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# KNJIGA POVZETKOV BOOK OF ABSTRACTS

Slovensko društvo  
za biologijo rastlin



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## Towards fine root identification key of common tree species

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Fine roots (defined as roots thinner than 2 mm) comprise less than 2 % of the tree biomass in temperate and boreal forest stands, but their role in the formation of belowground carbon pools is of great importance because of their short turnover rates (Brunner & Godbold 2007). Quantitative analyses of species' root distribution may reveal belowground carbon allocation patterns and competition relationships (Rewald et al. 2012). Since anatomy of the roots can differ significantly from the anatomy of stem, specialized root identification keys are needed (Rewald et al. 2012). Besides anatomical characteristics, morphology of the fine root system e.g. diameter of lateral branches, branching pattern, colour, texture of the root bark or epidermis (Pregitzer et al. 2002) may also be valuable for determination purposes. The most valuable root identification key of Cutler et al. (1987) is sold out and hard to obtain, while the comprehensive atlas of Kutschera & Lichtenegger (2002) is missing identification key and information on typical characteristics of the presented species are difficult to find. There is practically no identification key or atlas that would present morphological characteristics of fine roots. In the frame of EUFORINNO project (REGPOT no. 315982), we are investigating both anatomical and morphological approaches on ten common tree species to specify the most useful identification characteristics. These characteristics will be used to prepare an identification key for the studied species and if possible, extended to other woody plants.

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