# ROLE OF CONODONT PROVINCIALISM ON DEFINING PERMIAN SERIES AND STAGE BOUNDARIES

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Permian conodont provincialism is indicated by less common endemic elements (i.e., *Gondolelloides* and *Vjalovognathus*) in Asselian through Artinskian, marked by differences at species level of *Mesogondolella*, *Neostreptognathodus* and *Sweetognathus* during the Kungurian, and becomes very distinct with differences at genus level during the Guadalupian and Lopingian. Consequently, Middle and Upper Permian conodont zones established in the Equatorial Warm Water Province (EWWP) can not be correlated precisely with those recognized in the North Cool Water Province (NCWP) and the peri-Gondwana Cool Water Province(GCWP).

Four horizons, which define the boundaries of five Permian conodont evolutionary stages, have potential for inter-provincial correlation. They are in ascending order: 1) the first appearance of *Sweetognathus whitei* and the nearly coincident disappearance of Carboniferous-type conodonts (i.e., *Streptognathodus* and *Adetognathus*); 2) the first appearance of *Neostreptognathodus pequopensis*; 3) the base of the *Jinogondolella nankingensis* Zone; and 4) the base of the *Clarkina postbitteri* - *Iranognathus erwini* Zone. The Asselian, Sakmarian and Artinskian are to be established in the Urals, in the NCWP, and all other Permian stages are to be established in West Texas and South China, in the EWWP. The four conodont horizons enable relating the proposed boundaries between provinces. Study of the geographic variance in the morphoclines of index conodonts also should improve inter-province correlation.