

LOWER PERMIAN CISURALIAN SERIES: GLOBAL CORRELATION

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The ICS and SPS accepted global scale for the Permian system consists of three series (upwards): Cisuralian, Guadalupian and Lopingian. Obviously the GSSP for the Permian stages should be established in their type regions: southern Urals for the Cisuralian, Guadalupe Mountains for the Guadalupian and South China for the Lopingian stages. The definition of these stages with ISC requirements (monofacial section with definition within chronocline of pelagic fossils, etc.) is only the first step. To make the global stages workable and useful for the geological community we have to demonstrate their utility for global correlation. The goal of our presentation is to demonstrate the possibility for recognition and correlation of the Cisuralian stages (Asselian, Sakmarian, Artinskian, Kungurian) in different regions of the globe. We have analyzed the best and most complete sections in the Boreal province (East-European Platform, Urals, Spitsbergen, Greenland, Canadian Arctic, N-E Russia and Siberia), Tethyan province (Northern Pamirs, China, Japan), Peri-Gondwana (Southern Pamirs, Australia) and in Mid-Continent-Andean province (Mid continent USA, Great Basin and West Texas). Our correlation is based mostly on biostratigraphy, but in some cases additional criteria (magnetostratigraphy, radiometric dates, etc.) were utilized as well. A different degree of provincialism is characteristic of each fossil group. Our correlation is based primarily on conodonts as they are the most cosmopolitan fossil group. Ammonoids and fusulinids are also critical for correlation. The significance of these fossils is different from region to region. Therefore in our correlation we attempted to combine as many criteria as possible, particularly focusing on the sections where the three taxa occur together.