

Norway spruce in Finland is susceptible to European spruce bark beetle damage especially near clear-cuts: Study

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Norway spruce damaged by wind. Credit: Alexander Pulgarin Diaz

In Finland, the European spruce bark beetle prefers mature Norway spruce forests close to recent clear-cut sites, a new study from the

University of Eastern Finland finds.

Conducted in an effort to support proper forest management in Finland, [the study](#), published in *Silva Fennica*, examined the attributes of Norway spruce forests damaged by the beetle, as well as the role of some landscape attributes in the damage.

The scientists analyzed data from Metsäkeskus with 4,691 damage cases from 2012 to 2020, and found that the beetle preferred mature forests, forests in herb-rich heath forest site types, and forests in semi-coarse or coarse heath forest soils.

In addition, the scientists found that Norway spruce forests which have a high age and high mean diameter at breast height, and which are located close to recent clear-cut sites—no matter the species—are particularly susceptible.

"If your Norway spruce forest fits the description and is located in Southern Finland, it is wise to check it for spruce bark beetle damage more often than before," says Doctoral Researcher Alexander Pulgarin Diaz of the University of Eastern Finland.

The European spruce bark beetle (*Ips typographus*) is the most destructive insect on Norway spruce (*Picea abies*). Recent years have seen increasing European spruce bark beetle damage in Central Europe and in the Nordic countries, probably due to [climate change](#) and especially higher temperatures and longer droughts.

Favorable conditions are now frequent in Northern Europe as well, and concerns about increasing beetle damage and its effects on forest-related income show the need to adapt forest management practices and improve [forest](#) resilience.

More information: J. A Pulgarin Diaz et al, Relationship between stand and landscape attributes and *Ips typographus* salvage loggings in Finland, *Silva Fennica* (2024). [DOI: 10.14214/sf.23069](https://doi.org/10.14214/sf.23069)

Provided by University of Eastern Finland

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