

The last 1 million years of discoasters: late Pliocene productivity at IODP Site U1476 (Mozambique Channel)

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IODP Expedition 361 Scientists

Discoaster is an extinct coccolithophore genus that exhibited a fairly continuous evolutionary development from the first occurrence of its oldest forms during the late Paleocene (~60Ma) to the extinction of the last species by the end of the Pliocene (1.93Ma). Previous works suggested that the inception of bipolar glaciation during the Pliocene led to the successive disappearance of these species. Here, we present initial results from the productivity reconstruction of sediments collected during the IODP Expedition 36, southern African climates at

the Mozambique Channel (Site U1476), which focused on the last one million years of the discoasters (2.9 to 1.9Ma). New productivity data were obtained from the abundances and accumulation rates of the last five *Discoaster* species (*Discoaster brouweri*, *D. triradiatus*, *D. pentaradiatus*, *D. surculus*, and *D. tamalis*). The results were then compared to the downcore record of *Florisphaera profunda*, a known and widely used productivity proxy, and to the shipboard geochemical and sedimentological data.