

Long-distance dispersal of *Rumex alpinus* was studied in the Giant Mountain in the National Park. The invasion of *R. alpinus* is there kind of problem. The work builds on a thesis from year 2007 (20007 Červenková), in which was made the model of the invasion of *R. alpinus* in the area of the Giant Mountain.

The measurements of the seeds spread take place at four localities, three of them were for measuring of water dispersal and one was for measuring of winter dispersal.

Anemochory was measured using traps in the meadow up to a distance of 50 m. The seeds were dispersed by wind to a distance of 20 meters. Hydrochory was measured using a network's traps in the streams up to 100 m. The largest measured water dispersal was 100 m. Hydrochory therefore proved to be an important factor, which influenced the invasion of *R. alpinus*. The storms and flood had the great influence on the hydrochory and anemochory.

The prediction exponential curves were compiled from the data about the wind dispersal. The curves express the spread to more than a measured distance.

The field dispersion curves were compared with theoretical curves, which were used in the model of the invasion from 2007. It turned out that the theoretical curves overestimate the spread of *R. alpinus* by wind.

The dispersion of seeds was underestimated in the simulations with field dispersal curves. It was because of the large size of the grid cells in which was the model carried out.

In spite of underestimating of seed dispersion the results of simulation tell us that the invasion still keeps going. It is mainly because of the vegetative spread.