

# Veteranisation

*using tools instead of time*



Vikki Bengtsson  
*Pro Natura*

# Introduction

- What is veteranisation?
- Why and how do we do it?
- Where are we doing it?
- Does it work?
- Conclusions
- The future



# What is veteranisation?

- Nature conservation tool
- Damaging live young trees
- NEVER on VETERAN trees!



# What is veteranisation?

- Nothing new!
  - England, USA, Italy, Australia
- Habitat production in young trees
- Mimicking nature
- Bears been doing it for centuries!





# Why do we need to veteranise?

- High mortality rates
- Small, isolated sites
- Age gaps
- Species loss
- Tree diseases
- Time is not our side!





# Rare & threatened species

- 18% of European saproxylic beetles are threatened (IUCN)
- Most threatened species community in Europe



*Hermit beetle Osmoderma eremita*



# Where do we do it?



# How do we do it?

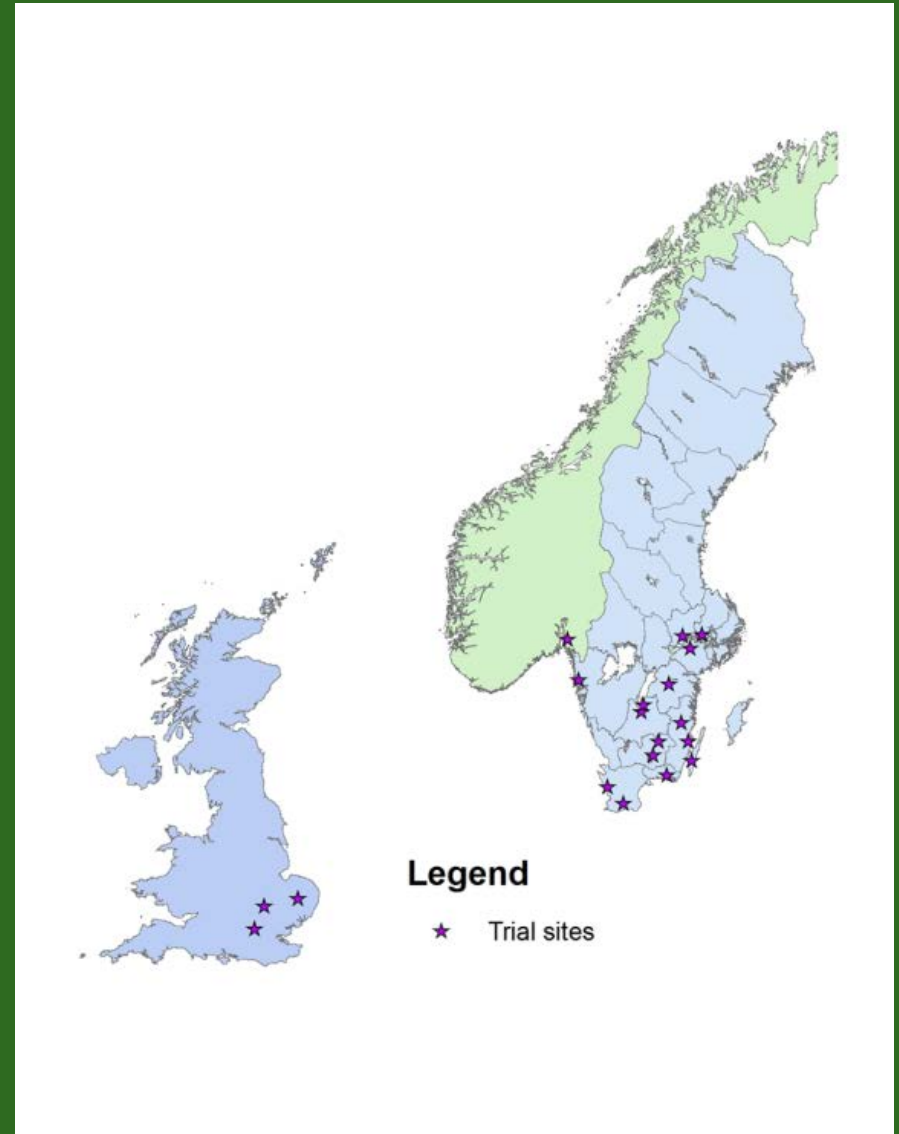
- Fantasy/imagination
- Using nature as a guide
- 20 + techniques





# International trial 2012 - 2037

- 20 sites in total
- 980 oaks
- 700 veteranised
- 25-60cms in diameter
- All visibly healthy
- All trees tagged, photographed and coordinates taken









# EU LIFE projects







Does it work?



# Results

- 3 trees died out of 980
- 63% nest boxes used for nesting
- 45% of woodpecker holes used by birds
  - 1/3 for nesting
- 5% used by bats
- Sap runs,
- Woodpecker activity





# Beetles

- Woodpecker holes attracted 5 RDB species
- Nest box 9 RDB species, including some real heavyweights.
- Control 1 RDB species!





# Flies, bees and wasps

- Yellow-ringed comb-horn crane fly
- Hornets
- Lots of species associated with sap runs
- Many species associated with wet decaying wood & rot holes

# Finally fungi!

- Research group from Mycology Dept, SLU, Sweden and NINA, Norway
  - Anders Dahlberg, Deanne Redr, Audrius Menkis, Björn Nordén







# Sawdust samples



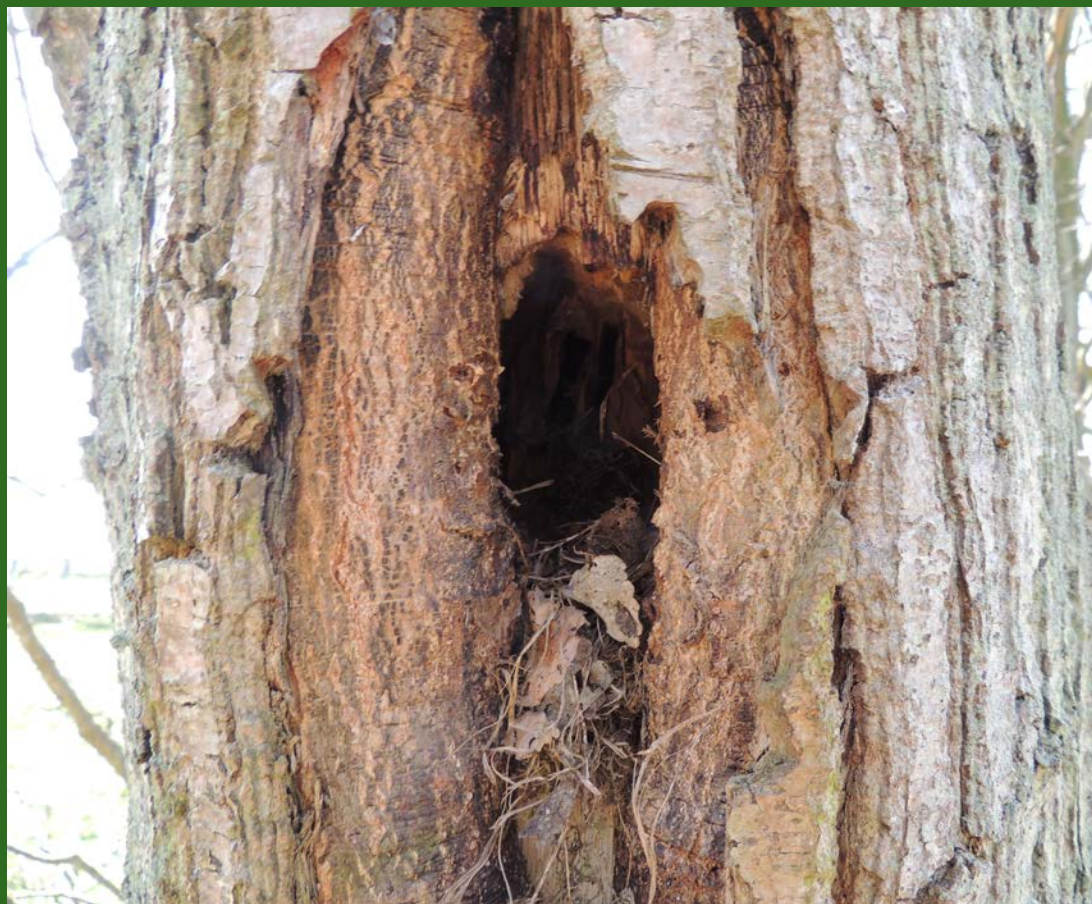
# Fungi results from 2018

- 700 species (OTU) found in total!!!!
- Species richness similar for all trees and sites
- Significant difference in species composition



# Fungi results from 2018

- Only 25% could be identified to species
- Only 10% known from Sweden or Norway before!
  - *Moristroma quercinum*
  - *Querciphoma carteri*



# Fungi results from 2018

- Chicken of the woods
  - 5 trees (all types)
- Beefsteak
  - 1 tree (control)



# Fungi results

- High species richness a real surprise!
- Endophytes common in oak?
- Maybe the decay fungi have an endophytic phase?
- Decay limited



# The future – the next 25 years?

- More analysis
- More sampling
- Decay succession?
- Mortality rates?
- Succession of species?
  - Fungi
  - Beetles
  - Bats/birds
  - Lichens/mosses







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# Conclusions

- On the right track?
- More research needed
- More to learn!
- Inoculation with damage?
- **Will never be a replacement for our ancient trees!**



NEVER a  
replacement,  
but a complement!



Patience is a virtue!



Thank you!



Huge thank you to Anders Dahlberg, Audrius Menkis, Deanne Redr, Björn Nordén.  
SLU, Sweden & NINA, Norway