



Problems of managing geoh heritage in the protected area: an example of the Saukliai erratic boulder field in the Salantai Regional park, NW Lithuania

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Surface of Lithuania and surrounding countries is sculptured by at least five glaciations, which left behind morainic tills and melt water deposits, modified by erosion and human activities. Glaciation legacy are numerous erratic boulders and boulder fields that are declared as nature monuments or reserves in Lithuania and surrounding countries. Tens of single boulders and boulder fields are included into the Geosite database at the Lithuanian Geological Survey (www.lgt.lt/epaslaugos/elpaslauga.xhtml). In the database, you can find detail descriptions of the protected geosites, and, in some cases, evaluation of their present state. However, no detail monitoring of many geosites has been carried out and some of them are already transformed or destroyed by natural and human-induced processes.

We will concentrate on one geoconservation area in NW Lithuania because of its critical present state. The Saukliai boulder field and surrounding tundra-like landscape (82 ha) were declared as a nature landscape conservation area and incorporated into the Salantai Regional park in 1992. A unique for Lithuania tundra-like landscape had developed on morainic till covered with melt water sediments including variably sized (up to 2 m) erratic boulders. Calcareous soil was favorable for tundra zone grasses and mosses and, especially, for juniper trees. The place has been used as a pasture for grazing animals: cows, sheep and goats, and remained in a perfect state for a long time. After the assignation, any activity was stopped here as well as many restrictions/prohibitions were enforced in surrounding areas. Agricultural activities have reduced considerably in the whole area; fields gradually overgrew by weeds, shrubs and forest. The tundra was polluted with numerous birch and willow seedlings turning into thick shrub cover. Shrubs and tall grasses thrived, expanded very fast and completely covered the area. Boulders have disappeared under the vegetation cover, and their erosion rate has increased. No more boulders are visible on surface, except for a few, recently opened near the wooden trail. Because of over-shadowing and soil acidification, juniper trees started to dry-out and disappear. Recently, the park administration has installed a herd of mouflons, but their grazing capacity is far too low to clean the whole area and to expose the boulders.

Meantime, there is not a big problem in Lithuania to get a protection status for a chosen geosite. More difficult is to ensure its sustainable management. What if the usual conservation measures (admission/activities restriction/prohibition etc) strongly affect the protected geosite, cause its transformation or even destruction? Shall we “let natural forces to do their job” – as many advise - or shall we interfere? If so, in which cases, how and to which extent? Case studies answering those questions as well as recommendations for a sustainable management of variable geoconservation sites should be far more abundant and widely spread.

What measures, if any, could save the Saukliai boulder field? Any suggestions are very welcome.