



## **Potential of natural objects of the Permian Period from the point of geological time scale perception: retrospective analysis and prospective trends in research and museum field**

Yuliya Glazyrina

Perm State National Research University, Faculty of Geography , Biogeocenology and Nature Protection Department , Perm, Russian Federation (glazyrina\_yuliya@mail.ru)

The abstract presents experience of the Permian Period heritage interpretation and current research at the place of its discovery – Perm Region in Urals, Russia – which still have outstanding significance in historical geology. Permian Period was discovered here by Scottish geologist Sir Roderick Murchison in 1841; since 2009 Perm Regional government, scientific community and several museums leading by Perm Regional Museum have made a strategic shift in time scale perception through paleontological research, nature protection in situ and interdisciplinary interpretation through regional development program. It was not so easy to start this program due to the “negative connotation” of the Permian mass-extinction in the minds of decision-makers, so we’ve made several step-by-step activities in scientific and museum fields to achieve change in minds. All these activities ultimately aim to shift the perception of the geological time scale, switching focus from everyday to eternity, which is so important in decision-making at all levels.

Firstly, interdisciplinary scientific research projects were developed at Perm Regional Museum and its paleontological branch – Museum of Permian Antiquities. Scientific re-attribution of geological and paleontological collections was followed by excavations and monitoring on four localities, with the support of Paleontological Institute of Russian Academy of Sciences. Excavations are accompanied by public communication campaign.

Secondly, interdisciplinary educational programs on time scale perception were started, including the only one in Russia Children Paleontological Conference, with more than 500 participants annually, from 7 to 17 years old. Conference is held in close collaboration with Perm State National Research University. Several educational activities, including “Paleontological gymnastics” measure Earth history in steps according to the scale, showing Humans time on the planet.

On the one hand, we explain that geology deals with enormous intervals of time, so far from nowadays. On the other hand, we create conditions for interdisciplinary consciousness, showing that geological heritage of Permian exist in the modern-day Perm Region: geological outcrops and fossil fuels itself, as well as many cultural and historical connotations (from salt mining to local dishes made of ancient plants). All that realized through exhibitions and IT-products, including interdisciplinary “Discover Permian Period!” mobile app, consist of 11 routs developed with tourist sector.

Thirdly, Perm University have started a research project devoted to the identification of the potential of natural objects in terms of creating the Permian Geopark, based on the existing nature reserved areas of so-called “Main Permian Field” where most significant marine and terrestrial Permian outcrops are available for studying, representation and eco-education. The main idea is to show the role of Permian mass extinctions in the Earth history in situ.

At least, in 2017 Perm Regional Museum started research project “Welcome to the Anthropocene!”(pioneering one in Russia, supported by V. Potanin Charitable Foundation), focused on the changing role of Natural History collections at the time of Humanity, and based on the retrospective models of working with the time-scale perception, involving ecological practices into one semantic range with the geological ones.