## Summary

In this research, we estimated the amount of forage available to ungulate herbivores in two research areas. We determined the role of environmental factors, like soil quality and light intensity upon the intensity of browsing on saplings of various species. First, we conducted the laboratory measurements of saplings collected in the study areas to develop allometric equations relating tree height, stem thickness, and other traits to twig dry mass available for ungulate browsing. These equations and data from field measurements in 44 sample plots were then used to calculate the amount of forage available for ungulates in the study areas.

Research plots were established in two national parks: the Tatra N. P. and the Roztoczański N. P. There were 22 research plots in each study area. Each plot was a belt transect 30 m long and 5 m wide. Within transects, we measured morphological parameters of tree saplings and diameters of browsed twigs; based on these measurements, we calculated the index of browsing intensity BI. In the Roztoczański N. P., we collected soil samples from each transect; in the lab, we measured soil parameters and calculated the soil quality index. The browsing intensity of various tree species was then related to the soil quality index and the amount of forage available for ungulate herbivores within each sample plot.

The results show that soil quality significantly influences browsing pressure and varies by species. Higher soil quality generally increases browse abundance and shifts browsing pressure from more palatable species such as *Acer pseudoplatanus* to less palatable species such as *Fagus sylvatica*. Increasing browse abundance effectively reduces browsing pressure on palatable species, facilitating a more balanced composition of regeneration and maintaining higher biodiversity in the natural forest ecosystems. This suggests that canopy disturbance by increasing browse availability may be critical for supporting the regeneration of ungulate browsing-vulnerable tree species.