

# The off-site impacts of mines on plant diversity in boreal areas

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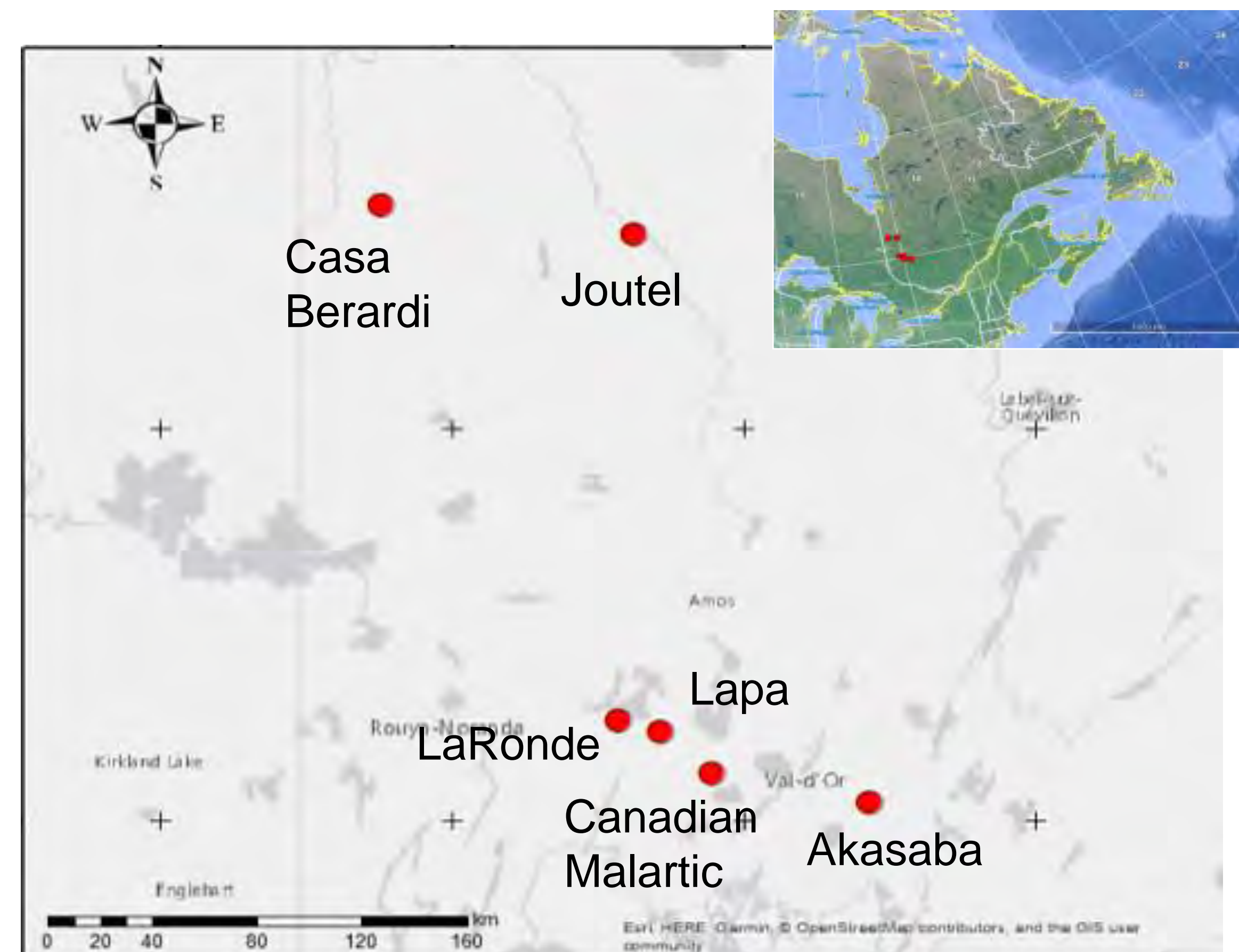


## Introduction

The continuous supply of minerals and metals from mining facilitates social and economic development in the world. However, it is also one of the main anthropogenic disturbances on biodiversity and ecological services, especially in Québec boreal forests. Little is known about off-site impacts of mines on surrounding plants. To address this research gap, six gold mines from different stages of the mining lifecycle were selected.

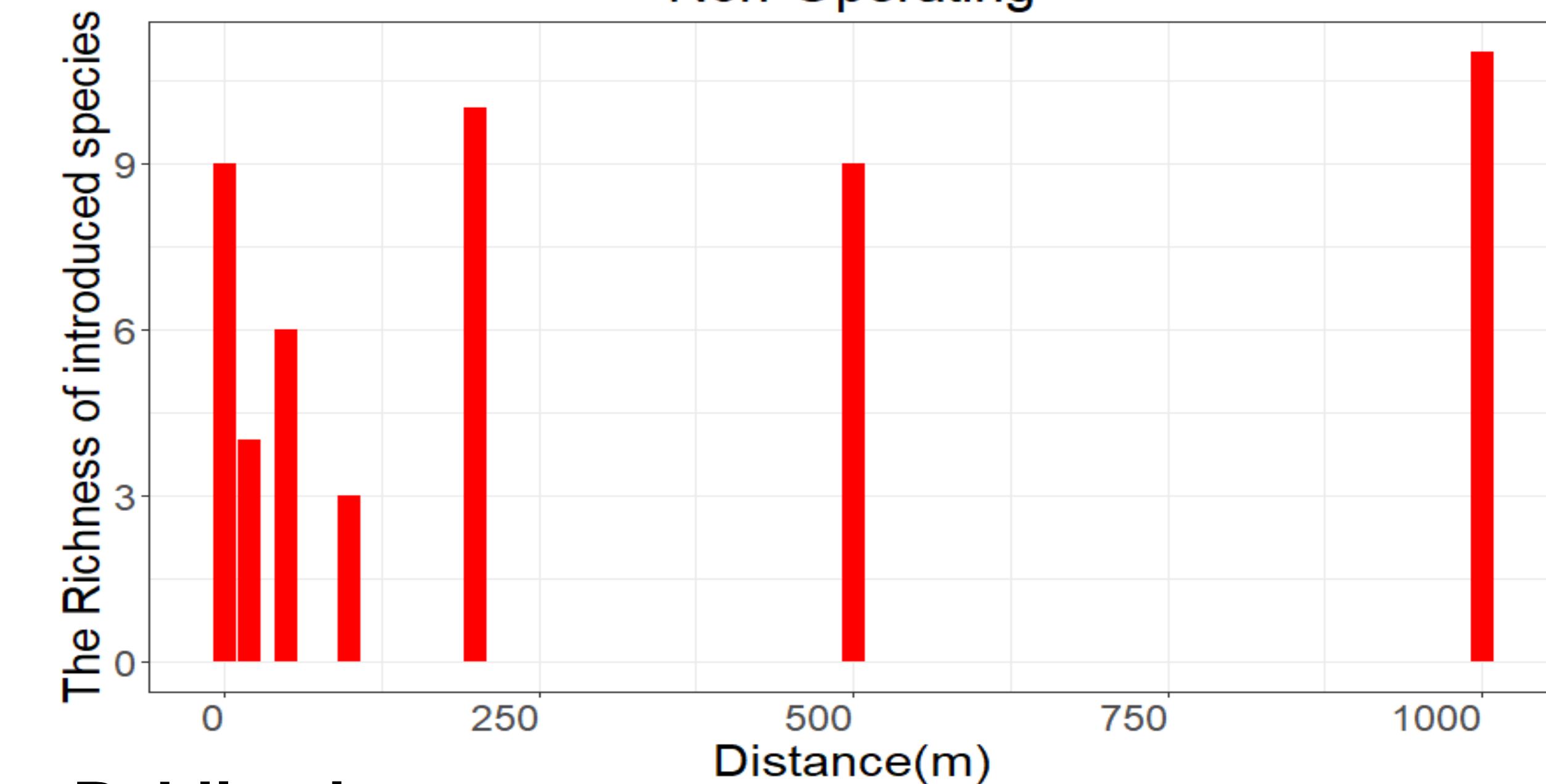
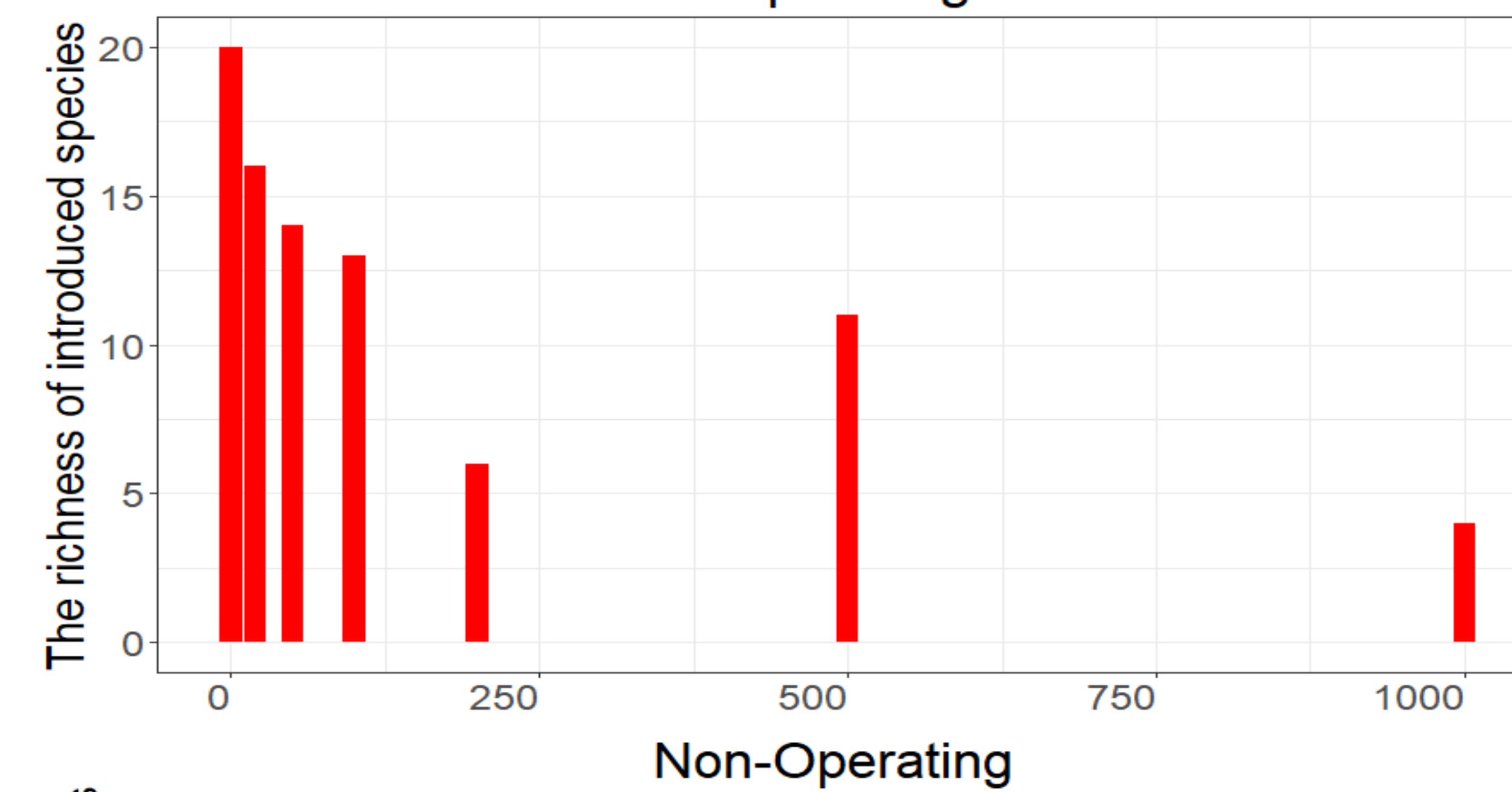
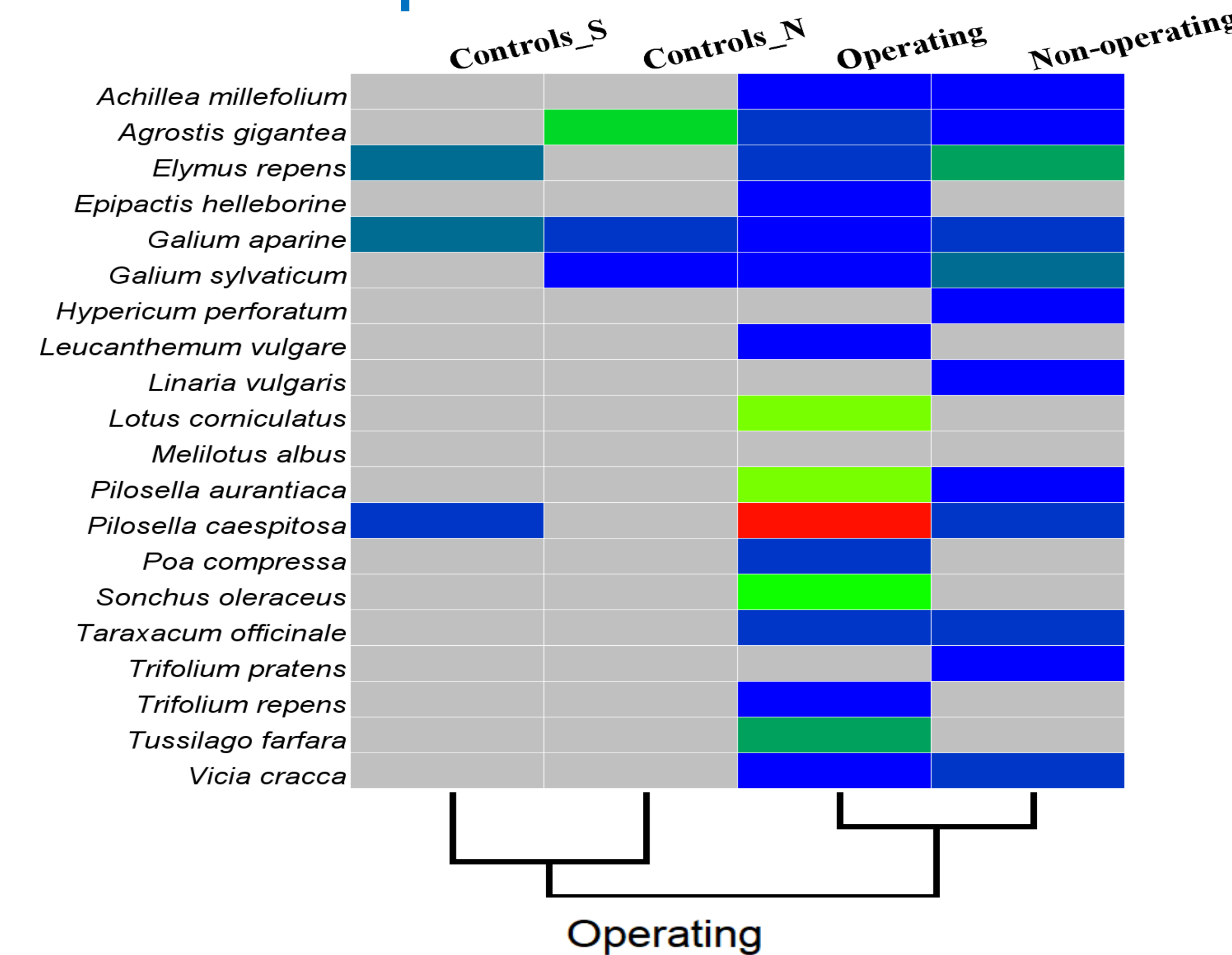
**Objectives:** 1) Determine the offsite impacts of mines on plant diversity in the boreal area. 2) Evaluate the main environmental factors; 3) Evaluate which vegetation groups could be used as reliable indicators to monitor the offsite impacts of mines in boreal areas.

## Methods



## Results

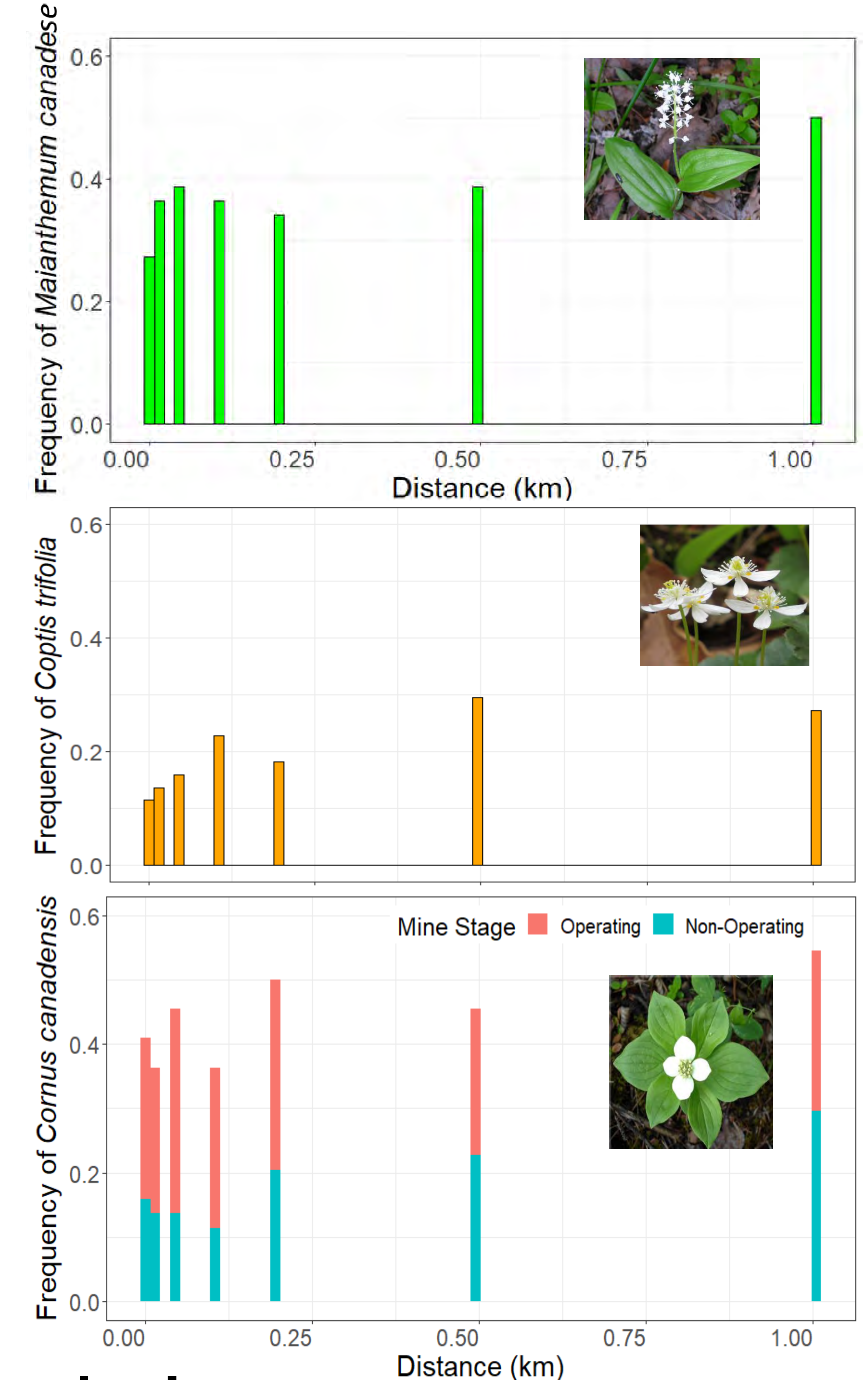
### Introduced species



### Publication:

Boisvert, Rémi; Yin, Xiangbo; Fenton, Nicole\*. Offsite effects of mining on the frequency and abundance of five herbaceous species in western Québec (Canada). Botany (Submitted).

### Native herbaceous species



## Conclusion

- Our study documents the presence of off-site impacts of mines on plants.
- Introduced species and *Cornus canadensis* with significant effects of the interaction between distance from mines and mine stage maybe used as indicators for off-site impacts of mines in boreal areas.