

REPORT
of the Russian Working group on the IPGC Project-512

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Neoproterozoic ice ages

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The following investigations were carried out:

The isotope composition of carbon and oxygen from the Upper Riphean strata of the Northern Urals was defined. On this base these strata were correlated to the stratotype deposits of the Southern Urals (B.G. Pokrovsky, N.M. Chumakov)

The paper "Late Precambrian glaciations and accompanied biotic events" was prepared and a conclusion was made that the Late Proterozoic glaciations were accompanied by numerous crises in different biosphere subsystems (changes in climatic zonality and in circulation in atmosphere and hydrosphere, glacioeustacy phenomena, disturbance of carbon and oxygen cycles, etc.), which led to biotic crises, extinction of some organisms, changes in dominant biotic groups, and appearance of new groups (N.M. Chumakov)

During the field works samples has been collected for isotopic studies of Vendian deposits of the Baikalo-Patom Upland (Middle Siberia, B.G. Pokrovsky) and the Middle Urals (A.V. Maslov).

Publications:

Chumakov N.M. The Baykonur Late Vendian glacial horizon // Stratigraphy and Geol. Correlations. 2009. Vol. 17, No. 4, pp. 23-31.

Chumakov N.M. Neoproterozoic glacial events in Eurasia // Developments in Precambrian Geology. Vol. 16. pp. 389-403.

Chumakov N.M. Problem of total Earth glaciations // Geology: history, theory, practice. Moscow.: 2009, pp. 272-275.

Chumakov N.M. Evolution of climatic zonality during Cretaceous greenhouse epoch // Rare environmental/climate changes and catastrophic events in Late Cretaceous and Early Paleogene. Wien: Berichte der Geologischen Bundesanstalt. 2009. Vol. 78. p. 9.

Pokrovsky B.G., Chumakov N.M. Carbon and oxygen isotopic composition in carbonates of the Demino and Niz'va formations, Upper Riphean of the Northern Urals // Stratigraphy and Geol. Correlations. 2009. Vol. 17, No. 5, pp. 108-112.

Pokrovsky B.G., Melezhik V.A., Chumakov N.M., Buyakaite M.I. Carbon isotope anomalies in Neoproterozoic carbonates of the Baikal mountainous area: geochemistry, paleoclimatic and stratigraphic interpretations. //: Geodynamic evolution of the lithosphere of the Central Asia mobile belt. Materials of the conference. 2009. Issue 7, Vol. 2, pp. 41-42.

The Working group has not participated in conferences and meetings in the framework of Project-512.

Members of the working group plan to attend the International conference with field discussions "Precambrian Life, Time and Environments: Evolving Concepts and Modern Analogues" in India, Lucknow, Chandigarh, 2-9 February, 2010.

The Working group has not participated in conferences and meetings in the framework of UNESCO projects.

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Leader of the Russian Working Group

On the IPGC Project-512