

UPPER CRETACEOUS RUDISTS FROM THE MENDERES MASSIF

S. Özer

Dokuz Eylül Üniversitesi Mühendislik-Mimarlık Fakültesi Jeoloji Mühendisliği Bölümü
35100 Bornova-Izmir/TÜRKİYE.

The presence of the rudists in the Menderes Massif have been reported for the first time by Dürr (1975). The rudist bearing marbles have been accepted as an Upper Cretaceous in age by Dürr and also in some later investigations.

In this study, the descriptions and distributions of the rudists in the Menderes Massif are presented and the stratigraphic positions are discussed.

The rudists are observed in the upper levels of the thick Mesozoic sequence of the Menderes Massif. This sequence consists of platform-type marbles which extends in the form of an arc in the south of Menderes Massif, whereas in the north of the massif, it shows less regular extension. The upper levels with rudists of the Mesozoic sequence consist of dirty white-dark colored, medium to thick bedded crystalline limestones which show probably lateral and vertical changes with the brecciated crystalline limestones. In the south of the massif, the rudist bearing limestones grade into reddish, yellowish, Upper Cretaceous-Paleocene pelagic limestones and into Upper Paleocene-Eocene flysh like sequence.

In the south of Menderes Massif, the principal rudist bearing limestones grade into reddish, yellowish, Upper Cretaceous-Paleocene pelagic limestones and into Upper Paleocene-Eocene flysch like sequence.

In the south of Menderes Massif, the principal rudist localities are located around Akbük. They are observed also in the southwest and southeast of Milas and in the southwest of Denizli areas.

Hippuritids and Radiolitids are very abundant in the Akbük area. *Hippurites nabresinensis*, *Hippurites* sp., *Vaccinites* sp., *Sauvagesia* sp., *Durania* sp. and *Radiolites* sp. are determined. Some sections of *Hippurites* show a similar siphonal pillars as *Hippurites lapeirousei*, or contain very developing costae reflecting those of *Hippurites colliciatius*. The sections of Radiolitids are generally represented by large forms preserving ligamental ridge and/or siphonal region. A few sections of *Sauvagesia* have siphonal bands and ligamental ridge like *Sauvagesia tenuicostata*. Hippuritids are abundant especially in the northwest of Akbük, where small build-ups of *Hippurites nabresinensis* are found. The rudists are poorly preserved in the Asinyeniköy and Yeniköy localities (SW of Milas), around of Akdag (SE of Milas) and in the southwest of Denizli. However, Radiolitids (*Radiolites* sp., *Sauvagesia* sp.) and Hippuritids (*Hippurites* sp., *Vaccinites* sp.) can be determined from the Milas and Denizli areas.

The rudist fauna of the south of Menderes Massif implies a Santonian-Campanian

age, and shows similarities with the Santonian rudist association determined from the limestones of the Izmir-Ankara Zone.

In the north of Menderes Massif, the rudists are observed in the Akhisar and Selçuk areas. The rudists are very sparse and are represented by the fragments (probably Radiolites). New investigations on the stratigraphy of the Menderes Massif suggest that the rudist bearing recrystalline limestones of the Akhisar area contain foraminifers indicating an Upper Campanian age.

HIGH FLUORINE CONTENTS OF THE PLIOCENE VOLCANIC ROCKS IN THE GÖLCÜK AREA, ISPARTA/WESTERN TAURIDES

N. Özgür, A. Pekdeğer and H.-J. Schneider

Institut für Geologie, Geophysik und Geoinformatik der Freien Universität Berlin,
Wichernstr. 16, D-1000 Berlin 33, Germany

The Gölcük area in central Anatolia represents a post tectonic Pliocene volcanism upon a Mesozoic paleorift in the entire Taurides margin. In this connection the tectonic structures of the region result from the main alpine orogenic phases of the Helleno-Tauric belt. The study area consists of sedimentary and volcanic rocks. As allochthonous, the Triassic through Upper Cretaceous Akdag-limestone and the Upper Cretaceous to Lower Tertiary volcano-sedimentary series constitute the basement rocks. They are transgressively overlain by marine clastic series of Eocene and conglomerate of Oligocene age. The volcanic rocks are tephriphonolite (stage i), pyroclastic series represented by friable tuff, ignimbrite, and pumice tuff (stage ii), and trachyandesite with trachyte (stage iii) as vents, dikes, and volcanic domes. They indicate a sodic alkaline character.

As F-bearing minerals, the volcanics consist of pyroxene, hornblende, biotite, fluorapatite, and extreme small fluorite crystals. Additionally, the glassy groundmass can be added to the F-carriers. The F-contents in the volcanic rocks show a close correlation with P_2O_5 and are generally controlled by fluorapatite consequently. This assumption can be established by the predominance of high REE contents. Moreover, it is a novelty that the F-contents display a remarkable depletion from basic towards the acidic rocks which might be attributed to discharging of the F portions during fumarolic activity.