

Abstract

The objective of this work is to evaluate the riverbank vegetation burden of selected watercourses in Střela basin by eighteen taxons of significant invasive neophytes and studies the impact of different geographical factors on their occurrence. Evaluation of riverbank vegetation burden is based on field research. Quantity data of single taxons were collected through this field research for selected, 0, 5 km long sections of riverbank vegetation. The impact of the geographical factors is evaluated using linear regression model. The number of taxons in section, the burden index of the section, and the number of specimens of *Impatiens parviflora* specie are chosen as dependent variables. Different physio-geographical and socio-geographical conditions of segments and their imminent surroundings are chosen as independent variables. There are several findings of this work. River Střela is affected by selected invasive neophytes, but the burden is below the average of the rivers of Czech Republic. Occurrence of invasive neophytes in riverbank vegetation of Střela basin is dependent on the average altitude, distance of segment from rail, land use of imminent surroundings and surroundings up to 500 m from river.

Key words: Střela basin, invasive neophytes, riverbank vegetation, geographical factors