### NUTRIENTS DYNAMICS OF MISTLETOE VISCUM ALBUM L. AND ITS HOST TILIA CORDATA MILL.

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# Introduction

Trees in urban areas provide us with a lot of benefits, from aesthetics to sanitary functions and it is very important to preserve them from any kind of damage. One of the factors threatening the vitality of trees is perennial evergreen mistletoe - *Viscum album* sp., which can even cause the death of its host. This study describes the nutrient dynamics of mistletoe (*Viscum album* supsp. album) and its host tree (*Tilia cordata* Mill.) during the vegetation season.

Fig. 1 Experimental site on the Brno city cemetery



# Results





Fig. 2 (A) - Leaf mass per area (LMA) and (B) normalized difference vegatation index (NDVI) dynamics during vegetation season. Green line current-year leaves of *Tilia*, blue line - current-year leaves of *Viscum*, orange line - one-year old leaves of *Viscum*.

Fig. 3 Calcium (Ca), potassium (K), nitrogen (N) and phosphorus (P) dynamics during vegetation season. Green line - current-year leaves of *Tilia*, blue line - current-year leaves of *Viscum*, orange line - one-year old leaves of *Viscum*.

## Conclusions

- LMA and NDVI (i.e. proxy for chlorophyll content) of current-year *Viscum* leaves developted during whole vegetaion season contrary to *Tilia* leaves (Fig. 2)
- Current-year Viscum leaves had 1.6, 4.9 and 3.9 times higher N, K and P, respectively, than Tilia

leaves at the end of growing season (Fig. 3)

• Ca content in the current-year leaves was similar in both species (Fig. 3)



Experimental site on the Brno city cemetery, Czech Republic

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#### Methods



PolyPen. Spectral reflectance of leaves measurements (NDVI)



Sampling of leaves for LMA and nutrient analysis

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