

## TERTIARY GEOLOGY OF GÖKÇEADA AND BOZCAADA (ÇANAKKALE), TURKEY

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ABSTRACT.- Karaağaç formation which is made up of mainly sandstone lithology and presented by the regressive features toward up in the Gökçeada and Fiçitepe formation which consist of red continental conglomerates are Early Eocene in age. Middle Eocene carbonates of the Soğucak formation including numerous Nummulites overlie Early Eocene units unconformably. Soğucak formation is presented as lens with no lateral continuation in the field. Sedimentation continued with the shale deposition of the Ceylan formation and left its place to the shore face facies of the Mezardere and Osmançık formations with the beginning of the regression in the Early Oligocene. Continental Danişmen formation overlies all these units. Volcanic activity (Hisarlıdağ-Ayvacık volcanics) continued intensely during Early-Middle Eocene in the region. Depositional systems which were formed under tectonic control in the Late Miocene continued to be develop until the beginning of the Early Pliocene. This is turn provided Gazhanedere, Kirazlı and Alçitepe formations to be deposited. Approximately 1000 m Thick Pliocene sediments (Ergene formation) were determinial in the offshore sedimentary basins by the seismic and drilling data, however they do not encountered in the field exposures. Facies were seperated according to their depositional difference. There are four main depositional periods in the islands. These are Early Eocene, Middle Eocene-Late Oligocene, Late Miocene-Pliocene and Pliocene-Present depositional periods. The most important tectonic feature in the islands is the Ganos fault which is a western extention of the Late Miocene NAF. This fault borders the northern part of the Gökçeada island. Lateral components of the Ganos fault in the southern parts provided sedimentary basins to be developed in the Late Miocene-Pliocene. There is no tectonic data from the Early Miocene time in the islands. However, tectonic features can be seen in the seismic sections from the offshore areas.