VEGETATION RECONSTRUCTION ON THE SOUTHERN SHORES OF THE TETHYS OCEAN DURING THE EARLY OLIGOCENE – INSIGHTS FROM CONTINENTAL PALYNOMORPHS, EGYPT

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This study documents continental palynomorphs recovered from the late Eocene to early Oligocene Dabaa Formation near the Qattara Depression. The recorded assemblages are well preserved and comprise diverse lineages of algae, spores and pollen belonging to 46 families encompassing chlorococcalean algae, lycopods, ferns, gymnosperms and angiosperms. The assemblages are mainly of tropical vegetation, including tropical deciduous forests, grassland and (semi-)arid tropical shrublands, in which angiosperms were among the main representatives; additionally, open, drier habitats might have existed in the hinterland. The current data have been combined with previous megafossils and palynological evidence to assess and refine vegetation changes during the early Oligocene time window in Egypt and across North Africa. The inferred vegetation was a mosaic of different plant belts that ran more or less parallel to the Tethys coastline under the variable geographical influence of streams and lagoons. Evidently, the belt of tropical forest along the coast of the Tethys Ocean narrowed during the Oligocene in tandem with climatic deterioration following the Eocene–Oligocene boundary, which may have also led to the fractionation of forest habitats.