



## **New paleontological data and facies characteristics of the lower Miocene terrestrial sediments from the Nallıhan District (NW Turkey)**

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The Beypazari Miocene basin is a well known terrestrial area including a thick fluvial, lacustrine clastics, carbonates and gypsiums. It comprises various geological units from bottom to top as follows: Çoraklar, Hırka, Karadoruk (=Akpınar), Çayırhan, Bozbelen and Kirmir Formations. The Miocene sediments overlies unconformably the Paleogene Kızılçay Group. This study focuses on the lower Miocene sediments of eastern Nallıhan area. In the study area, seed fossils recognized by their distinctive orbicular in shape was seen in the clayey carbonates of the Karadoruk Formation, early Miocene in age. The lower Miocene sediments is up to 150 meters thick may be divided into five lithofacies. In ascending order these are (1) medium to coarse siliciclastic facies, (2) mudstone dominated siliciclastic facies, (3) placked, thin bedded clayey limestone facies including seed fossils, Menispermacea, (4) medium to thick bedded limestone facies and (5) rhythmic siliciclastic facies including coal occurrences. The lithological, paleontological and sedimentologic characteristics of the lower Miocene sediments indicates a mudflat to very shallow lacustrine environment, particularly planted shallow lake margin.

**Key words:** Nallıhan, NW Turkey, Miocene, seed fossils