

# Production forests cannot compare with nature reserves



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## Introduction

Sweden has 23 million hectares of productive forest land in which more than 80% consist of Norwegian spruce and Scot's pine. During the 1950s, selectively logged uneven aged forests were replaced by plantations and young forests. About 200,000 hectares are clear-cut annually. This made the previous diverse forests decline and change with a negative effect on biodiversity. Deadwood is an important factor in forests, in Sweden more than 700 of the 2000 red-listed forest species are dependent on deadwood and the current forestry practices has dramatically decreased the amount of deadwood.

## Aims

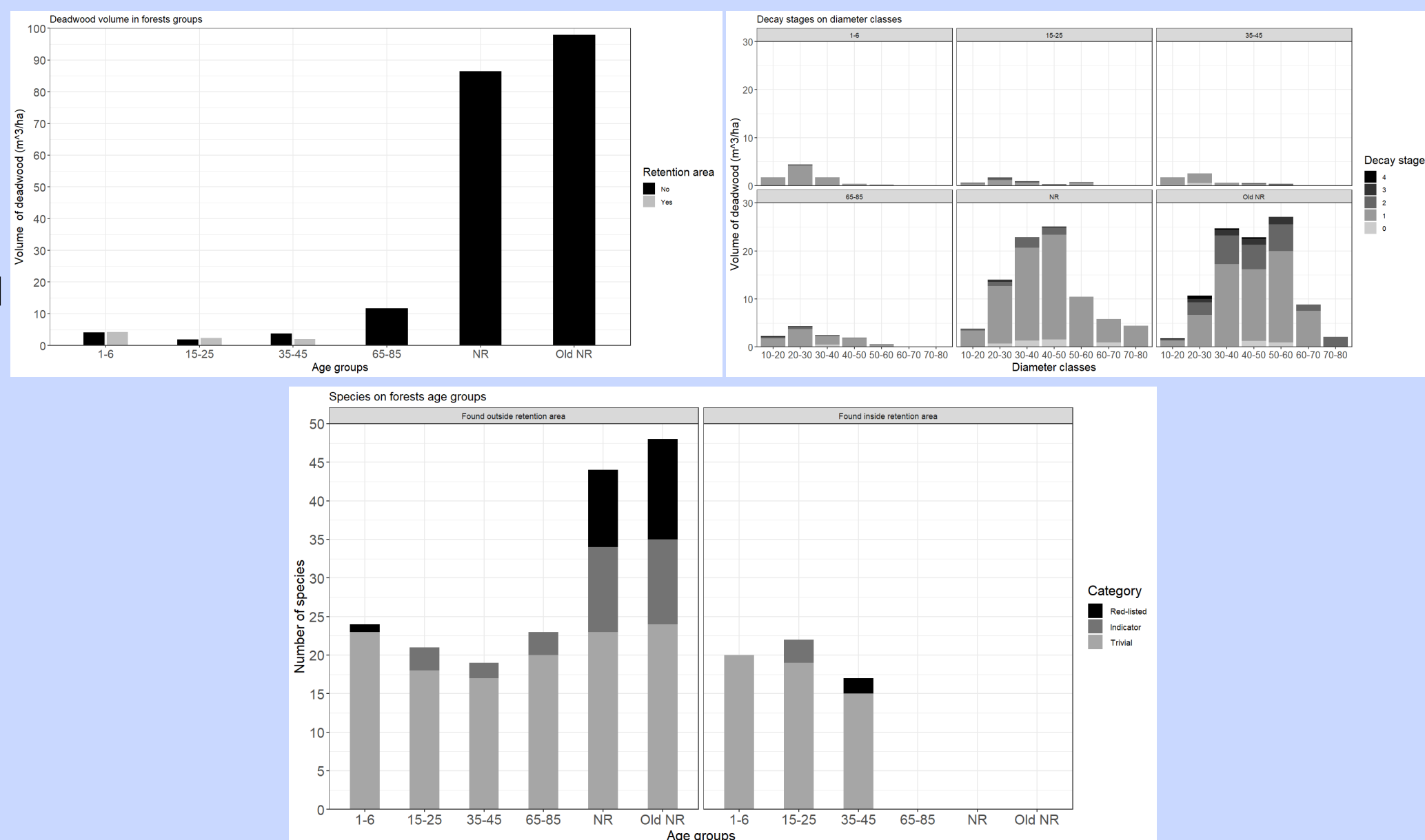
- Investigate the difference of quality and quantity of deadwood in production forests of different ages and nature reserves.
- Investigate the difference of trivial, indicator and red-listed species of bryophytes, lichens and wood fungi on deadwood.
- Investigate if retention areas that forest companies has done in production forests makes a difference regarding deadwood and species.

## Methods

In total 35 forest stands were visited. 24 of those were production forest stands of four different ages: 1-6, 15-25, 35-45, 65-85 years old. 6 were newer nature reserves and 5 were older nature reserves. 8 sample plots + 4 in retention areas were laid out, standing and lying deadwood were studied. Deadwood diameter, length and decay stage was noted. Trivial, indicator, and red-listed species of bryophytes, lichens and wood fungi were observed on deadwood.

## Results

Reserves had higher volume of deadwood than production forests as well as higher variation of diameter classes and decay stage. Reserves had more observations of indicator and red-listed species. Retention areas did not differ from the rest of the production forest. Analyses showed that indicator and red-listed species richness was higher in reserves. Trivial species abundance was higher in reserves while richness did not differ.



## Conclusions

- Production forests have lower volume and variation of deadwood
- Most of the indicator species and red-listed species could be found in nature reserves
- There is a need to increase volume and variation of deadwood in Swedish production forests to meet biodiversity goals