



Ore Mts. are located in north-western part of the Czech republic forming a natural border between Czech Republic and Germany. Source of the map: http://d-maps.com/carte.php?num_car=5800&lang=en

Abiotic stress



Scots pine stand severely damaged by rime.

1. Frost damages are recorded during the whole year and June frosts are not exceptional.
2. There have not been any pollution in the last 30 years in Ore Mts. Nevertheless the soil pH values are below the optimal level for forest trees (pH round 4 and lower).
3. There are frequent air temperature extremes during the whole year. In December 1978 the temperature dropped from 10°C to -25 °C within 12 hours.

Current research



Gasometric measurement on blue spruce in order to estimate the photosynthetic parameters of individuals infected by the fungi.

The meeting of the EPP0 panel was hosted by the Central Institute for Supervising and Testing in Agriculture (ÚKZÚZ). www.ukzuz.cz



The technical visit was organised by the Faculty of Forestry and Wood Sciences Czech University of Life Sciences Prague. www.fld.czu.cz



23rd Meeting of EPP0 Panel on Quarantine Pests for Forestry in Prague

Ore Mts., 2018-05-16



Bilina mining pool as the deepest strip mine in the CR, felling of blue spruce and today's typical landscape in the Ore Mts.



Lokomo Makeri 34T with felling scisors was used massively in Ore Mts. in the 70's.

Basic overview

Ore Mts. form a natural border between Czech Republic and Germany with its highest peak reaching 1244 m (Klinovec). There are many mineral resources in Ore Mts. Surrounding landscape was significantly changed by large scale brown coal mining and its burning in the power plants.

Long-term mining history, extreme climate and orography have established a platform for todays multidimensional problems in forestry.

After massive deforestation due to SO₂ and NO_x pollution, species composition was radically changed. Substitute tree species, e.g. rowan and Blue spruce, were planted at the clearings after massive forest dieback (the Norway spruce died off across 90 000 hectares). Nowadays these tree species are facing unprecedented attacks of biotic and abiotic factors.

„In tranquillo quilibet gubernator.“

Everyone could be a wheelman on the smooth sea (Seneca jr.).

Already three generations of foresters have been working hard to keep the forests alive in Ore Mts.



Typical landscape of Ore Mts. in the 70's. The spruce forest died resulting in persistent forest weed spread around.

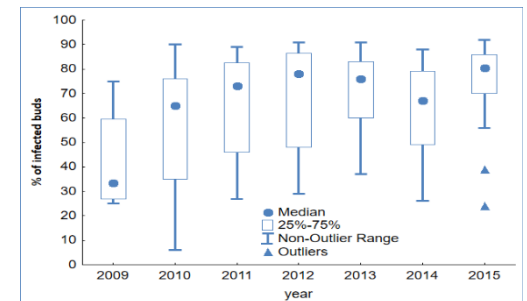
Biotic stress

Gemmamyces piceae was identified first in 1917 on Blue spruce (*Picea pungens*). After almost 100 years from the first occurrence massive outbreak of the bud blight disease was recorded. It re-appeared on Blue spruce covering thousands of hectares of former pollution-exposed sites where Norway spruce (*Picea abies*) died back.

Since 2015 we have noticed that this pathogen switched to *P. abies* and recently it damage more often buds of these autochthonous trees. The plantations in age between 31 and 60 years are the most sensitive.



Infected buds of Norway spruce (*Picea abies*) by *Gemmamyces* bud blight (*Gemmamyces piceae*) fruit bodies.



Percentage of *Picea pungens* buds damaged by *Gemmamyces piceae*.