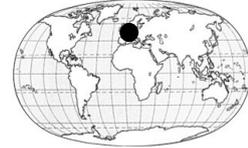


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INVASIVENESS AND PHYTOCOENOTIC RELATIONS OF *IMPATIENS*

PARVIFLORA: A STUDY OF NATURE RESERVES

In 13 woodland nature reserves situated in southern Poland, 75 permanent study plots were established. In these plots, 10m x 10m divided into 100 subplots of 1 m² and randomly placed in various forest communities, percentage cover of herbaceous and moss species was recorded with the use of 10 percent intervals. Impact of highly invasive plant species, native of Asia small balsam *Impatiens parviflora* DC, on indigenous species was estimated using concept of alfa-diversity (species richness within sites), and beta-diversity (species richness among sites). The subplots with a presence of *I. parviflora* were compared with those where only native resident species occurred. The studies revealed that small balsam *I. parviflora* is an indicator of local high biodiversity what is caused probably by the disturbance and the influx of non-forest species into forest vegetation. On the other hand the plots with higher number of subplots occupied by the species studied were more species-poor. Comparison of beta-diversity among the study plots gives different results. In the study plots characterized by higher species richness beta diversity tended to be lower in case of subplots with the absence of *I. parviflora*. The more species-rich forest communities are, the less its impact is. Small balsam seems to take advantage from existence of bare ground and thinned tree stands or canopy gaps in forest phytocoenoses what is concordant with results of other experimental and theoretical studies on invasibility of plant communities. Its occurrence is hampered by clonal plants as native and expansive sedge *Carex brizoides* even in favorable light conditions. The study was partially funded by KBN, no. project 3 PO4 G 093 25.

keywords: *Impatiens parviflora*, biodiversity, impact, Poland