



## **The Superimposed Paleocene–Miocene Tectonics of the middle part of the Nallıhan Wedge (NW Turkey)**

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In the NW Turkey, the area between the suture zones of the Rhodope-Pontide Ocean and Izmir-Ankara Ocean, and North Anatolian Fault Zone (NAFZ) and Thrace-Eskişehir Fault Zone (TEFZ) is known as the Nallıhan Wedge. The shape of Nallıhan Wedge is a 90 degree counter-clockwise rotated isosceles triangle. The northwestern boundary is a part of NAFZ and the southwestern boundary is a part of TEFZ. The 160 km-long eastern boundary is located at around Beypazarı and western corner is on the Bursa Plain. Nallıhan is situated at the centre of this isosceles triangle. While all the thrusts and folds shrink towards to the west and show an imbricate-like structure, the characteristics of the folds turn into to the open folds. Thrusts faults are locally observed as blind and almost perpendicular thrusts at the fold limbs towards to the east.

The rocks of the study area show different characteristics according to their types and basins of formation. On the other hand the structural properties of these rocks display the effects of the closure of the Intra-Pontide and Izmir-Ankara Oceans in between Paleocene and Early Oligocene. During Miocene, the thrust faults reactivated and a deformation formed the NEE–SWW left lateral strike–slip faults parallel to these thrust faults.

Whereas the first events are related to the closure of the branches of Neo-Tethys, the Miocene deformation is probably based on the Miocene tectonics of the Western Anatolia by the reason of equivalent age of the TEFZ. In this framework, the deformation of the Nallıhan Wedge presents significant information about the period between the evolution of Paleotectonic and Neotectonic of Turkey.