

## **Abstract**

The thesis is a part of an ongoing research on taxonomy, ecology, and the distribution of epiphytic bryophytes particularly within the *Orthotrichaceae* family, based on collected bryofloristic records. The database now contains 6500 records. I have analysed interspecific differences in habitat preferences between species, namely their associations with particular phorophytes, pH of phorophyte bark, altitude, and the position on the phorophyte. Individual species differed in their occurrence according to altitude, phorophyte, and pH, though altitude was the most important factor. All analysed species have been shown to represent obligate epiphytes. Some species reveal a tendency to occur preferentially on northern or western side of the phorophyte, but this tendency is not by any means universal. I discuss these findings in the context of the knowledge of species autecology and current changes in their distribution.