Qualitative correlation is done by comparing the mapped patterns of observed and expected seismicity rates, while quantitative correlation is calculated by the application of statistical tests, i.e. calculation of the correlation coefficient, r. Once the model is tested in previous cases, an estimation of the expected number of small earthquakes or the probability of a large shock to occur in the future is performed for each one of the studied sub-regions. An earthquake forecast for shocks with magnitude greater than or equal to a minimum magnitude M, is attempted for specific regions and for a settled time period, contributing to a more reliable time–dependent seismic hazard assessment.

Larger foraminiferal stratigraphy and paleoenvironments of the Middle Eocene to Lower Oligocene shallow-marine units in the northern and eastern parts of the Thrace Basin, NW Turkey

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Several sections of the shallow-marine Eocene Soğucak Limestone and one of the Oligocene Ceylan Formation were studied with detailed biometric analysis of the full spectrum of larger benthic foraminifera (mainly nummulitids and orthophragmines). This allows us establishing a high-resolution biostratigraphy in the context of the shallow benthic zonation (with SBZ zones) of the Tethyan Paleogene since larger foraminiferal assemblages show a very strong Western Tethyan affinity. Only two species (*Heterostegina armenica* and *Orbitoclypeus haynesi*) cannot so far be traced to the west of the Thrace Basin.

The age of particular larger foraminiferal sites is determined based on (i) the occurrence and developmental stage of different species of *Heterostegina*, (ii) the presence/absence of giant *Nummulites*, (iii) the presence/absence of *Spiroclypeus*, (iv) the developmental stage of reticulate *Nummulites*, (v) the occurrence and developmental stage of orthophragmines, (vi) the occurrence of particular *Operculina* and radiate *Nummulites*.

Six larger foraminiferal horizons could be established. They correspond to (i) the vicinity of the early/late Bartonian boundary (SBZ 17/18), (ii) the middle late Bartonian (SBZ 18B), (iii) the latest Bartonian (SBZ 18C), (iv) the early Priabonian (SBZ 19), (v) the late Priabonian (SBZ 20) and (vi) the early Rupelian (SBZ 21).

Three main shallow-water depositional environments could be recognized in both the late Bartonian and Priabonian: two of them took place in the inner shelf: one with low, and another with high water-energy, whereas the third one refers to the outer shelf.

Biostratigraphical and paleoenvironmental observations allow us to reconstruct three subregions with different depositional histories. (i) The eastern part of the territory with a basement of the İstanbul zone was transgressed at the beginning of the middle late Bartonian (SBZ 18B) followed by the drowning of the carbonate platform still in the latest Bartonian (SBZ 18C). (ii) The Çatalca block lying on the Strandja Massif formed a paleohigh at whose peripheries a similar depositional history can be reconstructed as for the former subregion, however the central part was transgressed only in the (early) Priabonian and was not drowned at all. (iii) The northern margin of the Thrace Basin (also lying on the Strandja Massif) was transgressed only in the latest Bartonian (SBZ 18C) or in the early Priabonian (SBZ 19) and the Priabonian carbonate platform has only partly and moderately been drowned. This subregion very probably formed the northern margin of the whole Thrace Basin in the Paleogene.