Traces of organism life activity presevred in the fossil state as trace fossils and bioturbation structures are important source of information about ecosystems of the past. For several sedimentary environments, models of ichnological record are elaborated. For sandy aeolian dunes, such a model (Entradaichnus-Octopodichnus ichnofacies) is based on the research of Mesozoic and Late Palaeozoic desert deposits. However, ichnological investigations in young inland and coastal dunes in higher latitudes are missing. Late Glacial and Holocene dunes and sandy covers occupy large territories of the European lowlands, from England, through the Netherlands, Germany to Poland and Lithuania. They form the so-called European Sand Belt. Ichnological research such deposit of the territories of Poland and Lithuania, where the aeolian deposits are widespread, can enlarge the knowledge on environmental processes and their changes in the Lathe Glacial and Holocene, as well as complete the knowledge on ichnology of aeolian sediments in colder climate.

Obtained data will be based on the field research. Outcrops will be documented by detailed logging, photographing, sampling and taking of preparations. The most abundant occurrence of trace fossils and bioturbation structures is expected in humus-rich horizons, including fossil soils. Simultaneously, sedimentological and stratigraphical investigations will be carried out, with application of the optically stimulated luminescence, C^{14} and OSL datings, georadaru and statistical analysis.

It is expected that different trace fossils and bioturbation structures will be documented and described. They will be interpreted on respect to their tracemakers, their life functions and environmental conditions. It is possible that some relationships between different types of aeolian sediments and their ichnological features will be discovered. It is not excluded that, a correction of the ichnological model of aeolian sediments will be proposed, and a geographical north-south trend and a stratigraphical trend of ichnological record through the latest almost 15 ky will be detected. The obtained results will be published in international journals and will be presented during international and local conferences.