

Conclusions

The set of presented studies on the population ecology of *Heracleum mantegazzianum* show that there is no simple characteristics responsible for this species' invasion success – rather this success is determined by its behaviour in various stages of the life-cycle that enabled *H. mantegazzianum* to make use of the advantage of having been introduced into a milder climate and largely human-made, or at least heavily disturbed landscape. The invasion is supported by reproductive characteristics such as possible selfing, production of thousands of easily germinable seeds and high regeneration ability. Furthermore, the species is highly plastic as far as the timing of flowering is concerned; under less favourable conditions plants are able to “wait” for reproduction up to 12 years, but under suitable conditions they are able to flower in the second year. *Heracleum mantegazzianum* has superior colonization ability with relatively high role of randomly dispersed seeds at the landscape scale, although the establishment rate of seedlings is quite low.

In spite of the fact that no transition or stage in the life cycle was found to be a weak link in the life cycle of the species studied, there are some hints that should be mentioned in context of planning control methods, i.e. a low survival rate of seedlings on undisturbed ground, high mortality during the first year and strictly monocarpic life history of *H. mantegazzianum*. Control and management efforts can be therefore targeted so as to prevent the dispersal of produced seed, which shall lead to the gradual retreat from invaded sites. Cutting or other mechanical control methods applied on vegetative plants can only prolong time needed for flowering and thus the time needed for control.