The palynoflora of the lignite strip mines of the Yatağan basin, located in the Muğla province of western Turkey, is the focus of this study. Samples were taken from the Eskhisar, Salihpasalar and Tinaz mines. In the Yatağan basin two Miocene formations, formed from river and lake deposits, Eskhisar Formation (middle Miocene) and Yatağan Formation (late Miocene) have been designated (Fig. 1). Both show a general lithology consisting of conglomerate, sandstone, claystone, limestone and tuffite. The mined/excavated lignite bearing strata are restricted to the Eskhisar Formation.

Until now, pollen from the Yatağan basin has mostly been described according to conventional morphological nomenclature, using light microscopy (LM) only. In this study, the same individual pollen grains are investigated using both, LM and scanning electron microscopy (SEM). The high resolution pictographs allow a higher taxonomic resolution (Figs. 2, 3, 4).

The rich palynoflora (Table 1) is comprised of diverse spores (at least nine morphotypes), gymnosperm pollen from Cupressaceae, Gnetales, Pinaceae, and angiosperm pollen from Poaceae, Typhaceae, Altingiaceae, Amaranthaceae (Chenopodiaceae), Anacardiaceae, Apiaceae, Betulaceae, Buxaceae, Caprifoliaceae (Dipsacaceae, Lonicera) Caryophyllaceae, Compositae (Asteroidae, Cichorieae), Cornaceae, Eucomniiaceae, Fabaceae, Fagaceae (Fagus, Quercus, Trigonobalanopsis) Geraniaceae, Juglandaceae, Malvaceae, Myricaceae, Nympheaceae, Oleariae, Palmae, Plantaginaceae Armeriae, Phascolarctaceae (2 types), Poaceae, Portulacaceae, Primulaceae, Ranunculaceae, Rosaceae, Salicaceae, Sapindaceae, Smilacaceae, Solanaceae, Taxaceae, Ulmaceae, Zonarieae. (Fig. 5).

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