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PLANETARY PERMO-CARBONIFEROUS ICE AGE – BANK OF PALEONTOLOGICAL AND GEOLOGICAL FACTS FOR DISPROVING THE GLACIAL THEORY

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Abstract. The hypothesis of Permo-Carboniferous glaciation appeared for the first time in the middle of XIX century based on findings of tillite outcrop and striated boulder in India and Australia. After that such boulder deposits were found in South and Equatorial Africa, Europe, Kazakhstan, South and North America, on the Arabian Peninsula. The latest place where tillites were found is Antarctica. Over 150-200 years the hypothesis turned into an unshakeable theory and, together with the theory of powerful Quaternary glaciation, was wildly introduced into Earth science (geoscience), it was definitely considered as a fundamental and epoch-making scientific achievement. During this period the scientific groups from different countries – botanists, zoologists, paleogeographers, climatologists and geologists collected rich, sometimes unique, factual material concerning plant and animal life of the late Paleozoic and wide formations of coal deposits. The paleogeography reconstructions of almost global glaciation with ice thickness of 6 km (!) were also informative; this glaciation was called "The Great Permo-Carboniferous ice age". It was impossible to think about debunking this theory. Therefore, it is worth mentioning that many scientists, both foreign and Russian ones, can be regarded as our extramural co-authors. The fact that we, unlike them, try to disprove the glacial theory, does not change the matter – it was impossible to prove the absence of this glaciation without the powerful glacial doctrine created by the scientific community and without huge factual material collected by them. The geological features of the Permo-Carboniferous glaciation are based on the same criteria as for the Quaternary glaciation. First of all, this is "an ice exaltation relief" – they are roche moutonnée (sheepbacks), polished rocks, striation, furrows on bedrock and boulders, tillites. It allows using the well-known principle of actuality. The author's multi-year research has proved that "exaration" types of relief of the Quaternary time (fjords, skerries, lake basins in bedrock, drumlins) were formed due to the disjunctive dislocations of different rank and sequence. They occupy their normal place in the ensemble of paragenetic structures that accompany faulting. A detailed study of fault systems, especially shifts and zones of their dynamic influence, showed a paragenetic connection of the most striking "exaration" types of relief (roche moutonnée (sheepbacks), fleecy rock, rocks polishing, striations and furrows) with structures such as near-surface thrusts, upcast faults, downcast faults and shifts. Mass development of the above-mentioned relief forms is observed at the ends of the large shifts and they are made of fault planes and slickensides of the listed near-surface disjunctive structures upthrow sides of which are mostly destroyed into a blocky-boulder component. There is rich paleontological material concerning the period of vast Permo-Carboniferous glaciation that covered virtually the entire globe, this material allows reconstructing actual landscapes and climates of that epoch. Extremely favorable conditions for the development of terrestrial vegetation were created in the Carboniferous period. Warm, humid climate dominated in vast territories of the globe. A sultry, heavy atmosphere reigned in the Carboniferous forests. The deposits of coal amounting to nearly 30 % of the world's reserves of this fuel were formed. And climate of the Permian period was generally the warmest of the formerly dominated Paleozoic. *Tillites*. Considering that the remnants of the Paleozoic vegetation are often found in the cut layers of the tillites, and the tillites are interbedded with the lenses and layers of coal, it is high time to recall that the tillites are a tectonic breccia, tectonic melange, and boulders with scars and striations are the most reliable indicator of their tectono-dynamic processing. As for the polished and grooved "glacial bed" of the bedrock, as well as roche moutonnée (sheepbacks) and fleecy rocks that are associated with the tillites, this is just a clear illustration of tectonic subsurface shear displacements of fault and thrust types. This allows closing the topic about the grand Permo-Carboniferous glaciation. *Glaciology***.** But there is additional material in support of these conclusions – they relate to the glacial theory in the whole. By now, due to the work of glaciologists, geologists, and geophysicists, the dynamics and tendency of glacial drifts, throughout its mass, have been studied. The results of ice through drilling (to the bedrock) in Antarctica and Greenland, obtained within the framework of the International Projects, are of great importance. A thorough study of many kilometers of ice columns, as well as the study of vertical ice breaks and the study of ice in tunnels broken through the base of glaciers, produced unexpected results. It turned out that instead of moraine-containing ice mass, entirely filled with huge blocks and boulders (as is customary depicted in diagrams and drawings in the textbooks on general and quaternary geology and geomorphology), only inclusions of sandy-loamy and fine-earth substance are traced in continental ice. Even in the bottom of the glaciers – where it is customary to place a wide basal moraine filled

with huge blocks and iron-like boulders, only small lenses and clots of loamy and sandy-loamy substance, and rarely sand grains are fixed. These mineral inclusions are contained in hundredths of a percent and are mainly represented by volcanic ash, microcosmic particles, aeolian dust of distant deserts, rare inclusions of fine-earth terrigenous material, as well as spores and pollen. There's no need to mention tillites with huge boulders! All that is left for the proponents of the glacial doctrine, who depict decimetric dust-like moraines without boulders. An important function of glaciers is to conserve the subglacial geological-topographic surface.

Key words: Permo-Carboniferous ice age, tillite, ice exaltation relief, erratiecs, coal formations, plate-tectonics, calamiteles, filices, cordaites.