

Abstract

Snowpack is strongly influenced by several environmental factors. Besides meteorological and topographical conditions, vegetation structure plays an important role. The aim of this bachelor thesis was to assess how the canopy structure affects snow distribution. The snow depth and snow water equivalent (SWE) were measured in a selected location situated in the Kvildský potok basin in the Šumava Mountains during the winter season 2019. Canopy structure was described using Leaf Area Index (LAI) obtained from hemispherical images of the area. The degree-day method was used to calculate melt factors. The influence of vegetation was examined by using the correlation and regression analyses. Snow depth and SWE was significantly lower in forest sites than in the open area and in the forest disturbed by the bark beetle (*Ips typographus*). The influence of canopy structure was highest during snow accumulation and its importance decreased with time. The SWE variability was largest for last measurement during the melt phase. Melt factor calculated for period between last two field measurements was $2.3 \text{ mm} \cdot \text{C}^{-1} \cdot \text{d}^{-1}$.