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Tectonics of the Western Mediterranean and North Africa

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Preface

The Western Mediterranean Alpine chains, resulting from the convergence between the Eurasian and African plates, surround this sea describing three of the most tightly arcuate orogenic belts in the world.

The Alps show a northward convexity and a complex structure, which began to develop during the early Cretaceous when the Apulian plate collided with the Eurasian plate, and continued during the Eocene and into the early Neogene.

The other two oroclines, the Gibraltar arc, connecting the Betics to the Kabylides through the Rif, and the Calabrian arc, connecting the Apennines to the Maghrebides, form the western and eastern ends of the western peri-Mediterranean chains. The southern branches of these two oroclines join one another along the Maghrebian chain, whereas their northern branches fade away both in the Alps and into the Algerian–Provençal basin. Although they have opposite convexity and are about 2000 km distant from one another, their geological histories are comparable.

The main goal of this book is to contribute to a better knowledge of these two oroclines, and to improve our understanding of their genesis and tectonic evolution. To this purpose, the papers presented in this book discuss in detail: (1) new palaeogeographical reconstructions of the evolution and geodynamic significance of the ‘Verrucano’ and ‘Pseudoverrucano’ in the central–western Mediterranean Alpine chains (**Perrone *et al.***) and of the Upper Cretaceous–Eocene carbonate turbidites of the Northern Apennines (**Argnani *et al.***); (2) relationships between sedimentology and tectonics in the internal zones of both oroclines through marine (**Piangiamore *et al.***; **Gamberi & Marani**) and field geology studies (**El Kadiri *et al.***; **Chaabani & Razgallah**; **Oujidi *et al.***; **El Kadiri *et al.***; **Chalouan *et al.***; **El Kadiri *et al.***; **Mattioni *et al.***); (3) the northern and southern fronts of the Gibraltar arc (**Ruano *et al.***; **Chalouan *et al.***; **El Kadiri *et al.***; **Pedrerá *et al.***); (4) basin development in the Iberian foreland (**Segura *et al.***); (5) recent deformations at the northern border of the Adriatic indenter (**Massironi *et al.***); (6) eustatic versus tectonic-controlled basin development during the Plio-Pleistocene in the Southern Apennines (**Benvenuti *et al.***; **Capraro *et al.***); (7) seismicity and seismotectonics both in Sicily (**Tondi *et al.***) and in Morocco (**Ait Brahim *et al.***); (8) relationships between fluid geochemistry and active tectonics in Morocco (**Tassi *et al.***).

The majority of these papers were presented at the ‘Geology of the Mediterranean Area’ session of the 32nd IGC held in Florence on 20–28 August 2004. The Editors wish to thank the following reviewers, who contributed to improve the final quality of this book:

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died suddenly just before this book went to press.
With great sorrow, Giovanna Moratti would like to
dedicate this book to Tonino and Peppe, who were
great geologists, but above all very good friends.

Giovanna Moratti
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