

BIOSTRATIGRAPHY AND PALEOECOLOGY OF OSTRACODES AT THE CRETACEOUS-TERTIARY BOUNDARY FROM POTY QUARRY, NORTHEASTERN BRAZIL*

1FAUTH, G., 1,2KOUTSOUKOS, E.A.M., 2RODRIGUES, R.; 1Geologisch-Paläontologisches Institut der Universität Heidelberg, Im Neuenheimer Feld 234, D-69120 Heidelberg, Germany; 2Petrobras-Cenpes, Cidade Universitária, Ilha do Fundão, 21949-900, Rio de Janeiro, Brazil.

Abrupt faunal and floral changes across the Cretaceous-Tertiary (K-T) boundary have been observed and investigated intensely for the last twenty years. Localities can be found worldwide with a well preserved boundary, but a few of these possess a good ostracode record. In the Poty Quarry, Pernambuco, northeastern Brazil, the K-T boundary is well exposed in the carbonate succession and yields well preserved ostracode assemblages. This section is probably the most complete marine K-T section at low-latitudes of the Atlantic Ocean. Detailed biostratigraphic analysis carried out in Poty Quarry reveal one Cretaceous zone (*Cytherella* aff. *ovoidea* Zone) and three Tertiary zones: *Soudanella laciniosa* Zone, *Paracypris jonesi* Zone and *Paracosta recifensis* Zone. The ostracode zones are closely correlated with the planktonic foraminiferal zones previously studied in the Poty Quarry section. The K-T boundary based on ostracodes is positioned at the contact between the limestone layers B and C, at the base of the *Soudanella laciniosa* Zone. The uppermost Cretaceous ostracode assemblage indicates a deep outer shelf environment, marked by individuals with weak ornamentation and absence of ocular tubercle. The lowermost Tertiary (Danian) ostracodes are better preserved, abundant, and strongly ornamented, indicating inner-middle shelf depths. Stable isotope analysis ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) carried out in selected carapaces of *Cytherella* aff. *ovoidea* and *Cytherella piacabucuensis* suggest major oceanographic changes across the K-T boundary transition.*This is a contribution to IGCP Project 381 South Atlantic Mesozoic Correlations.