

## **Abstract**

The alpine treeline is a global phenomenon which represents sudden change between two significantly different vegetation types: mountain forest and low-stature alpine vegetation. The primary climatic factor that determines its position seems to be the temperature. We summarize the results that describe the relation between temperature and the altitudinal position of the treeline and search for a general formula that would determine its position. There are two hypotheses which try to explain what is the main limiting factor above treeline: C-limitation and growth-limitation. The first one claims trees are limited by carbon shortage, while the latter one favours low-temperature limitation of tissue formation although the carbon income is sufficient. This thesis provides a summary of the arguments for each of them and describes the state of knowledge on this matter.