

GRAPTOLITE LOCALITIES OF THE SNOWY MOUNTAINS, NEW SOUTH WALES

By H. O. FLETCHER.

(Graptolite Identifications by Mrs. K. Sherrard, M.Sc.)

(4 Maps.)

The initiation of the Snowy Mountains Hydro-Electric Authority gave a decided impetus to geological research over an area of some 6,000 square miles in southern New South Wales.

Following the Authority's request in 1949 for geologic investigation, officers of the Geological Survey of New South Wales have mapped more than 3,000 square miles of this country by detailed reconnaissance standard on a scale of 1 inch = 1 mile. During the course of these surveys an intensive search was made for fossil remains.

The information embodied in this report was gained during several visits to the Snowy Mountains with Survey parties in the author's capacity as Honorary Palaeontologist to the Geological Survey of New South Wales. A good deal of the information is included in the Snowy Mountains Reports (unpublished) of the Department of Mines. I am indebted to Mrs. Kathleen Sherrard for the graptolite identifications.

Previously the geology of the Snowy Mountains area was not very well known except for a broad generalization. The age of the meta-sediments, which comprise a large section of the region, was matter of considerable doubt.

The first graptolite remains to be recorded from the actual Snowy Mountains area are those mentioned by David (1908, p. 659), from Barney's Range, near Berridale. The genus *Leptograptus* was recognized among the specimens.

Laserson (1909, p. 118) recorded graptolites from a black slate at Wambrook Creek, which crosses the Adaminaby Road, eleven miles from Cooma. Specimens were collected from some distance up the creek on the southern side of the road. Laserson's locality was again mentioned by Browne (1914, p. 191), and the following list of graptolites, supplied by Laserson, was published: *Diplograptus foliaceus* (very abundant), *Climacograptus bicornis*, *C. hastata* (very abundant), *Dicellograptus elegans*, *D. caduceus*, *D. affinis*, ? *Pleurograptus*.

Öpik (1952, p. 1), recognized at Wambrook Creek, *Pleurograptus linearis*, the zone species of the lower zone of the Bolindian, and also *Dicranograptus nicholsoni* indicating the top of the lower zone of the Eastonian ("zone with *Climacograptus wilsoni*?"). In between, as Öpik points out, "is the complete Upper Eastonian zone with *Dicranograptus clingani* = *D. hians*."

Poorly preserved graptolites and apparently only recognizable as such have been recorded from black shales exposed at McCarty's Crossing, near the junction of Bridle Creek and the Murrumbidgee River. The locality is about four miles to the north-north-east of the Wambrook Creek locality.

A further locality is mentioned by Browne (1914, p. 192), at Geygedzerick Hill, 2½ miles north-east of Berridale. The slates at this locality although greatly altered contain an abundance of well preserved graptolites, said to include *Diplograptus*, *Didymograptus* and *Tetragraptus*.