it would seem scarcely necessary to re-examine the material were it not that since his death a

(1) Hall, T. S. Evidence of Graptolites in Tasmania, Papers and Proc. Roy. Soc. Tasmania, 1902, pp. 16, 17.

(2) *Ibid.*

(3) *Ibid.*

wealth of new information has come to hand regarding forms and faunas unknown to him and the existence of which was then quite unsuspected.

In regard to the slab from the Stephens Collection (Tasmanian Museum, No. 10935) collected by Mr. Waller from the Ring River, the graptolites preserved as "talcose" markings "can only be seen when the specimen is held in a particular position with regard to the light" (4). In regard to the thecae my observations agree with Dr. Hall's that "their outer edge is straight and the apertural margin is about normal to the branch" (5), but with these thecal characters and the outline of the polypary, such as it is, I would rather be inclined to refer it to *Retiograptus* than the *Dendroidea* (6). The ferruginous marks seem to me to support the same conclusion.

In regard to the graptolites from the N.E. Dundas Railway, 12.35 miles from Zeehan. The following forms suggest themselves:—

No. 1 slab—

Dichograptid fragt. Specimen No. 1

No. 2 slab—

? *Tetragraptus* sp. Specimen No. 1

? *Leptograptus* sp. Specimen No. 3

? *Syndyograptus* sp. (distal fragt.) . . .
 Specimen No. 4

Uniserial stipe (non *Monograptus*) . . .
 Specimen No. 2

In this poorly preserved collection not even a generic determination is certain.

The evidence as it appears to me is, then:—

1. Dr. Hall was convinced that *Diplograptus* sp. was obtained by Mr. Thureau from Strahan.

2. The indistinct forms from the Ring River suggest *Retiograptus* affinity.

3. The *Tetragraptus* 12.35 miles from Zeehan is reminiscent of *T. tabidus* recently described (7) by me from Nelson, New Zealand, where it is associated with *Leptograptus*,

(4) *Ibid.*

(5) *Ibid.*

(6) *Ibid.*

(7) Keble, R. A., and Benson, W. N. Graptolites from N.W. Nelson. Trans. N.Z. Inst. Vol. LXIX. *In litt.*

Syndyograptus, *Diplograptus*, *Retiograptus*, etc., etc., all of which are suggested in some connection with the doubtful Tasmanian occurrences. Summarising the evidence it would seem that the Tasmanian graptolites are Ordovician, either at the summit of the Lower, or at the base of the Upper, Ordovician (8).

In regard to the Lisle graptolites, so called, Dr. Hall could not do otherwise than regard the record as worthless, but as he pointed out in a previous contribution (9) Mr. Thureau was familiar with graptolites and a skilled collector. He discovered that elegant form *Gonograptus thureaui*, which McCoy made a generic type, and added considerably to our knowledge of the Lower Ordovician fauna. His statement that he saw at Lisle "dark elongated imprints—probably "carbonaceous—in dark blue shales, . . . too indistinct to be "classified . . ." (10) is suggestive, not that the elongated carbonaceous imprints were graptolites, but that graptolites should be found there. Furthermore, a rapid inspection of some slates in the area lead me to the same conclusion.

In correspondence (17/9/28) Mr. Keble added, "After "much consideration I have decided to add something further "regarding the Zeehan graptolites. Were it not that in "collaboration with Dr. W. N. Benson I recently examined "some graptolites from Nelson for the New Zealand Geo- "logical Survey I should have remained quiet. Two con- "siderations prompted me:—

"(1) The prevalence of unusual forms of the *Lep- "tograptid* type.

"(2) That the late T. S. Hall accepted *Diplograptus* "as found by Mr. Thureau.

"The specimens are too poor to figure.

"The horizon suggested has proved to be barren in "Victoria in regard to auriferous and other mineral wealth. "It occurs at Bendigo, Sandy's Creek, and Mornington— "always away from payable reefs and alluvial."

(8) It should be pointed out in regard to Mr. Thureau's Strahan occurrence that *Diplograptus* ranges from the middle part of the Lower Ordovician through the Upper Ordovician into the lower part of the Silurian, so that one could reasonably retain a Silurian age for the beds. It is, however, much more typical of the Upper Ordovician.

(9) Hall, T. S. An examination of the Tasmanian Graptolite Record. Report Aust. Assoc. Adv. Sc., v. 7, 1898, p. 401.

(10) Hall, T. S. Evidence of Graptolites in Tasmania. Papers and Proc. Roy. Soc. Tas. 1902, p. 16.