

AMMONITE-BASED CORRELATION OF THE MIDDLE/LATE ANISIAN BOUNDARY (MIDDLE TRIASSIC) BETWEEN NEVADA AND THE SOUTHERN ALPS

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This study presents the preliminary results of ammonite-based correlation of the middle/late Anisian (Pelsonian/Illyrian) boundary (Middle Triassic) between Nevada and the Southern Alps (Fig. 1). On the basis of new collections from a new locality in eastern Lombardy (Monte Guglielmo) and from classical sections in Giudicarie, these ammonoid faunas allow revising the taxonomic interpretation of *Ceratites cimeganus* Mojsisovics, 1882 and of the genus *Paraceratites* Hyatt, 1900. *Ceratites cimeganus* is here assigned to the North American genus *Rieppelites* Monnet and Bucher, 2005.

An improved age calibration of the regional transition from shallow to deep water environments is then obtained through the assessment of these new fossil finds and literature data. In eastern Lombardy-Giudicarie, *R. cimeganus* is diagnostic of a distinct biochronological unit (*cimeganus* Zone) bracketed between the older *Bulogites zoldianus* Zone and the younger *Judicarites euryomphalus-Paraceratites trinodosus* zones.

This refined ammonoid succession is then compared with the recently revised Anisian ammonoid record from Nevada (Monnet and Bucher, 2005, 2006). The recognition of this *cimeganus* Zone significantly improves worldwide correlation since it is recognized in several other Tethyan basins (Dolomites, Northern Calcareous Alps) as well as in North America (Nevada). These new data allow a redefinition of the middle/late Anisian boundary in the western Tethys, which is here drawn between the *zoldianus* and *cimeganus* zones. This limit is marked by a clear ammonoid turnover (e.g., disappearance of *Acrochordiceras* and *Balatonites*, diversification of Paraceratitinae).

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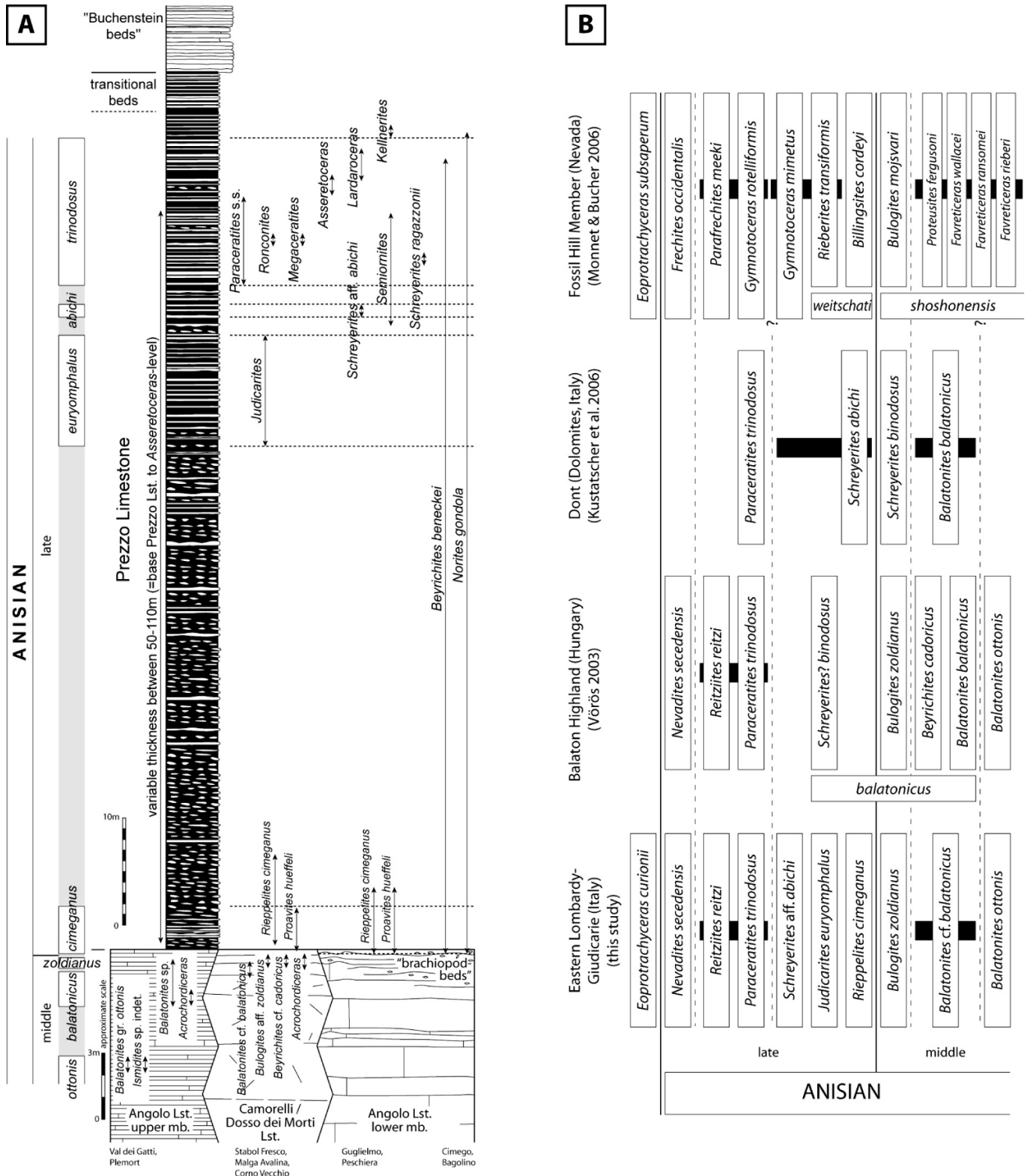


FIGURE 1. **A**, Schematic summary distribution of major ammonoids around the middle/late Anisian boundary in eastern Lombardy-Giudicarie (compiled and modified after Gaetani, 1969, Balini, 1992, Balini et al., 1993, Brack et al., 1999, 2005, and this study). **B**, Correlation of the middle/late Anisian boundary (Pelsonian/Illyrian) between major Tethyan basins and Nevada (vertical black bars indicate amount of uncertain correlation).