Abstract (English)

The bachelor thesis focuses on the interaction of plants and herbivores, specifically deer. The main question is if (and possibly how) the changes induced in the plants by deer browsing affect the probability of re-browsing. I tried to answer the question by reviewing published literature.

Plants respond to browsing by tolerance (compensatory growth) or resistance (production of defensive chemical compounds), depending on the plant's life strategy. Tolerance prevails in adult woody plants and grasses; resistance prevails in young woody plants and forbs. In resistant plants, browsing increases the content of phenolic substances and decreases the cellulose content, while tolerant species react in the opposite way. It is the contents of these substances, which are negatively correlated, that are key to food selection by deer.

Large species of deer generally prefer plants with more cellulose, which they are able to digest efficiently. Smaller species prefer plants with lower cellulose content and higher concentration of simple sugars. These more nutritious plants are protected from browsing by phenolic substances, which smaller deer species are able to neutralize more effectively.

Only a few studies have addressed the issue of re-browsing of the same plants, and their results are ambiguous. Further studies taking multiple factors into account and performed using a uniform methodology are necessary.