

ABSTRACT:

Polyplodisation plays a major role in plant evolution. It can also cause taxonomic complexities as morphological differences are often blurred in higher ploidy levels. One of the taxonomically-intrigued groups of Central Europe is *C. rotundifolia* agg. Three ploidy-heterogeneous species are traditionally recognized in the Czech Republic: *C. gentilis* (2x, 4x), *C. rotundifolia* (2x, 4x) and *C. moravica* (4x, 6x). The thesis examines karyological and phenotypic variation of *C. moravica*, in the centre of its distribution (the Czech Republic and Slovakia). With the aid of modern biosystematics tools (DNA flow cytometry, multivariate morphometrics), marked discrepancies were revealed between published data and actual cytotype distribution pattern and morphological variation. In contrast to literature records, cytotype distribution in *C. moravica* is largely parapatric, with hexaploids occurring in Pannonian basin and tetraploids in Central and Eastern Slovakia. The type population of presumed tetraploids turned out to be hexaploid. The coexistence of one majority (4x) and six minority cytotypes (2x, 3x, 5x, 6x, 8x, 9x) was found in one population in central Slovakia and represent the most salient case of ploidy coexistence ever reported. Multivariate morphometrics showed that species identification on the basis of morphological characters is rather challenging (the proportion of correctly classified species is comparable with that of cytotypes). The reasons behind the observed taxonomic complexity possibly include low evolutionary age of the group under investigation and high phenotypic plasticity. The role of inter-specific hybridization needs to be clarified. The available pieces of evidence support recognition of "*C. moravica*" at subspecific level (as *C. rotundifolia* subsp. *moravica*). However, robust taxonomic treatment requires investigation over larger spatial scales, including southern Europe, where morphologically similar and closely-related species of the section *Heterophylla* are reported.

keywords: Campanulaceae, *Campanula moravica*, *Campanula rotundifolia* agg., polyploidy, cyto geography, flow cytometry, morphological variability, multivariate morphometrics