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## APPENDIX

### Fusuline Limestone in the Torlesse Group near Benmore Dam, Waitaki Valley

By N. de B. HORNIBROOK and SHU YEOH KHOON

VERBEEKINID or Neoschwagerinid fusulines were discovered by Y. K. Shu in a limestone in the Torlesse Group some two miles south-east of Benmore Dam in May, 1964. The same limestone contains polycoeliid rugosan corals and crinoid columnals. The fossils indicate a Permian age for the limestone.

A fault block of siltstone, sandstone, pebbly conglomerate, limestone lenses and volcanics lies to the east of a fault block of conglomerate and sandstone from which Mesozoic (?Rhaetian) plant remains collected by Harrington and McKellar at locality S117/469 were described by Bell (in Bell, Harrington and McKellar, 1956). The creamy white recrystallized limestone forms a thin discontinuous band traceable for more than a mile, some two miles south-east of Benmore Dam. Fusulines occur in one locality in the upper reaches of Akatarewa Stream, S117/666, and their tests constitute somewhat less than half the volume of the rock.

The following description was made by one of us (N. de B. H.):

Oval shaped fusulinidae, approximately 1 cm long, are plainly visible on the weathered surfaces of the limestone; but in thin section it was found that recrystallisation had obscured most of the detailed structure of the fossils.

The largest specimen measured is 11 mm long by 4 mm wide and the test wall is approximately 0.075 mm thick.

Although sections through more than 20 specimens were examined, it was not possible to determine which genus they belong to. As far as could be determined not more than one form is present.