

GASTROPODA FAUNA OF KASABA MIOCENE BASIN (WESTERN TAURIDS, SW TURKEY)

Yeşim İSLAMOĞLU****

ABSTRACT.- In this study, 37 numbers of gastropoda species which were found in the Uçarsu and Kasaba formations outcropping in the Kasaba Miocene basin, have been determined systematically and their paleogeographic distributions have been told. Species, which were found into the Uçarsu formation such as *Turritella terebralis turritissima* Sacco, *Turritella terebralis subagibbosa* Sacco, *Turritella (Peyrotia) desmarestina* Basterot, *Turbonilla (Mormula) aturensis* (Cossmann ve Peyrot), *Cassidaria tauropomum* (Sacco) and *Vexillum (Uromitra) pluricostata percostulata* (Sacco) belonging to Early Miocene, they haven't been known in the Middle Miocene. *Cerithium zejszneri* Pusch which was found into the Kasaba formation is a species peculiar to Middle Miocene. According to this, the age of Uçarsu formation as Upper Burdigalian and the age of Kasaba formation as Langhian have been accepted. A great deal of the investigated gastropod fauna distributed both in Tethys and Central Paratethys during early and middle Miocene. Most of the fauna such as *Turritella (Turritella) tricarinata* (Brocchi 1814), *Turritella terebralis turritissima* Sacco, *Turritella terebralis subagibbosa* Sacco, *Turritella (Haustator) striatellatus* Sacco, *Turritella (Peyrotia) desmarestina* Basterot, *Turbonilla (Mormula) aturensis* (Cossmann ve Peyrot), *Cassidaria tauropomum* (Sacco), *Mitrella (Macrurella) cf. nassoides grateloupi* (Peyrot), *Vexillum (Uromitra) pluricostata percostulata* (Sacco), *Clavatula (Clavatula) calcarata francisci* (Toula), *Conus conoponderosus* (Sacco) and *Conus clavatulus* d'Orbigny only displays widespreading only in Tethys Tethian origine fauna and typical species demonstrate that the study area is part of the Proto- Mediterranean - Atlantic biogeographic provence. In the study region, the species which are known only Central Paratethian marine stages have been found. *Cerithium zejszneri* Pusch found in Kasaba formation, is peculiar to Lower Badenian and *Murex (Bolinus) subtorularius* Homes ve Auinger is a species characteristic for Karpatian and Badenian. This situation shows wide connection and faunal immigrations also from western central paratethys to mediterrane

Key words: Antalya, Kasaba, Miocene, Gastropoda, Systematic, Paleontology

GRAVIMETRIC MODELING OF BASIN AND RELATION WITH EARTHQUAKE DAMAGES

Hakkı ŞENEL

ABSTRACT.- After the 17 August 1999 earthquake, as the regional distribution of the damaged buildings at Gölcük-Izmit and surroundings are examined, it can be observed that some of the buildings in some regions that have the same quality and type with other buildings in other areas have more damage. This work attempts to point out that the concerned situation is closely related with the alluvium and basement topography over lined by the deposit layer as well as the rigidity of the soil. After 17 August 1999 earthquake, considering the allocation of heavy damaged buildings in the study area it can be seen that, they are close to the half basins whose southern sides are open or buried valley walls. This direction is in the way of the Earthquake waves. This situation clearly demonstrates the focusing effects of the earthquake waves. In order to show the focusing effect of the earthquake waves, 785 gravity data in 4 km² area are measured in the settlement of İzmit municipality and their modelling with inverse solution techniques were done to obtain the shape of the basement topography which is covered with alluvium. The location of the collapsed, heavy and intermediate damaged buildings was plotted on the calculated basement map and accordingly basin depth and damage distribution were observed as correlated. This relation will be preliminary information for the locations where the damage would be more concentrated in probable further earthquakes. The basement rock shows a deepening attitude towards the southern part of the study area. Basement topography is clearly formed by the buried sequential valley-hillside structures and slope of buried basin is close to right angle over some places. It is interesting that the damage density on the high stored buildings increases on the alluvial areas that are over the buried valley shape basement topography. The vertical or sub vertical hillsides of the basement topography covered by alluvium can be considered as buried fault planes. The surface topography that is seen as valley-hillside in the northern of the study area shows continuity to the west with the alluvial cover in southern of the study area needs to be taken into consideration of the oblique faulting.

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