



The Once and Future Warm Earth: A Paleoceanographic View

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Predictions of climatic warming in the near future, if true, will approximate the very warm conditions of the early to mid Eocene. By studying the early Paleogene world we may learn what may be in store for us, as well as better understand the processes by which such a warm climate is developed—and ended. In the early and mid Eocene the Arctic Ocean was ice-free and subtropical flora and fauna were found in its waters and along its shores. The tropical oceans of the time of peak Eocene warmth give evidence of relatively weak trade winds and a diminished equatorial divergence. It is likely that this increased warmth, especially at high latitudes, was effected by atmospheric heat transport and greenhouse gases rather than by ocean heat transport.

Ted Moore was a shipboard scientist on DSDP Legs 8 and 17. He was Co-Chief Scientist of DSDP Leg 74 and has served as shipboard scientist on ODP Legs 138 and 199. He was also a shipboard scientist on the recent IODP Expedition 302 to the Arctic Ocean.