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Citation style: Chmura Damian, Woźniak Gabriela, Tokarska-Guzik Barbara, Nowak Teresa, Błońska Agnieszka, Bzdęga Katarzyna, Ziemer Barbara, Szary Małgorzata. (2014). Plant species diversity associated with invasive Reynoutria taxa in riparian vegetation : [streszczenie]. "Biodiversity Research and Conservation" (Suppl. 1, (2014), s. 18).



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Plant species diversity associated with invasive *Reynoutria* taxa in riparian vegetation

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Invasive plant species influence the resident species, communities and ecosystems in many ways. They may reduce species richness and abundance of native biota and decrease their local species diversity, although individual habitats vary considerably in their susceptibility to invasion. Riparian habitats are especially valuable ecological communities with high species richness and are identified as habitats with value for nature conservation. These particular habitats, together with other waterside habitats, are the most endangered and most easily invaded by alien invasive plants. In many riparian habitats, the *Reynoutria* taxa individuals are common invaders. The description and quantification of differences caused by closely related alien taxa such as *Reynoutria* on the diversity of riparian vegetation resident species is presented. For this purpose, analysis of the studied vegetation based on the participation of species with similar morphological and ecological characters (Plant Functional Groups (PFG)) was performed. The use of the concept of PFG-s in studies on invaded communities provides a pragmatic approach which will make

it possible to implement links between traits of species and community and/or ecosystem functional structure.

The aim of the present study was to determine whether there were differences in the species diversity, particular in terms of the structure of plant functional groups of accompanying species, between patches of riparian vegetation dominated by *R. japonica*, *R. sachalinensis* and *R. ×bohemica*, respectively. We hypothesized that presence of the three *Reynoutria* taxa studied caused differences in the composition of plant functional groups which the associated species represented.

The expectation was that the structure of plant functional groups of species accompanying the *R. ×bohemica* dominated riparian patches would be most different in terms of all the analysed features as the hybrids were known to possess the best invasive abilities. However, the results suggest that the functional composition of riparian patches dominated by *Reynoutria japonica* was the most distinctive when compared with the composition of patches dominated by *R. ×bohemica* and *R. sachalinensis*.