

# Abstract

The Tree of Heaven (*Ailanthus altissima*) is an invasive deciduous tree, which has spread to every continent except Antarctica from its original area. It came to the Czech Republic in the 19<sup>th</sup> century as ornamental tree to the gardens of castles and parks. Later it spread to surrounding cities, but also into wild nature. Nowadays we find it in the Czech Republic primarily in hotter and drier areas and human disturbed areas. Its occurrence in these areas may suggest ideal conditions, which *A. altissima* seeks for its growth and spread. Studied conditions in this bachelor thesis are light, temperature, soil, water availability and overall environment, which *A. altissima* finds in its native and non-native area. Limits for the individual conditions were investigated, and these could define, where *A. altissima* can appear and where it cannot. Then everything was linked to the conditions in the Czech Republic. The results show that its appearance in the Czech Republic is mostly affected by altitude and average annual temperature linked with it. Shading limits *A. altissima*, but less than it was expected. When it comes to soil and water availability, *A. altissima* is very undemanding. The question is if *A. altissima* has already managed to occupy every location where it is able to grow in the Czech Republic and how its spread can change with the changing climate.

**Keywords:** the Tree of Heaven (*Ailanthus altissima*), invasive species, conditions to grow, spread, biodiversity, the Czech Republic