

The purpose of this study is to evaluate the existing knowledge on the evolution of genome size and also to focus on genome in the phylogenetic context. Among angiosperms we find a wide range of C-values ( $1C = 0.63 \text{ pg}$  ?  $1C = 127.4 \text{ pg}$ ), but the modal value is  $0.6 \text{ pg}$ . We still do not know much about the nature and mechanisms of plant genome size evolution, but we are learning more and more every year. There are already dozens of studies dealing with the dynamics of genome size of smaller taxonomic groups and on four of these they demonstrate possible approaches. Researching within higher taxonomic groups such as families is difficult and so more valuable. New research on the evolution of genome size in the family Zingiberaceae has started and my master thesis dealing with the Globbeae tribe should be part of it.