

**Depositional and stratigraphical setting of the recent deposits in Southern Adriatic:  
Results of AD91 Cruise**

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The AD91 Cruise, carried out in the Southern Adriatic Sea, characterized by a complex shelf-slope system and a deep basin (Fig. 1), was held in order to ameliorate the knowledge about the Recent to modern sedimentary pattern of the Apulian margin as well as benthic Foraminifers thanato- and bio-coenoses by University of Bologna and Institute for Marine Geology of the Italian CNR.

Low frequency sub-bottom and high resolution seismic reflection profiles have been recorded. Box cores and gravity cores (distributed in 33 stations) were taken at all 100 m isobaths. At 20 stations the sediment top (5-10 cm) was sliced, and stained with Bengal Rose, for the recognition of living Foraminifers. These samples were preserved in ethyl alcohol.

At 13 stations short sediment cores were sampled with a gravity corer provided with 4 m Or casing. The faunas contained in the top and bottom of each segment (1.20 m in length) or each core were provisionally studied.

The preliminary study of foraminiferal associations and of acoustic data allowed a first step toward the interpretation of the depositional and stratigraphical setting of the most recent deposits. On the whole area, a shelf-wide regional unconformity (U- horizon) overlaid by a thin of modern dei osils is the most prominent recognizable feature (Fig. 2a, b).

On the shelf it marks a sharp erosive surface connected to the last glacioeustatic sea level changes. In the northern sector (Gulf of Manfredonia) the deposits reach a maximum thickness of about 25-30 msec, and they evidence significant variations in the terrigenous input, probably due to climatic changes during the Pleistocene-Holocene transition.

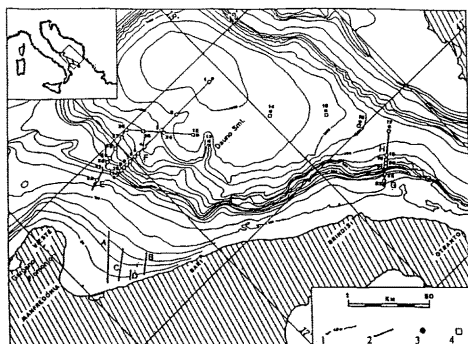
Off the Gargano Promontory, a progradational growth of the margin, with at least three inner clinoform progradational growth, was recognized (Fig. 2b).

In the southern sector (Bari-Brindisi area) the modern shelf deposits are limited to a few meters (Fig. 2c). Active distensional tectonic seem to affect the shelf-slope system, as testified by the morphology and by the Early Pleistocene deposits overlaid by a few centimeters thick Holocene clay cover.

Along the whole margin the sedimentary cover is extensively affected by deformative events of several kinds and amplitude (Fig. 2d), detected also in the basin area, where the sediment accumulation rate estimated to be comprised between 10 and 40 cm/ky.

**Fig. 1.-** Bathymetric map of the South Adriatic Sea (data from GIORGETTI and MOSETTI, 1969 and from FABBRI and GALLIGNANI, 1972; modified).

1. isobaths in meters; 2. seismic lines showed in Fig. 2; location of gravity cores (3) and box cores (4).



**Fig. 2.-** 3.5 kHz profiles across the Northern shelf edge (Lines A and B), the basin (Line C) and the Southern outer shelf (Line D) (see Fig. 1 for locations).

U = Last Glacial erosive surface; CL = Late Pleistocene clinoform sigmoid sequence; U1 = erosive surface cutting the earlier stage of propagation; W = buried wedge; WP = lens-shaped body acoustically transparent.

