

**PECULIARITIES OF HETEROPHYLLY  
IN *ACER SERRULATUM* (ACERACEAE)**

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The article highlights the results of a study of the individual development of *Acer serrulatum* Hayata plants during ontogenesis. The development of the leaf blade shape from the seedling to the mature stage is characterized and special attention is paid to heterophylly of the species. Two types of heterophylly, that of the pre-generative and of the generative period, are considered. In *A. serrulatum*, the heterophylly is absent in young and fast growing trees 10–12 years old. There, the leaves on all the shoots of the tree (both growth and short shoots) are strictly 5-lobed. The phenomenon of heterophylly of adult plants is considered from the position of phylogenetics, i. e., comparisons of evolutionarily more and less advanced species, and from the ecological point of view – more lobed blades have a greater photosynthetic surface. The changes from 5-lobed to 3-lobed leaves are explained as the effect of underdevelopment of the leaf blade in order to form the stem part of the shoot, the latter being capable to develop a larger leaf surface next year. The phenomenon of heterophylly was also considered for the other 36 maple species of the section *Palmata* Pax. The total number of species with a leaf blade changing in ontogenesis is 90% of deciduous species of the section. Moreover, the species having heterophylly in the adult generative state account for 35% of deciduous species of the section. The vast majority of them have 9-lobed blades. The results of our studies allow us to clarify the characteristics of the adaptive capabilities of the species and, along with genetic studies, are important for understanding evolutionary trends (transformations) within a taxon. They are also important for emendation the taxonomy of the members of the genus *Acer* within the section.

*Keywords:* *Acer serrulatum*, ontogenesis, pre-generative and generative periods, shoot, heterophylly, leaf blade

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