

planktonic fauna, so it could be assumed that some factor was inhibiting circulation today, but did not exist during the lower Miocene. This interval was probably deposited in a water depth of between 300 and 100 feet.

(d) A similar environment is envisaged for the interval 2530' to 1500' as was for the one above. The subtle difference between the two is that the upper one is almost lacking in miliolids and has a higher percentage of cibicidids. The two intervals are separated by the volcanics. The three dimensional form of the volcanics on the sea floor may have influenced the environment slightly. In general the depositional environment is considered to have been much the same before and after the volcanic activity.

Above 1500 feet, the percentage of planktonic species appear to decrease sharply, with an increase in miliolids, Elphidium and arenaceous species. Thus water depth decreased and circulation was probably restricted.

There is no indication of biothermal accumulations within the Bass No. 1 foraminiferal sequence.

(ii) The sequence of depositional events:

Marine Tertiary sedimentation commenced in the Eocene, probably upper Eocene, with the deposition of sands and silts (often carbonaceous) in a restricted, barred basin environment. Oceanic circulation gradually penetrated to the depositional area in the lower Oligocene. The circulation inhibitor was not effective during the lower and middle Miocene when calcareous sedimentation took place in a shelf environment with unrestricted water circulation. The depth of deposition decreased during the upper Miocene and was accompanied by some restriction of water circulation.

The initial part of the depositional sequence (5905' to 5382') is identical with that in the Angelsea area, Victoria (between Geelong and Cape Otway). Where the Demon's Bluff Formation of Raggatt & Crespin (1955) was deposited in a very restricted environment, with a predominantly Haplophragmoides assemblage (= Cyclamina of Raggatt & Crespin) which Taylor (1965b) regards as being of upper Eocene age. The top of the Demon's Bluff Formation is marked by the widespread Oligocene (Janjukian) transgression and the Jan Juk