

## REVIEW

*Pre-Mesozoic geology in the Alps*: edited by J. G. VON RAUMER and FRANZ NEUBAUER. P. 677, 279 figs., 32 tables, Berlin, 1993 (Springer Verlag, 298 DMk.)—This book is a monumental compilation of material on the Pre-Alpine rocks, structures, and history of the Alps, that part of their geological history preceding the late Permian. During the last 10 years, those studying those rocks throughout the Alps have been meeting, and 3 years ago they agreed to put this volume together, starting from but not confined to papers presented at such a meeting. The result is a book of 38 articles by no less than 80 authors covering virtually all regions within the Alps where the pre-Alpine rocks come to the surface—approx 50 percent of the area of the Alps.

The Alpine, that is, post-Permian, orogenic deformation of the Alps is polyphase and notoriously complicated, and any attempt to study the pre-Alpine rocks and structures is faced at the outset with the problem of reconstructing the pre-Mesozoic paleogeographic situation. The first part of the book is devoted to precisely this problem: the product of its four articles is a carefully specific palinspastic map for the end of the Paleozoic, showing the relative positions of more than 60 pieces of pre-Alpine basement, which then serves in later articles as a base for discussing the pre-Mesozoic history. But that history, that of the Variscan orogeny, was at least as complicated as the Alpine history; even in that part of Europe little affected by Alpine orogeny, innumerable problems of correlation arise between the different regions where Variscan rocks and structures are exposed, rendering still more difficult the problem of understanding the pre-Mesozoic geology within the present Alps.

The second part of the book consists of 8 articles discussing general subjects across the region. It begins with a fine summary by the editors of the history of geologic investigation of the Alpine "basement." The bulk of the book consists of 24 articles describing the pre-Alpine geology or aspects of that geology for different areas, each accompanied by a full reference list (reference lists form nearly 15 percent of the volume). It must be admitted that no very clear overall picture emerges from these detailed reports, some of which are not easy to follow for one not thoroughly familiar with the area in question. The book concludes with two articles by the editors, one an overview of the basement rocks within the Alps, the other extending the overview to the basement in other European mountain ranges of Alpine age and to the Variscan orogenic belt outside the Alpine ranges. From both one comes away, not with any simple overall picture, but with a strong sense of the complications piled upon complications inherent in the attempt to reconstruct the paleogeography and geological history of such a large region from the geology of its fragmentary parts.

The volume contains so much valuable yet otherwise difficultly accessible material, brought together in so useful a form, that one fervently hopes it will be widely disseminated and read, despite the very

high price which will tend to put it out of reach of many small libraries and young researchers who should have copies.

The entire book is written in English, although English is not the language spoken in any part of the Alps (leaving out certain tourist centers), nor is it the native language of any one of the 80 authors. One must salute the courage of the authors and editors and even more their success; almost never is the meaning of their words in any doubt. One can only hope on the other hand that Anglophone readers will not be lulled into smugly believing that they can understand Alpine geology without mastering the Alpine languages.

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