Abstract:

Inflorescence and its properties have a fundamental influence on the pollinating behavior of pollinators, which can affect the resulting reproductive success of plants. Clustering of more flowers in the inflorescence is an advantage for plants due to the diversification of pollen sources and greater visual supply, which can attract more pollinators and thus increase the chance of pollen transfer to other individuals and ensure genetic variability of the offspring. The disadvantage of multiple flowers in one inflorescence may be both an increase in energy requirements for the formation and maintenance of multiple flowers and an increased risk of geitonogamy. Plants prevent geitonogamy within the inflorescence by various adaptations. The aim of this work is to evaluate the effect of inflorescence arrangement on successful plant reproduction. When studying the arrangement of flowers in the inflorescence, it is necessary to take into count not only their morphology, i.e. the shape, number, size and arrangement of flowers, but also other functional properties in the form of genitals, sterility and rewards. The resulting effect of flower arrangement on the reproductive success of plants also depends on the vectors that transfer pollen, in this case especially insect pollinators, which are affected by the arrangement of plants.

Key words:

inflorescence, geitonogamy, pollinators, flowers, pollinators behaviour, Optimal foraging, Marginal Value theorem,