



Calcareous nannofossil and planktonic foraminiferal assemblages and paleoecological reconstruction of sapropel S1 in SE Aegean Sea

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Calcareous nannofossil and planktonic foraminiferal assemblages of two gravity cores, NS-14 and NS-40, were investigated and correlated. Both cores are located in the vicinity of Nisyros Island in SE Aegean Sea. Stratigraphic framework was based on radiocarbon dating. Additionally Z2 Santorini tephra layer and sapropel S1 are well represented. An interruption in S1 sapropelic sequence has been observed in both cores. Marine biogeochemical conditions and SSTs derived from alkenones, are well determined in core NS-14 (Triantaphyllou et al. 2006).

Warm and stratified conditions during S1a are characterized by abundance of calcareous nannofossil *Florisphaera profunda* and planktonic foraminifer *Globigerinoides ruber* especially the *rosea* variety, suggesting the presence of DCM. Towards the upper part of S1b the decrease of *F. profunda* followed by increase of *Braarudosphaera bigelowii* and *Globigerinoides trilobus-sacculiferus* imply severe reduction of stratification caused by great influx of less saline waters most probably from the Black Sea. Above S1, at approximately 5200 -4200 yrs *cal* BP, calcareous nannofossils suggest increase in productivity. A similar interval of highly productive waters is observed just above the Santorini tephra layer.

The combined faunal and floral signals allow the refinement for the Aegean Sea area

of the ecozonal scheme of Principato et al. (2003), during the last 10000 yrs *cal* BP.

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References

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