

Welander, Jonas (2000): Spatial and temporal Dynamics of a Disturbance Regime; Acta Universitatis Agriculturae Sueciae, Silvestria 127.

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Abstract

Through escapes from enclosures during the 1970's, and probably up to present time, wild boar is today once more a part of the Swedish fauna. As wild boar increase in abundance and distribution so do the different disturbances, e.g. roots, wallows, rubbing trees, and nests, that they create in various habitats. I investigate the spatial and temporal dynamics of rooting in the Tullgarn Nature Reserve, Sweden. I also report some ecological consequences on plant species diversity as a result of disturbances by wild boar.

Significant differences were found in soil surface being rooted by boar between year, season, habitat type, and soil category. The amount of surface being rooted varied between 2.4 and 14.2 ha on 226 ha censured. The rooted surface in relation to available ground to root was higher in deciduous than in coniferous forests and grassland, and much higher in damp than in dry soil. A geostatistical analysis of rooting shows that wild boar prefer to root in specific areas within habitats and animal return to a large extent to previously rooted areas.

Disturbed patches as well as patches in the undisturbed matrix were inventoried for vascular plants in reeds, pastures, alder shores, alder marshes, old and young pine forests, and calcareous bedrocks. With 256 vascular plants identified in patches where wild boar had rooted or build nests and 194 identified in controls, species diversity was approximately 30% higher in the disturbed patches. The mean number of species was significantly higher in reeds, alder marsh, older pine forest, and calcareous bedrock than in their respective controls.

By taking advantage of wild boar frequently visiting rubbing trees and wallows, the capacity for wild boar to disperse vascular plant and bryophyte species was analysed. A total of 103 vascular plant and 54 bryophyte species were found, of

which 39 and 10, respectively, were exclusively found in soil samples collected near rubbing trees and in wallows.

Based on my results, wild boar enhances species diversity both by the creation of disturbed patches and by dispersal of plant propagules within and between habitats.

[biodiversity](#)

[forest ecology](#)

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