

## Abstract

Master thesis investigates reproductive barriers in diploid-polyploid complex of *Vicia cracca*. Complex with basic chromosome number  $x=7$  consists of diploid ( $2x=14$ ), tetraploid ( $4x=28$ ) and rare triploid ( $3x=21$ ) cytotype. I studied prereproductive barriers between diploid and tetraploid cytotype: phenology of flowering, pollinators' behavior (preference of species of pollinators to cytotypes, sequence of visited cytotypes), variables, that could explain pollinators' behavior (amount of nectar as the main reward, size and amount of pollen grains as a potential reward). To find out how strong the triploid block is I analyzed ploidy of seeds and seedlings from mixed-ploidy population. The habitat isolation showed up to be the strongest reproductive barrier. Pollinator's behavior meaningfully contributes to isolation, phenology of flowering contributes only minimally. Index expressing rate of prereproductive barriers is 0,956. Pollinator *Bombus pascuorum* visited on one locality preferably tetraploid plants and *Andrena* sp. preferred diploid plants. Even though tetraploid plants produce more nectar, no other analysis showed pollinators' preference to tetraploid plants. I prepared one squash of diploid *V. cracca* using method of in situ hybridization. This method needs to be optimized for the studied taxon.