

MORPHOLOGICAL TYPES IN THE WESTERN PART OF THE MEDITERRANEAN RIDGE - DEFORMATION PATTERNS OF AN ACCRETIONARY COMPLEX

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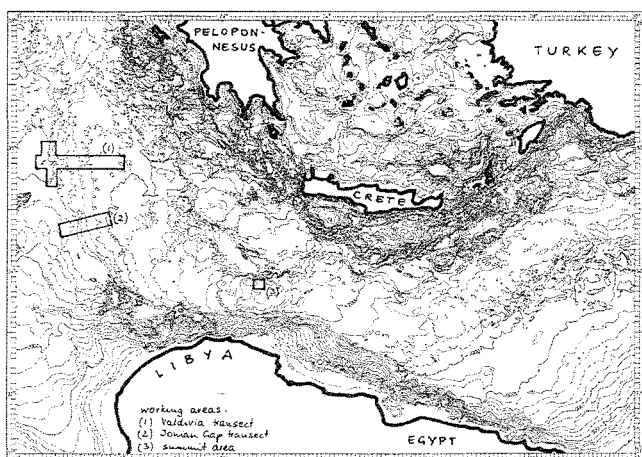
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During Meteor cruise no. 25/4 (1993), the detailed morphology of the western part of the Mediterranean Ridge (MR) has been studied in two transects from western forelands onto the ridge and in the summit area SW of Crete (Fig.), and the deformation front bordering the Messina Abyssal Plain was surveyed.

The Hydrosweep swath-mapping system and a deep-tow side-scan sonar were applied during the profiling, together with continuous gravity and magnetic measurement covering the above areas. Four piston cores were raised from ponded deposits in order to study tectonical instabilities documented in the sedimentary sequences.

The bathymetric maps show impressing variations of the small-scaled relief. Side-scan sonar records allow the identification detail structures. The tectonic instability of the area is reflected in the sediment cores by slumping structures, debris flow and turbidite layers. The dating of these sequences should enable us to gain more insight into the tectonic history of the MR. The gravity and magnetic anomalies coincide with the prominent tectonic units. First gravity modelling for the summit area of MR indicates the possibility to identify mud diapirs.



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