

environmentally restricted calcareous benthonic fauna which included Anomalinoides vitrinoda, Anglogenerina ototara and Cerobertina kakohoica. This latter species is not present above this interval. Below 3,700 feet and in core 4 (3,800 to 3,828 feet), only arenaceous species listed above, are present and are similar to the arenaceous assemblage in the Demons Bluff Formation at Anglesea (west of Geelong, Victoria), which is discussed by Taylor (1965b) and shown to be of upper Eocene Age. The Haplophragmoides assemblage within core 4 is certainly not that of Paleocene. Thus on superposition within the Bass No.2 section, this interval is considered as upper Eocene. Especially with the limited range of Cerobertina kakohoica, the faunas correspond almost exactly with the similarly designated unit between 5,382 and 5,905 feet in the Bass No.1 section (Taylor, 1965a, pp. 3-5 and fig.1 and 2).

The base, of core 4 (at 3,828 feet) or just below it, is taken as the base of the marine Tertiary sequence in Bass No.2 well. No new faunas are recognised below this level.

#### DEPOSITIONAL HISTORY

The marine Tertiary depositional environments were postulated for Bass No.1 (by Taylor, 1965a) on palaeoecological grounds, based on accumulative percentages of dominant faunal elements. This quantitative approach can not be repeated for the Bass No.2 section because of the nature of sampling. However a visual examination shows several trends and can be compared with the Bass No.1 section, where Taylor (l.c., p.7-8) has divided the marine Tertiary sequence into four broad biofacies. This comparison will be discussed in ascending order.

- (a) "Barred Basin" environment from 3,825 to 3,620 feet in Bass No.2 is identical with the same facies from 5,905 to 5,382 feet in Bass No.1.
- (b) There appears to be a gradual overflow of oceanic currents above 3,620 feet in Bass No.2, as there is an incoming, then a gradual increase in planktonic species. In Bass No.1 this facies operated throughout the Oligocene (Zonule J and I). But on comparing the