



Dinocysts and other palynomorphs from the Holocene record of the Adélie coastal margin, Antarctica (IODP Site U1357)

Julian Hartman (1), Francesca Sangiorgi (1), Peter Bijl (1), Henk Brinkhuis (1,2)

(1) Department of Earth Sciences, Utrecht University, Utrecht, Netherlands (j.d.hartman@uu.nl), (2) NIOZ, Royal Netherlands Institute for Sea Research, 't Horntje, Texel, Netherlands

During International Ocean Drilling Program Expedition 318, about 170 meters of Holocene core have been retrieved from Site U1357, near the Adélie Coast, East-Antarctica. This core provides a high resolution marine record of Holocene climate variability close to the Antarctic margin. Palynomorphs in this core are extremely well-preserved due to the high sedimentation rates of diatom ooze. One of these exceptionally well-preserved finds is the first account of cysts of a sea-ice dwelling suessoid dinoflagellate (*Polarella glacialis*). Furthermore, a new species of dinoflagellate cyst, large amounts of tintinnid loricae, copepod remains, and various kinds of unknown/undescribed acritarch species have been found. Although the composition of the palynomorphs assemblage is highly variable throughout the record, this record potentially gives insight into ecological and/or environmental changes in a polynya-controlled environment since the last deglaciation. For example, the dinocyst assemblage seems to indicate that the sea-ice season was shorter in the early Holocene.