or greater numbers than *Nothofagidites* spp. in the assemblage. Negative evidence supporting the zone assignment is the absence of key species of the Middle *N. asperus* Zone. Although *Proteacidites tuberculatus* is known to range as low as the Middle *N. asperus* Zone in the Bass Basin (Partridge, 1973) it is more typical of younger zones. At 1602m it is almost certainly caved. Also caved is the rare species *Corsinipollenites epilobioides* Krutzsch 1968 (see Mildenhall & Pocknall, 1989) which is more typical of Oligocene age strata.

Species suggesting an age no older than the Lower *N. asperus* Zone are *Nothofagidites falcatus, Proteacidites recavus* and *P. scitus*.

The dinoflagellates recorded support a Middle Eocene age but are not diagnostic of currently defined zones.

Indeterminate Interval: 1702-2304 metres **Eocene.**

The seven samples over this interval contained mixed assemblages of "light" and "dark" fossils. Only the "dark" carbonised palynomorphs are considered to be *insitu* and representative of the age of this interval. The total assemblage of "dark" palynomorphs supports an Eocene age but there were few species identified which allow any possible zone assignment. Those are the pollen *Polycolporopollenites esobalteus* at 1906m which indicates a zone assignment no older than the Middle *M. diversus* Zone whilst the dinoflagellate *Apectodinium homomorphum* (long spined variety) suggests a spore-pollen equivalent age no younger than the *P. asperopolus* Zone. As the limits of these species ranges creates a contradiction a broader Eocene age is preferred.

Lower *Malvacipollis diversus* Zone: 2365.5-2417 metres **Early Eocene.**

Of the two samples assigned to the Lower *M. diversus* Zone the shallowest is no younger based on the LAD (Last Appearance Datum) of *Peninsulapollis gillii* which ranges no younger than this zone according to the synthesised range chart in Partridge (1973). The deeper sample is assigned to the zone on the occurrence of frequent *Proteacidites grandis*, frequent *Spinizonocolpites prominatus* and *Polypodiaceoisporites varus* ms. The last two species are considered indicative of a mangrove association and suggest the presence of mangrove environments in this part of the Early Eocene. The presence of rare *Lygistepollenites balmei* is consistent with a position near the base of the Lower *M. diverus* Zone.