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Genetic diversity of *Dianthus arenarius* assessed with retrotransposon-based molecular marker system (iPBS)

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Dianthus arenarius is endangered perennial plant species, which is included in Annex II of the European Council Habitats Directive 92/43/EEC as well as

in the Latvian endangered plant list. In Latvia, Lithuania and Belarus *D. arenarius* create a complex of several perennial subspecies. *Dianthus arenarius*

is closely associated to the grey dunes and dry grasslands habitats. The area and quality of these sites decrease due anthropogenic and natural factors, such as recreation and overgrowing. Genetic diversity of populations reflects their adaptation to environmental conditions and its knowledge helps to choose appropriate protection measures for rare and endangered species. Genetic variability is one of evaluation's criteria of the populations' and species' sustainable existence. Until now genetic variability of *D. arenarius* in Europe has not been studied.

In total, 300 *D. arenarius* mature leaf samples were collected from 12 localities in Baltic region and Belarus: 8 from Latvia, 3 from Lithuania and 1 from Belarus. For investigation of genetic diversity, the retrotransposon-based markers type iPBS (inter primer binding site) was applied. 51 primers previously effective on different eukaryote species were tested and three of them, which represent higher level of polymorphism, were used for further population's characterisation (iPBS2242, iPBS2239, iPBS2386). Differences in genetic variation within and between localities were shown.