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1987/59. Palynology of an outcrop sample from the Lower Pieman Dam Road, western Tasmania.

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Abstract

A sample of black mudstone from one kilometre west of the Lower Pieman Dam has yielded a latest Eocene/earliest Oligocene (Upper *N. asperus* Zone) age microflora.

INTRODUCTION

P. W. Baillie submitted a single outcrop sample of soft black mudstone from a succession of channel sands and overbank fines from a locality about one kilometre west of the Lower Pieman Dam on the west coast of Tasmania. The locality is on the Lower Pieman Dam Road at grid reference CP435792. The sample was given normal palynological processing and analysis. The zonation used is shown on Figure 1 and is basically that of Stover and Evans (1973) and Stover and Partridge (1973) as modified by Partridge (1976).

RESULTS

The sample yielded well, but was dominated by cellular plant fragments. Diversity was low, with *Nothofagidites*, especially *N. emarcidus/heterus* the most common form. The assemblage included the following identified forms, and several undescribed but distinctive taxa.

Beaupreadites verrucosus
Dacrycarpidites australiensis
Dilwynites granulatus
D. tuberculatus
Ericipites scabratus
Haloragacidites harrisii : frequent
Ischyosporites gremius
Lygistepollenites florinii
Malvacipollis subtilis
Milfordia homeopunctatus
Nothofagidites asperus : rare
N. emarcidus/heterus : dominant
N. falcatus : frequent
N. flemingii
Periporopollenites vesicus
Phyllocladidites mawsonii
Polycolpites sp.
Podosporites microsaccatus
Tripoporopollenites spinosus
T. cf. ambiguus

The dinoflagellate *Saeptodinium tasmaniense* was also seen as a rare component.

DISCUSSION

The dominance of *Nothofagidites* clearly indicates assignment in the *N. asperus* to *T. Bellus* Zone interval. The presence of *B. verrucosus* and *P. vesicus* indicates the lower *P. tuberculatus* Zone or older. The

absence of *Cyatheacidites annulatus* (which would indicate the *F. tuberculatus* Zone) and of older indicators (many of which would indicate the middle *N. asperus* Zone or older), indicates assignment of this sample to the upper *N. asperus* Zone of latest Eocene/earliest Oligocene age. The presence of *S. tasmaniense* suggests lacustrine environments, and is not considered a marine indicator, as discussed by Harris (1973). It was described from Mt Bischoff in north-west Tasmania from an Oligocene/Miocene section.

CONCLUSIONS

The sample is from the upper *N. asperus* Zone of latest Eocene/earliest Oligocene age and is therefore much younger than the Strahan/Coal Head Macquarie Beds (Baillie et al., 1986). The age and environment are similar to the section recently studied from the Sub-basalt Drilling programme (Baillie et al., 1987) and other basalt-interbedded outcrop and subsurface material along the northern Tasmanian coast.

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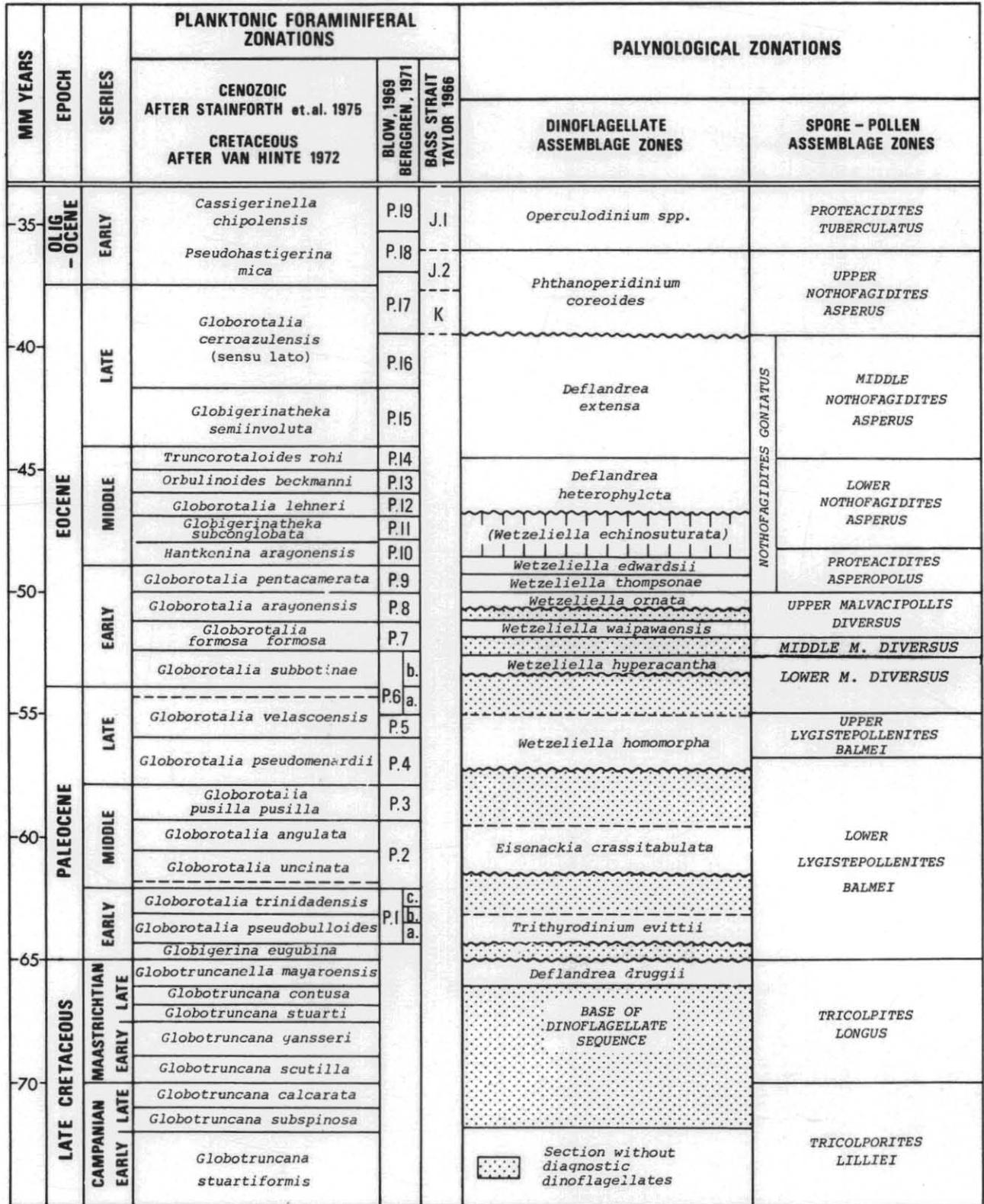


Figure 1. Zonation framework (from Partridge, 1976)

