

GUADALUPIAN SERIES: INTERNATIONAL STANDARD FOR THE MIDDLE PERMIAN

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Subdivision of the Permian System into three series, in ascending order the Cisuralian, Guadalupian and Lopingian has been approved formally by the Subcommittee on Permian Stratigraphy. Similarly, the constituent Guadalupian stages, Roadian, Wordian and Capitanian, have been accepted, with references within the Guadalupe Mountains National Park of southwestern North America.

Arbitrarily-chosen points within the transitional morphoclines of the conodont genus *Jinogondolella*, portrayed by the Pa element to be a mosaic paedomorphocline, are utilized to define the base of the three component stages. The rapid evolutionary succession of conodonts in the upper Guadalupian culminates in *J. crofti* with transition to *Clarkina postbitteri*. First appearance of the latter, in South China, has been proposed as the marker for the base of the Upper Permian Lopingian Series (Wardlaw & Mei, 1999), and the top of the coincident Middle Permian Guadalupian Series. However, the first appearance of *C. dukouensis* in the transition from *C. postbitteri* is an attractive alternative

Once stage boundaries are defined, conodonts, ammonoids, fusulinaceans and diverse other groups of fossils serve to correlate widely elsewhere. Paleomagnetism, sequence stratigraphy, geochemical anomalies, absolute dates and disparate other data also provide "bridges" for correlation to other facies. For example, the Illawarra Magnetic Reversal is recognizable near the top of the Wordian of the Guadalupe Mountains, coincident with a precise absolute date, as well as in the upper Maokou Formation of South China, the basal part of the Wargal Formation of Pakistan, and the lower part of the type Tatarian of Russia.