

SFE² GfÖ EEF

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"Ecology and Evolution: New perspectives and societal challenges"

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Ecology & Evolution: New perspectives
and societal challenges

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Impacts of alien invasive plant species on biodiversity in Central Europe. Impact of *Prunus serotina* in pine stands on the local entomofauna in the Berlin urban forests (Grunewald area).

Oral

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Abstract

Prunus serotina is known to have significant impacts on native plant species. Numerous authors point out that *P. serotina* has a negative impact on European native flora. Dyderski M, Jagodzinski A. (2021) studied the impact of several non-native tree species on biodiversity, species composition and shrub biomass in forests. The scientists found that *P. serotina*, among other invasive species, had the greatest impact, displacing native species and dominating the understorey. Also, Baranowska and Korzeniewicz (2020) have shown that *P. serotina* can even outcompete beech (*Fagus sylvatica*) in the competition for light.

However, so far, there are no studies on whether *Prunus serotina* affects the local entomofauna under Central European conditions.

Starting in 2021, an experiment is being conducted in the Berlin urban forests.

The aim of this study is to understand the impact of *Prunus serotina* on local insect populations. In addition, we want to determine the abundance and species composition of ground beetles (Coleoptera; Carabidae) occurring in pine stands with or without *Prunus serotina* and investigate the structure of the beetle communities.

We aim to check whether *P. serotina* has an influence on the species diversity and total biomass of the entomofauna in pine stands.

The study is conducted on a total of ten experimental plots in selected pine stands (approx. 60-80 years old) in the Grunewald- Berliner Forsten forest district. In each plot, 10 traps are randomly distributed over about 200 m².

The first partial results of the research will be discussed at the SFE² GfÖ EEF conference in November 2022.