

LATE CARBONIFEROUS-EARLY PERMIAN RADIOLARIANS AND SEDIMENTARY FACIES OF THE SOUTHERN PART OF PREDURALIAN FOREDEEP (WESTERN SLOPE OF THE SOUTHERN URALS, RUSSIA)

CHUVASHOV, Boris I., Inst. Geol.&Geochem., UB Russian Acad. Sci., 620151 Ekaterinburg, Russia;
AMON´, Edward O., Inst. Geol.&Geochem., UB Russian Acad. Sci., 620151 Ekaterinburg, Russia.

The Preduralian foredeep is a large tectonic structure spanning an area from the Pricaspian syncline (47° N) in the south, to Novaya Zemlya Island (70° N) in the north. Along the western slope of the Urals the foredeep is filled with Middle Carboniferous-Lower Permian sedimentary deposits. Toward the western region including the Russian carbonate platform, there are the following facies zones including coarse flysh, fine flysh, pre-flysh, pre-reef and organogenic buildups including reefs. New radiolarian, fusulinid, and conodont data revises established radiolarians scheme by Drs.Nazarov and Ormiston. Radiolarians of the Gzhelian-Kungurian age are found in fine grained mostly terrigenous rocks including argillites, cherts, and micrites.

Geographically, radiolarians are found from Orsk City (50° N) to Krasnoufimsk City (57° N) (about 1000 km) and are *unknown in areas north of this region*.

Radiolarians are influenced by oceanographic conditions including salinity, depth, hydrodynamics, temperature and density of water. During the Middle Carboniferous-Lower Permian there seems to be two barriers. The area near the Sakmara-Ural Rivers watershed (51° N) seems to influence the radiolarian fauna negatively. The second was a barrier situated near Krasnoufimsk City, which prevented radiolarians from invaded the more northern areas.

The first appearance of radiolarians in Late Paleozoic in the western Urals was contemporaneous with the development of deepwater with cherty-clayish and terrigenous flysh-like sedimentation. The eastern boundary of radiolarian distribution reflects the eastern shore line. Organic buildups were a barrier to radiolarians in the west until Late Artinskian. During the Kungurian time an influx of high salinity water seems to be a western boundary. Numerous invasions of radiolarians could be traced in the sections on the eastern slope of the Preduralian foredeep and in the central portion.

These areas show promise in developing a more refined stratigraphy. Late Paleozoic sediments containing radiolarians are found only in the southern portion of the Preduralian foredeep. An increase of warm water in the south along the Preduralian basin can explain this lack of radiolarians. The area around the Sakmara-Ural River could be considered the most northern boundary of the Tethyan belt radiolarian fauna.