

## **Abstract**

The aim of this bachelor thesis is to compile basic characteristics of the so-called marine red beds (MRBs; <15 wt.% Fe), in particular their formation processes and paleoenvironmental significance, as well as their distribution in the sedimentary record. Furthermore, the practical part of this thesis focuses on Miocene marine sequences from the Adana Basin, Turkey, Eastern Mediterranean Sea. Using foraminifera as paleobiological markers, three samples from reddish colored marine deposits, stratigraphically ranging from the Burdigalian to the Serravallian, were analyzed to reconstruct the paleoenvironmental conditions. The interpretations are based on the presence of various foraminiferal ecological markers in the studied assemblages along with different statistical indices (e.g., Enhanced Benthic Foraminiferal Oxygen Index, Simpson and Shannon diversity indices). The results suggest an oligotrophic, warm water, open ocean environment with periods of water column instability, and a highly oxic benthic environment from the outer shelf to the bathyal zone (CAR 9 sample).