

**THE POTENTIAL EXISTENCE OF ANALOGUE
PLEISTOCENE METEORITE PLACERS IN
FORMERLY GLACIATED REGIONS OF RUSSIA WHEN
COMPARED TO ANTARCTIC METEORITE PLACERS.**

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The recovery of over 30,000 meteorites from Antarctic placer zones might have analogue areas for paleo-ice concentration from the last glaciation in areas of Northern Russia. In 2005 three meteorites were recovered from Manitoba, Canada; which have been proposed to be concentrated in the same process as the meteorites that have been recovered in Antarctica. If just one non-Antarctic Pleistocene meteorite place zone was recovered in Russia or Canada it might yield thousands of separate meteorite samples. Billions of dollars are spent on retrieving non-terrestrial geological samples and meteorites for the time being are still a cost effective way of collecting geological samples from the inner solar system. With minimal cost regions and sites could be selected for potential searching for meteorites even if only with public media campaigns to make the populace aware that they might find a piece of either the Moon or Mars in their locale. In depth topographic analyses in analogue with Antarctic meteorite placer zones might indicate potential areas in the Urals zone, Northern Europe and in North America, together with flow model of Pleistocene paleo-ice sheets could indicate areas where important slow down of ice happened. These areas should be important ancient meteorite trap relicts. The northern hemisphere paleo-ice sheets could have represented a great collectors for extraterrestrial material as well as the Antarctica ice sheet represents the most productive region for the discovery of meteorites on Earth nowadays. Beside being well preserved from the terrestrial weathering processes, meteorites are concentrated in specific regions by ice flow dynamics, according to the "ice-flow model". In this model, the extra-terrestrial material is embedded within the ice mass and transported downstream from snow accumulation zones; meteorite traps typically are formed in front of submerged or emerged bedrock obstacles, where the meteorite-bearing ice slows down forming areas of stagnant or slow-moving ice. There, a combination of ice deformation and uplift by the buttressing effect and wind ablation is capable of exhuming and concentrating meteorites trapped in the ice. As a consequence, high ablation rates and low surface velocity is the common characteristic of nearly all meteorite traps. The barrier effect could happen where two ice lobes meet together moving in a opposite way, although the lowest surface velocity are recorded in front of a bedrock barrier (submerged or emerged). During the last glaciation, in the northern hemisphere ice caps similar ice flow condition could have developed. The Urals could have represented a great obstacle to the ice moving southward (or south-westward) in a similar way to the Transantarctic Mountain in Antarctica.

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