BOOK REVIEWS

Jurassic tectonostratigraphy of the Austroalpine domain

by H.J. Gawlick, S. Missoni, F. Schlagintweit,
H. Suzuki, W. Frish, L. Krystyn, J. Blau &
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This monograph represents the result of several years of research between Austrian and German scientists in the Alpine area.

Following a brief introduction, the tectonostratigraphic evolution of the Austroalpine domain is discussed. The sedimentological and facies features of each formation are described in relationship with the geodynamic evolution of the region. Evidence was shown that the Triassic-inherited peculiarities of the Lower Jurassic formations were related to changes due to the partial closure of the Neotethys Ocean during the Middle Jurassic. Moreover, these changes lead to the obduction of ophiolites and the overthrust of tectonic nappes resulting in the formation of deep, trench-like basins.

These processes have slowed during the Upper Jurassic, simultaneously with the development of slopes and shallow-water carbonate platforms. When summarizing the tectonic-sedimentary evolution of the Austroalpine domain, three types of units were separated: (1) Austroalpine units facing the Neotethys Ocean; (2) Austroalpine units between the Neotethys Ocean and the Penninic Ocean, and (3) Austroalpine units facing the Penninic Ocean.

The core of this study is focused on the detailed presentation of the lithostratigraphy and the description of the formations identified within the Jurassic succession. The description of the lithostratigraphic units includes validity, type area, type section, reference sections, derivation of name, synonymies, lithology, fossils, origin, facies, age and biostratigraphy, thickness, underlying and overlying units, geographic distribution, and remarks.

The last part of this study concerns biostratigraphy and zonation based on radiolarians. Radiolarians are an important paleontological group and play a key role when it comes to dating most of the formations in this study.

The work is extremely well illustrated by 75 figures. Most of the figures are plates with photographs of sedimentary facies-microfacies types and microfossils with biostratigraphic significance.

To conclude, this study represents an important, contribution on the Jurassic Austroalpine formations presented in a paleogeographical and tectonic framework. Furthermore, it facilitates the understanding of the geological evolution of the region and provides a reference for similar studies concerning other Alpine-Carpathian regions.

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