A REVIEW OF DETAILED STUDIES OF HERACLEUM MANTEGAZZIANUM: WHAT LESSONS CAN BE LEARNED IN DEVELOPING STRATEGIES FOR OTHER ALIEN INVASIVE SPECIES?

_Heracleum mantegazzianum_ has been the focus of a 40 month in depth study by eight research groups across Europe, one of the most detailed studies undertaken in Europe of a non-agricultural weed. Lessons learned from this research are linked to investigations of other alien invasive species and their management. The value of understanding the ecology of the species in its native range is considered and an emphasis is placed on the importance exploring the genetics and taxonomy of the taxon found, in the case of this species, to be more complicated than first imagined. The initial dispersal of _H. mantegazzianum_ across Europe relied on different mechanisms from those of latter stages in the invasion at different spatial scales, i.e. invasion into a country or region of similar size, is typically by different modes from the spread of the species from one part of a country to another. _H. mantegazzianum_ is reliant on its seeds for propagation and spread, highlighting the importance of the longevity of the seed bank in deciding on effective management, contrasting with other species that are reliant on vegetative reproduction. To date, the search for a suitable biological control agent has been unsuccessful, a quest thwarted by closely related indigenous species (e.g. _H. sphondylium_) and crop species (e.g. _Pastinaca sativa_), and the absence of any identifiable weak point in the plant’s life cycle. These findings are discussed in relation to other alien invasive species.

keywords: Giant Hogweed, invasive weeds, control strategies, biological control, dispersal