Introduced tree species in European forests: challenges and opportunities

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1900

Eucalyptus spp. (1866)

Acacia spp. (1864)

Pinus controta (1853)

Picea sitchensis (1831)

Pseudotsuga menziesii (1827)

1800

Ailanthus altissima (1740)

Pinus strobus (1705)

1700

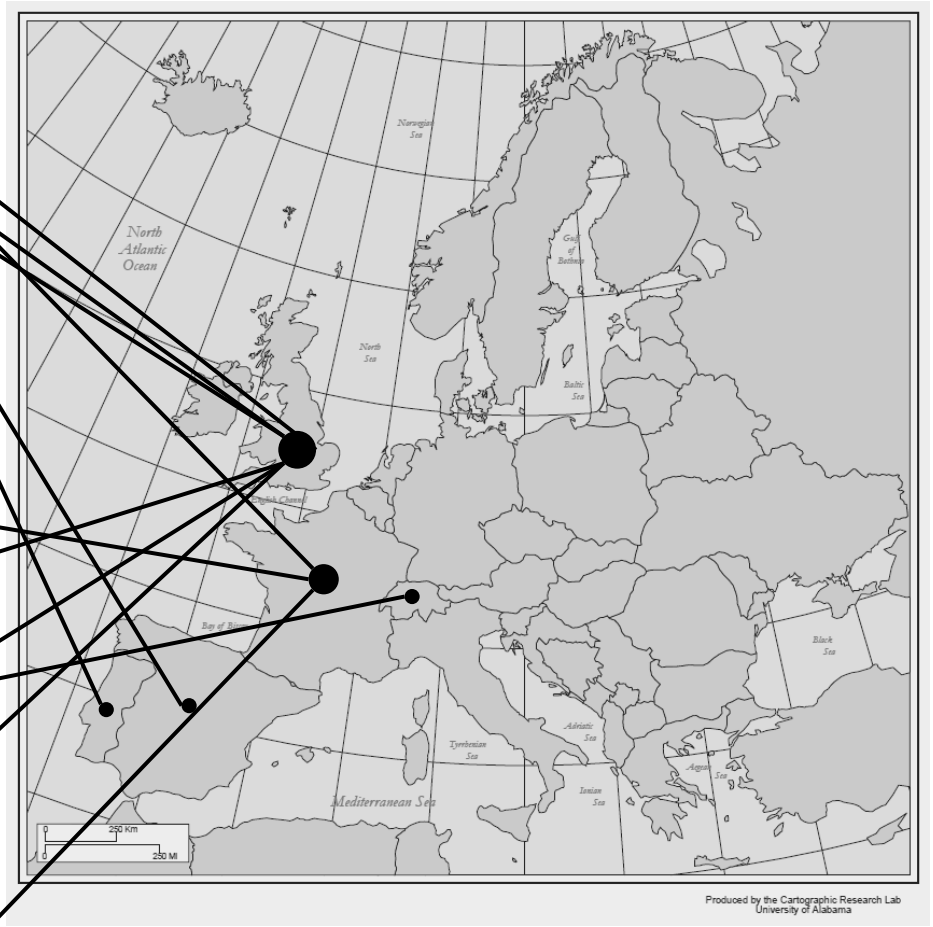
Quercus rubra (1691)

Acer negundo (1688)

Prunus serotina (1629)

Robinia pseudoaccacia (1601)

1600



Introduced tree species in European forests: challenges and opportunities

- Project *In-Tree* (www.in-tree.org)
  - Book publication ⟵
  - Expert exchanges
  - Risk platform
  - Media tools
  - Policy briefs & support

With support from
Federal Ministry of Food and Agriculture
by decision of the German Bundestag
EFICENT

Introduced tree species in European forests: challenges and opportunities

AIMS:

- To synthesise current knowledge on introduced tree species across the European continent
- To comprehensively present key challenges and opportunities
- To provide a neutral knowledge and evidence-based platform for future activities

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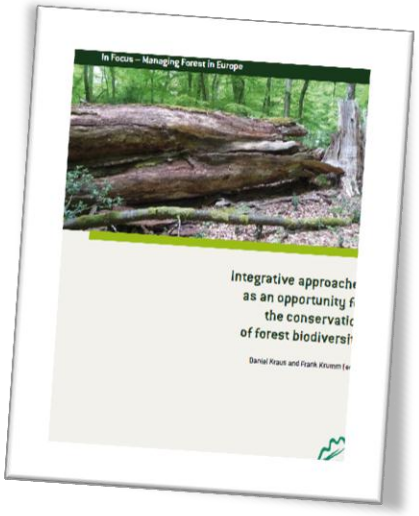
Added value:

- Comprehensive and concise publication
- Directed at a wide range of audience
- Open access



Content

1) Introduction
   - History of introduced tree species
   - Terminology and definitions

2) Management concepts and approaches
   - Risk assessment
   - Theoretical support aiding practical management
   - Practical insights into management

3) Key challenges

Social aspects | *Economic aspects* | *Natural disturbances*
Ecosystems services | *Pests and diseases* | *Changing climate*

4) Case studies

Robinia pseudoacacia | *Eucalyptus globulus* | *Prunus serotina* | *Ailanthus altissima*
Pseudotsuga menziesii | *Picea sitchensis* | *Acer negundo* | *Acacia dealbata* | *Pinus strobus*

5) Compilation of key messages

Authors

Current state:

- 70 authors (research & practice)
- 19 countries represented
- 40 institutions included

Selection:

- Academic record
- Practical experience
- Location
- Availability



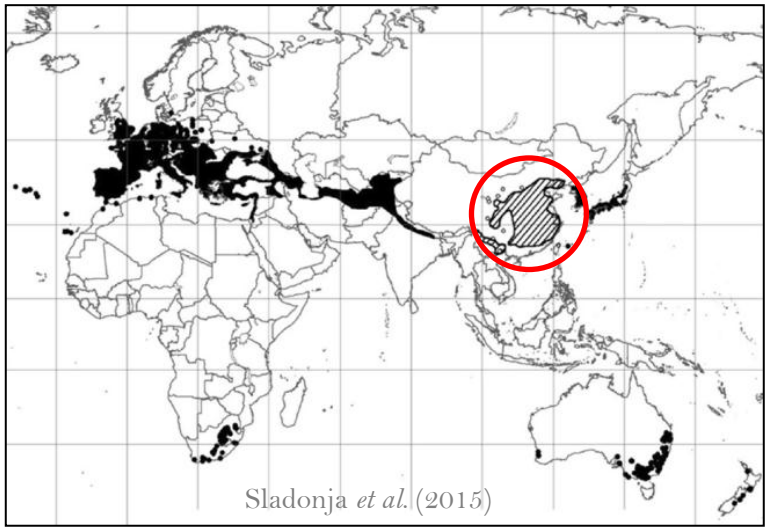

Scientific advisory board

- Annemarie Bastrup-Birk *(EEA)*
- Etienne Branquart *(Biodiversity Platform Wallonie, Belgium)*
- Jürgen Bauhus *(University of Freiburg, Germany)*
- Marco Conedera *(WSL, Switzerland)*
- Franz Essl *(University of Vienna, Austria)*
- Hans-Gerhard Michiels *(Forest Research Institute FVA, Germany)*
- Andreas Rigling *(WSL, Switzerland)*
- Jan Wunder *(WSL, Switzerland)*



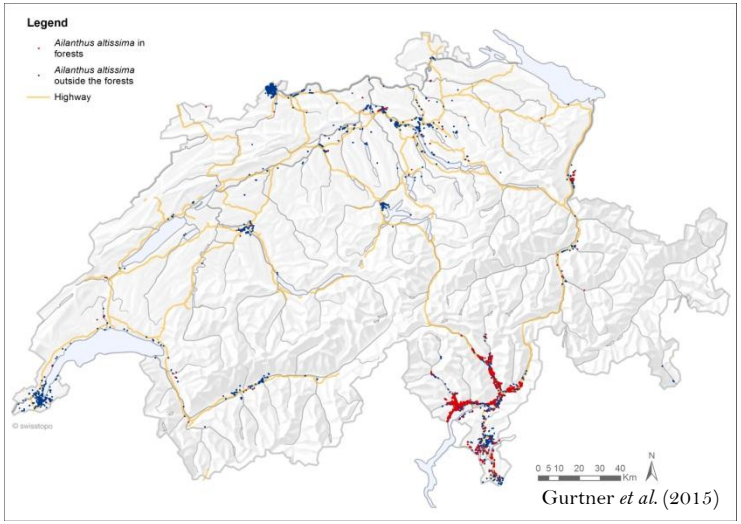

Tree of heaven
Ailanthus altissima (Mill.) Swingle

- 1740: introduced to France
- 100 worst invaders in Europe!
- Fast spread throughout Europe
- Pioneer species with the potential to grow in shade

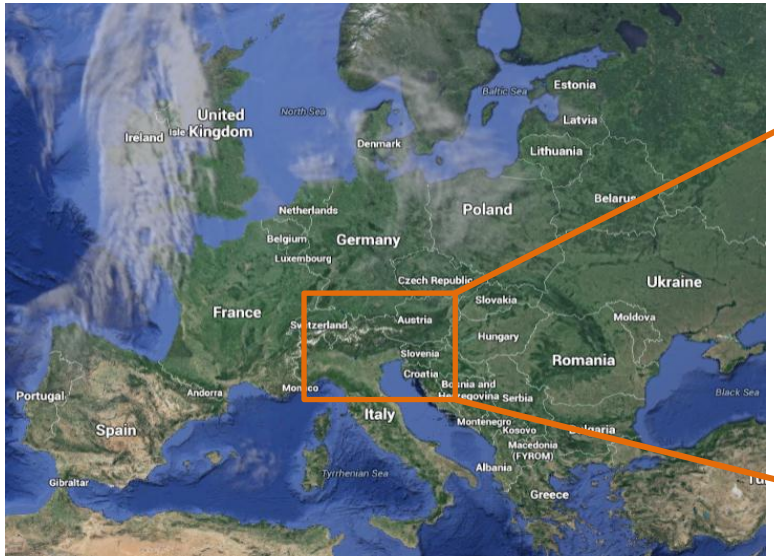


Tree of heaven
Ailanthus altissima (Mill.) Swingle

- Case study (Switzerland):
  - Past: south of the Alps
  - Currently: spreads north of Alps



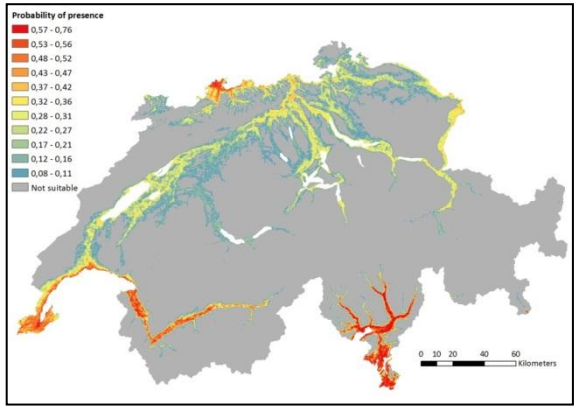
Gurtner *et al.* (2015)



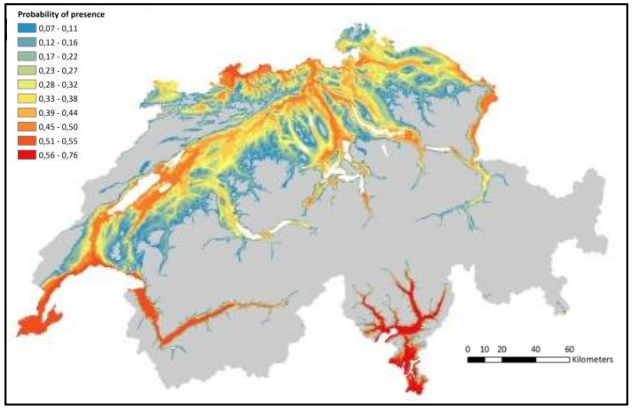
Tree of heaven
Ailanthus altissima (Mill.) Swingle

Probability of presence

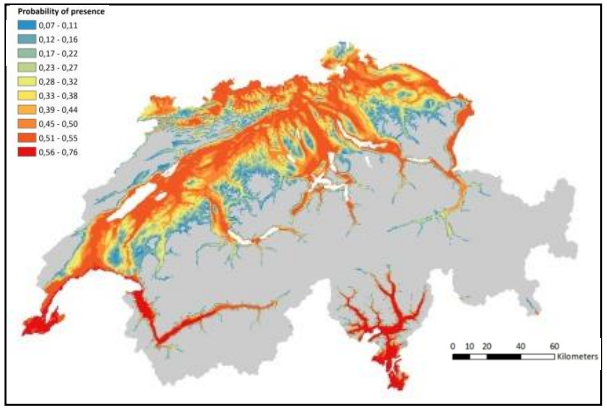
Current spread



Projections: 2045 - 2074



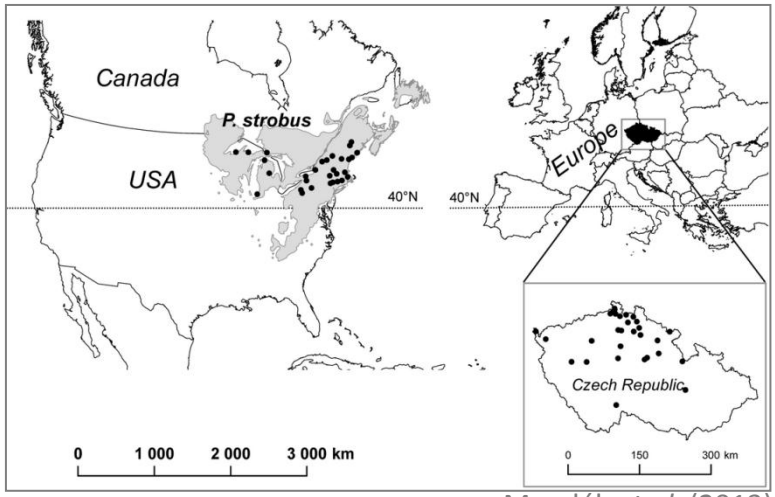
Projections: 2070 - 2099



Gurtner *et al.* (2015)

Eastern white pine
Pinus strobus L.

- 1705: introduced to England
- Fast growing conifer

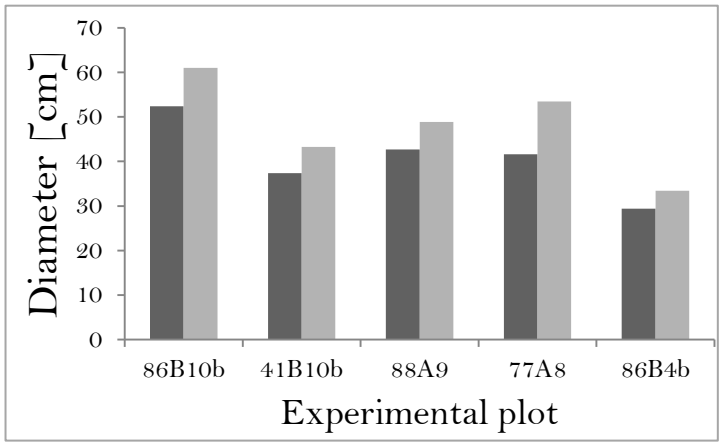


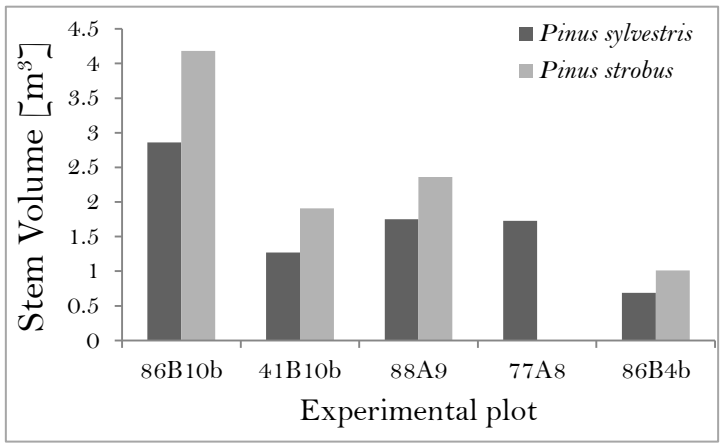
Mandák *et al.* (2013)

Vaněk (2013)

Eastern white pine
Pinus strobus L.

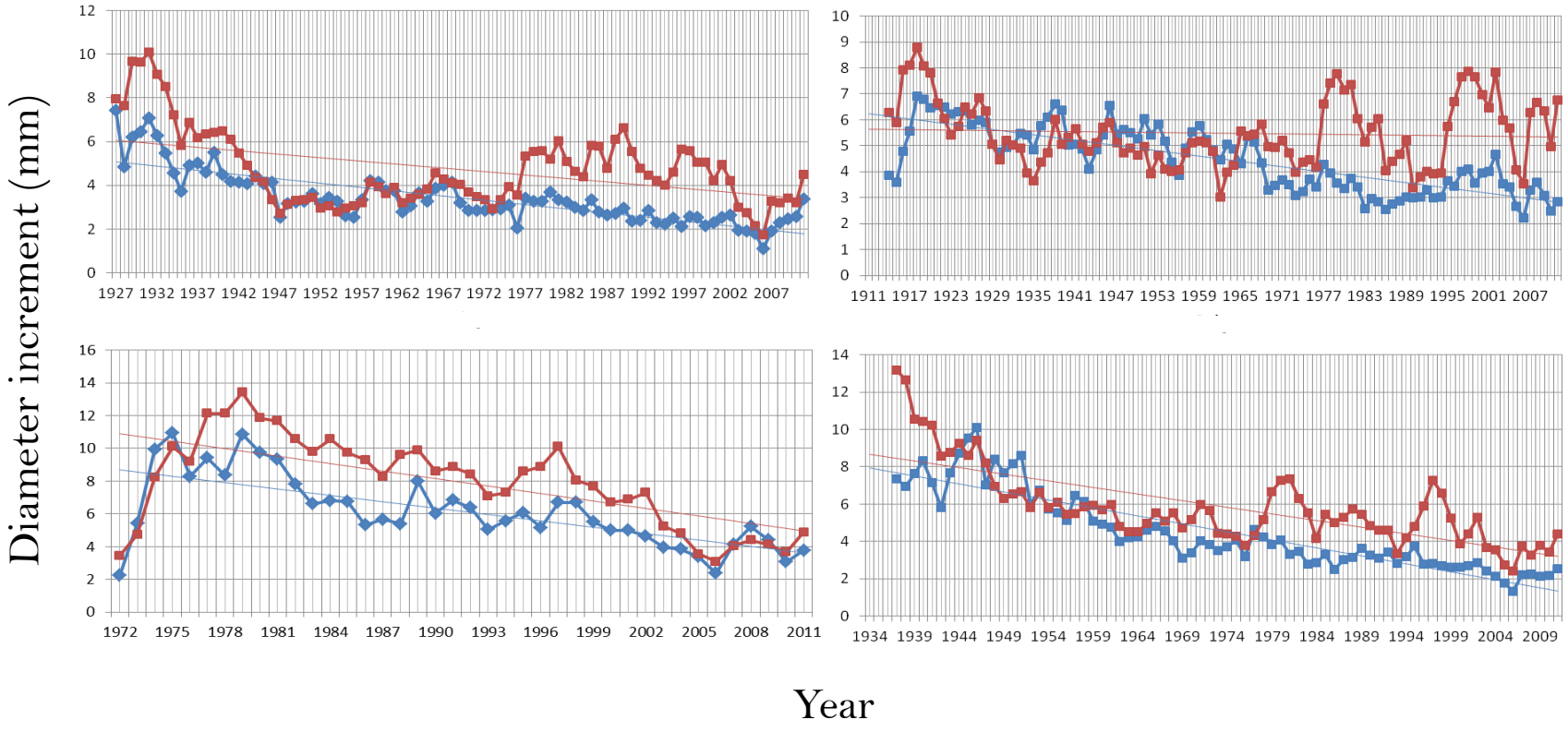
- Case study (Czech Republic)
  - Higher timber yields than native *Pinus sylvestris*
  - Vigorous natural regeneration in sandstone areas





Vaněk (2013)

Eastern white pine
Pinus strobus L.



Vaněk (2013)

Conclusions

- Reporting on the ‘current status’
- Presenting:
  - Scientific evidence
  - Case studies
  - Key synthesis => lessons learnt
- Open access

positive

negative

References

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