

## **Abstract**

The genus *Urtica* L. is represented by three species occurring in the area of the Czech Republic. The most common *Urtica dioica* L. represents a highly variable group with number of intraspecific taxa. The most common source of variability in *Urtica dioica* is probably polyploidy (min. 2 ploidy levels – 2x and 4x). Another source of the variation in this species is dioecy. A small percentage of individuals in dioecious populations are actually monoecious. The study of these individuals can potentially extend our knowledge of the evolution of Dioecy.

The species *Urtica dioica* is frequently confused with the closely related diploid taxon *Urtica kioviensis* Rogow., which relates to the study of *Urtica dioica* because of their similar ecological preferences and general affinity.

The aim of this review is to summarize existing knowledge of the species with results of a pilot sampling and analyses, which identified several ploidy levels with the center of abundance of the relict diploid in primary willow-poplar forests of lowland rivers. These issues will be further examined in a subsequent master's thesis, with focus on the morphological differentiation and the affinity of ploidy levels.

Since the rarest and the most targeted taxa, resp. cytotypes, of the genus *Urtica* occur exclusively in the willow-poplar forests of lowland rivers, the issues concerning these biocoenoses are discussed in a separate chapter dealing with the historical development of this habitat and its classification in the Czech Republic.

**Key words:** *Urtica*, polyploidy, Dioecy, Flood-meadow.