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Depositional environment, foraminifer content and ESR ages of Quaternary Gediz Delta Sediments (Eastern Aegean Sea, İzmir-Western Turkey)

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Sediments and fossil content of Gediz Delta (Eastern Aegean Sea - İzmir) were examined based on the drilling core samples of the YSK-C and SK-246 drilling. W-SW part of the Delta is represented by continental delta sediments up to 6 meters and shallow marine detritic sediments up to 35 meters in the YSK-C drilling. Continental part consists of an soiled, graveled, muddy and sandy sediment in terms of rich organic substance. As for marine part, it consists of bioclast, muddy, fine graveled sand and by repetition of pebble, sand and bioclast bearing mud layers. Bioclasts comprise of bivalvia, echinoid, ostracod, gastropod, foramifer and bryozoa fragments. Benthic foraminiferal fauna determinated in the marine levels are represented by 55 bethic, 2 planktonic species. These foraminifers and bioclasts reflect that the W-SW part of the delta, has been occured in marine conditions between 8-31m deep.

E-NE part of the delta is generally represented by continental sediments up to 43.5m in SK-246 drilling. In addition, it includes marine levels in 18-19 m, 23-24 m and 36-37,5 m intervals. Continental sediments of E-NE part is generally represented by calcareous and sandy mud rocks which mostly includes ash, tuff, and pebble derived from Neogene volcanic rocks. As for marine levels, it is composed of calcareous mud stones and calcareous clay stones including very thin gastropod, bivalvia and ostracod in 18- 19 and 36-37.5 meters whereas it is represented by sandy mud stones including a great deal of bentic foraminifer, bivalvia, bryozoa, echinoid, gastropod in 23-24 metres. Thus show that E-NE part of the delta is usually in continental condition but it is occasionally covered by sea.

In aging studies of YSK-C core done by ESR method, age of 8-9 m interval is determined to be 11. 376 $\pm$ 0,067 Ka; however ages of 10-11m and 24-25 m intervals are revealed to be 16.466 $\pm$ 0,016 Ka and 15.344 $\pm$ 0,021 Ka respectively; finally age of 25-26 m interval is found to be 19.995 $\pm$ 0,022 Ka. This results reflect while the W-SW part of the delta is in marine condition between 20 and 11 Ka, in the E-NE part of the delta, continental and marine conditions were repeated.