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In this study, paleontology and stratigraphy of Neogene and Quaternary units around south of the Dardanelles have been examined using Gastropoda and Bivalvia fauna.

In the investigation area, the base of the sediments that belongs to Neogene, consist of the volcanics which are formed with basalts, andesites and tuff. Neogene begins unconformity with basal conglomerate which are formed with basalt and tuff gravels. The measurable thickness of the Neogene sediments is approximately 200meters in total.

First fossiliferius level which consist of Lymnocardium (Euxinicardium) nobile Sabba has showed similarities with the Pontian (Late Miocene) fauna of the Eastern Paratethys. The existence of Melanopsis and Psidium species indicate that the basin has been brackish water feeding by fresh water in the Early Pliocene. Theodoxus fluviatilis (Linne), Theodoxus (Calvertia) aff. imbricata Brusina, Theodoxus (Calvertia) licherdopoli scriptus (Stefanescu), Viviparus mammatus (Stefanescu), Valvata (Valavata) sulekiana Brusina, Valvata (Cincinna) crusitensis Fontannes, Hydrobia cf grandis Cobalcescu, Hydrobia ventrosa Monfort, Melanopsis (Melanopsis) cf. bergeroni Stefanescu, , Melanopsis (Melanopsis) sandbergeri rumana Tournouer, Melanopsis (Canthidomus) hybostoma anili Taner, Melanopsis (Canthidomus) hybostoma amaradica Fontannes, Melanopsis (Canthidomus) lanceolata Neumayr, Amphimelania fossariformis (Tournouer), Melanoides tuberculata monolithica (Bukowski), Radix (Radix) peregra (Müller), Planorbarius thiollierei (Michaud), Potamida (Potamida) craiovensis craiovensis (Tournouer), Potamida (Potamida) berbestiensis (Fontannes), Unio pristinus davilai Porumbaru, Unio subexquisitus Jatzko, Anadonta zmaji Brusina, Pisidium amnicum (Müller), species have been determined from the mudstone, claystone, carbonated sandstone lithologies. These fauna are characteristic for the Dasic basin in Late Pliocene (Romanian). Also, Avimactra karabugasica (Andrussow), Avimactra ososkovi (Andrussow), Avimactra subcaspia (Andrussow), Avimactra venjukovi (Andrussow). Dreissena (Dreissena) polymorpha (Pallas), Dreissena rostriformis Deshayes species have been determined from the upper level of the section composed of carbonated sandstone lithology. These fauna are characteristic for the Caspic basin in the Late Pliocene (Aktschaglian). In the Treenean and Monastrian times, the marine fauna (Gibbula (Adriaria) albida (Gmelin), Gibbula (Tunulus) umblicaris (Linneaus), Hydrobia (Hydrobia) acuta (Draparnaud), Alvania (Alvania) reticulata (Montagu), Turritella (Turritella) tricarinata (Brocchi), Pirenella conica (Blainville), Bittium (Bittium) reticulatum (Da Costa), Thericium (Thericium) vulgatum (Brugiere), Radix (Radix) peregra (Müller) are belonging to the Gastropoda and Mytilaster lineatus (Gmelin in Linneaus), Ostrea edulis Linneaus, Ostrea lamellosa Linneaus, Paphia (Polititapes) senescens (Coc.), Timoclea ovata (Pennant), Corbula (Varicorbula) gibba (Olivi)) have been observed.

In the Pontian, the Basin has been low salinity and semi-marine conditions. In the Lower Romanian, the Basin was developed as brackish water character feeding by fresh water. Late Lower Romanian=Lower Kujalnikien, Basin was became more brackish character by increasing salinity. During the Upper Kujalnikien=Upper Romanian, feeding by freshwater was increased. The youngest sequence of the basin is Treenean-Monastrian terraces sedimented by increasing sea level. These marine fauna indicate that there was a connection between

Black Sea and Mediterranean in that time.

Key words: Neogene, Gastropoda-Bivalvia, Romanian, Dasic, Caspic.