

Abstract

The aim of this thesis is to summarize actual results of the field research of invasive neophytes' occurrence in the riverbank vegetation of selected water courses in the Czech Republic. In total approximately 850 km of the riverbank vegetation was mapped using author's own method. The occurrence of invasive neophytes (17 taxons) was registered for each of the 500 m long segments (in total 1693 segments was mapped). The number of specimen was registered using a logarithmical scale. Segments were defined using river navigation or important points of orientation (e. g. bridges or weirs).

Total number of taxons, total number of specimen, simple index of invasive neophytes load (I_s) and weighted index of invasive neophytes load (I_w) were calculated for each segment. The number of specimen was derived from registered values such as the mean value of the interval. The weighted index of invasive neophytes' load takes into account plant size, it's life history and potential risk for indigenous flora or people and human activities. The number of specimen of each taxon is weighted by certain coefficient. The value of weighted index of invasive neophytes' load and some other characteristics are presented for parts of the water courses (i. e. groups of neighbouring segments with similar geographical and ecological conditions): total number of taxon, average number of taxons per segment, share of segments with occurrence of each taxon, average number of specimen per segment of each taxon, average number of specimen per occupied segment of each taxon, average total number of specimen of all taxons per segment, average value of the simple index of invasive neophytes' load and average value of the weighted index of invasive neophytes' load.

The most frequent taxons were *Conyza canadensis*, *Erigeron annuus*, *Helianthus tuberosus*, *Impatiens glandulifera*, *I. parviflora*, *Reynoutria sp.*, *Robinia pseudacacia*, *Solidago canadensis* a *S. gigantea*. The highest number of occupied segments was recorded for *Impatiens glandulifera* and *I. parviflora* (approximately 43 %), the highest number of specimen was recorded for *Helianthus tuberosus* (more than 2000 specimen per segment). Some of invasive neophytes were registered only in the riverbank vegetation of one or some few water courses (*Heracleum mantegazzianum*, *Lupinus polyphyllus* and *Rudbeckia laciniata*), but the occurrence was significant there. On the other hand the occurrence of *Lycium barbarum* and *Quercus rubra* was so low and this species could be considered to be non-significant as for its occurrence in the riverbank vegetation.