

Biodiversity on pastures and abandoned farm land – the potential of using horses in ecological restoration



Horses on summer pasture. Photo Therese Löfroth.



The red listed butterfly *Lycaena helle* (Violett guldvinge). Photo Magnus Magnusson.

A large part of the biodiversity of plants and pollinators in temperate and boreal zones are associated with open areas created by traditional human land use such as hay-making or cattle grazing. This biodiversity is now declining as a result of land abandonment and intensified farming. In the northern parts of Sweden extensive cattle grazing was commonly applied until the middle of the 20th century. In the last few decades, a decline in the numbers of farms and an increase in the number of horses for recreational use means that the number of horses now exceed the number of dairy cows in Sweden. The fact that many horses are kept under more extensive forms e.g. allowed to graze on abandoned farm land, means that there might also be great potential for horses to act as ecological restoration agents as for example shown by Garrido et al (2019). They showed that introduction of all year grazing by Gotland ponies led to increased biodiversity of both plants and pollinators. However, the question still remains if horses on summer pasture will have the same positive effect on biodiversity and how the grazing regime might be adapted to further increase biodiversity.

The aim with this project is to investigate if and/or under which circumstances horse grazing can create habitat for a multitude and magnitude of plants and pollinators. There will be opportunities to work with butterflies, bumblebees, moths or vegetation. The thesis will include field work with species monitoring in grazed and ungrazed areas in Västerbotten and adjacent counties. Depending on the extent of the work there are possibilities for both 30 and 60 credit thesis.

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