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Vegetation and Climate Patterns of Western Türkiye since the Late Glacial Period Based on Pollen Records in the Aegean Sea

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Pollen analysis of the MAR03-02 core from the Aegean Sea (38°03.97'N, 26°22.30'E), western Türkiye allows us to reconstruct paleo-vegetation patterns and paleo-climate dynamics of the surrounding territory since the Late Glacial Period. We present palynological record from the topmost 2.8 m of a sediment core (MAR03-02) collected in the Aegean Sea, covering the last 20.7 ka. Variation in Mediterranean/temperate forests and herb/step plants indicates major climatic shifts connected to Heinrich Stadial 1, Bølling-Allerød, Younger Dryas, and the Holocene Climatic Optimum as well as some Rapid Climate Changes such as the 9.4, 8.2 and 5.9 ka events, Medieval Warm Period and Little Ice Age during the Holocene. In the cold and dry periods, low Arboreal Pollen (AP) and high amounts of herbaceous and steppe plants, including *Artemisia*, *Cyperaceae*, and *Asteraceae Chichorioideae* were recorded. In warmer periods, high AP which was mainly characterized by deciduous *Quercus*, and low herbaceous/steppe plants dominated in the region. A warm-temperate and Mediterranean trees, consisted of mainly deciduous *Quercus* and *Quercus ilex*-type, reached the maximum level from the onset of the Holocene to 6 ka, which corresponded to the Holocene Climate Optimum. The pollen records show similarities with regional proxy records. Anthropogenic impacts occurred clearly during the last 2 ka when cultivated plants become prominent in the pollen records (e.g. *Olea europea* and *Pistacia*).