

**Possibilities of using native and introduced in Poland species of the genus  
*Spiraea* L. (Rosaceae) in urban green areas on the example of Poznań**

The work concerns spireas (*Spiraea* L.), including little-known taxa collected in Polish dendrological collections, as well as those that are already widespread and cultivated in green areas. The research hypothesis assumed the possibility of using, apart from the spireas already used in urban greenery, other species due to their ornamental value, phytoremediation potential and absorption capacity of dust pollution. The verification of the hypothesis was achieved through three goals: 1/ collecting information on the specifics of spireas growth based on phenological observations of 34 taxa, 2/ characterization of the surface of leaf blades of 42 spireas (covering with hairs, presence of waxy crystalline structures on the surface of the epidermis, as well as its folding, size and density stomata), 3/ determination of the content of heavy metals in the soil and leaves of selected 12 spireas cultivation locations in Poznań.

The research has shown that many taxa are characterized by long full flowering (including *S. alba* var. *latifolia*, *S. douglasii* var. *menziesii*) and drought resistance (including *S. longigemmis*, *S. wilsonii*). Some of them are also characterized by attractive autumn leaves (e.g. *S. fritschiana*, *S. pubescens*) and a long vegetation period (e.g. *S. cantoniensis*, *S. chinensis*). In turn, the most favorable arrangement of epidermal structure features in terms of air phytoremediation is found in *S. cana*, *S. crenata* and *S. henryi*. The tested taxa (*S. ×cinerea* 'Grefsheim', *S. ×vanhouttei*, *S. densiflora*, *S. nipponica* 'Snowmound') meet the basic requirements for plants used for soil phytoremediation processes, especially for chromium phytoextraction. The degree of soil salinity does not pose a threat to the spireas grown in the city, and its alkaline reaction is suitable for the cultivation of a number of species from China. The obtained results were used to collect the most valuable information about the possibility of using spireas in green areas.

26.09.2023 *Janek*  
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