

THE PLANKTIC FORAMINIFERA SPECIES *Praemurica nikolasi* (Koutsoukos 2014): BIOSTRATIGRAPHIC RECORD

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ABSTRACT: The planktic foraminifera are unicellular marine organisms (protozoa), which inhabit the sediment water interface (benthic forms) or the shallowest portions of the water column with smoker planktic life. Due to the chemical composition of their tests, the relatively high abundance and preservational potential planktic foraminifers have been extensively used in paleoceanography, paleoecology and biostratigraphy studies. Their high fast speciation rates during the Cenozoic enable the identification of a series of evolutionary events, which can be applied to date marine sedimentary sections worldwide. The planktic foraminifera species *Praemurica nikolasi* Koutsoukos 2014 was recorded in the early Danian, an interval characterized by the largest known biotic recovery episode in the evolutionary history of the marine pelagic ecosystem realm, in the aftermath of the Cretaceous/Paleogene (K/Pg) boundary event. *Praemurica nikolasi* has been assigned to the genus *Praemurica* due to its non-spinose, cancellate and praemuricate wall texture. This species is associated with the first cancellate planktic foraminifera of the Danian, where it likely evolved from *Hedbergella monmouthensis*, a short-lived survivor species from the K/Pg event. The first record of this species is from the Campos Basin, in the northern South Atlantic, from a piston core that

recovered a lower Danian interval spanning the planktic foraminiferal zones P0 (*Guembelitra cretacea* Partial Range Zone) to P1c (*Globanomalina compressa/Praemurica inconstans-Praemurica uncinata* Interval Subzone), in part (Koutsoukos, 2014). The biostratigraphic range of *P. nikolasi* has been marked in the Campos Basin from the lowermost zone P0 up to zone P1c, but the upper range is truncated by the top of the piston core (Koutsoukos, 2014). DSDP (Deep Sea Drilling Program) Leg 3, Site 356, drilled in the São Paulo Plateau, recovered a section which yielded an abundant and well-preserved planktic foraminiferal assemblage, spanning the K/Pg boundary and a continuous record across the transition of zones P1c and P2, an interval that is missing in the Campos Basin piston core. At DSDP Site 356 the last occurrence of *P. nikolasi* is confirmed at 386.77mbsf, zone P1c. Therefore, the results of the current study confirm the known total range of *P. nikolasi* from the lowermost zone P0 up to zone P1c, lower Danian.

KEY-WORDS: PLANKTIC FORAMINIFERA; *Praemurica nikolasi*;
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