



TREE DISEASES AND PESTS HARMING ECOSYSTEM SERVICES IN URBAN AREAS

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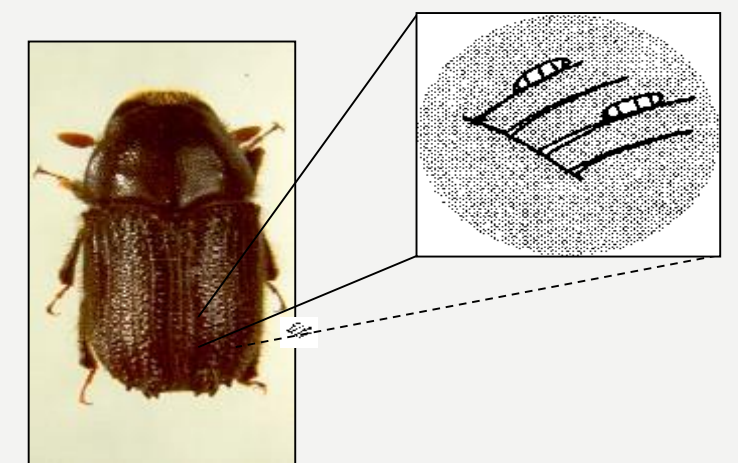
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Research activity



- Plant pathology and Entomology
- Diseases and insect pests of forest, urban and peri-urban trees
- Pathogen-insect interactions





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Diseases and insect attacks in the Mediterranean area

Climate change

- Native species outbreaks
- Alien species establishment





Native insect pests



Pine processionary moth

Native plant pathogens

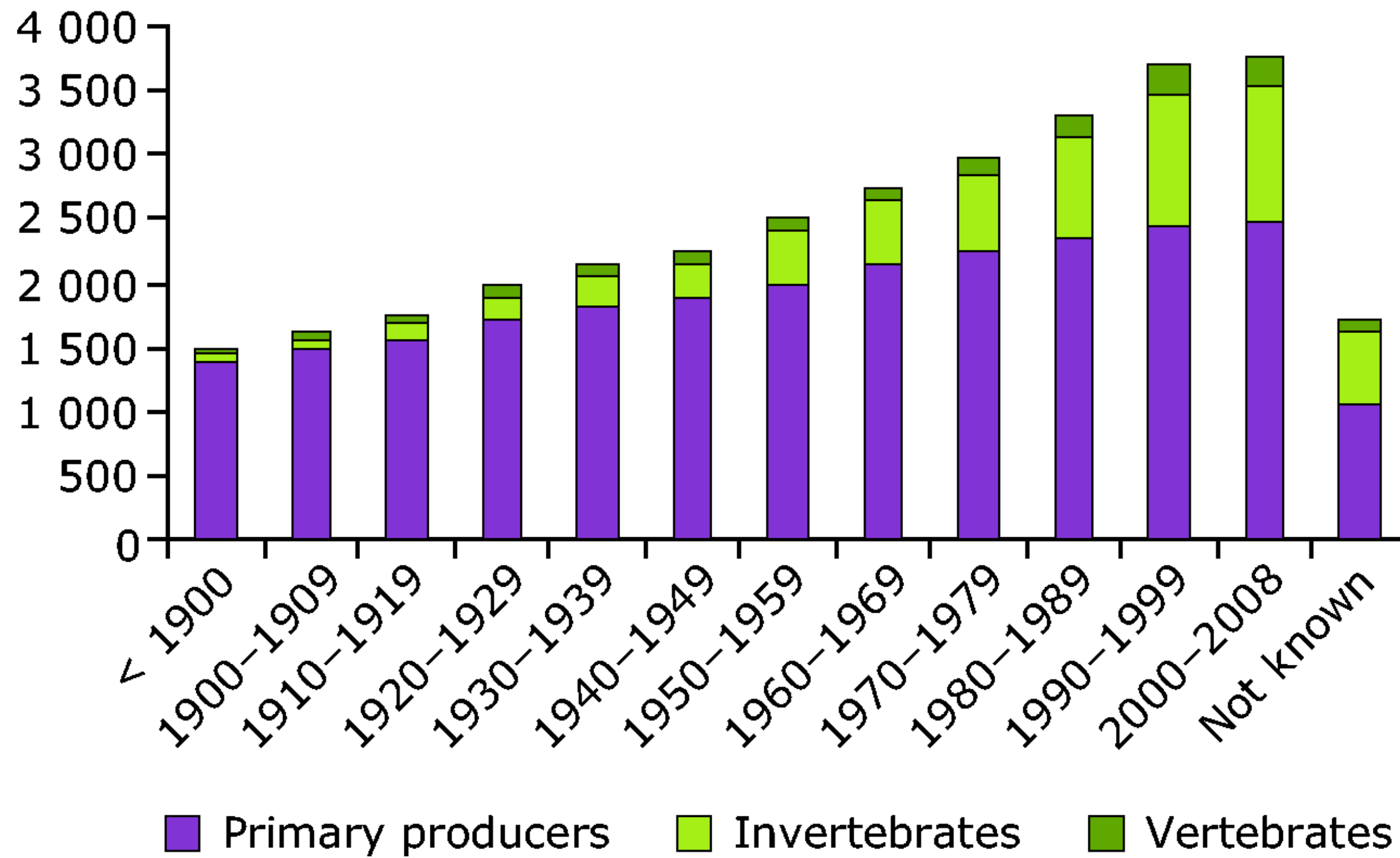
- *Botryosphaeria* cankers



Botryosphaeria dothidea

Cumulative number of alien species established in terrestrial environment

Number of species



Alien organisms





Alien insect pests

- Red palm weevil

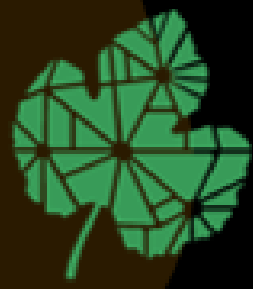
Rhynchophorus ferrugineus



- Pine bast scale

Matsucoccus feytaudi





Alien plant pathogens

- Charcoal canker
- Sudden oak death

Biscogniauxia mediterranea



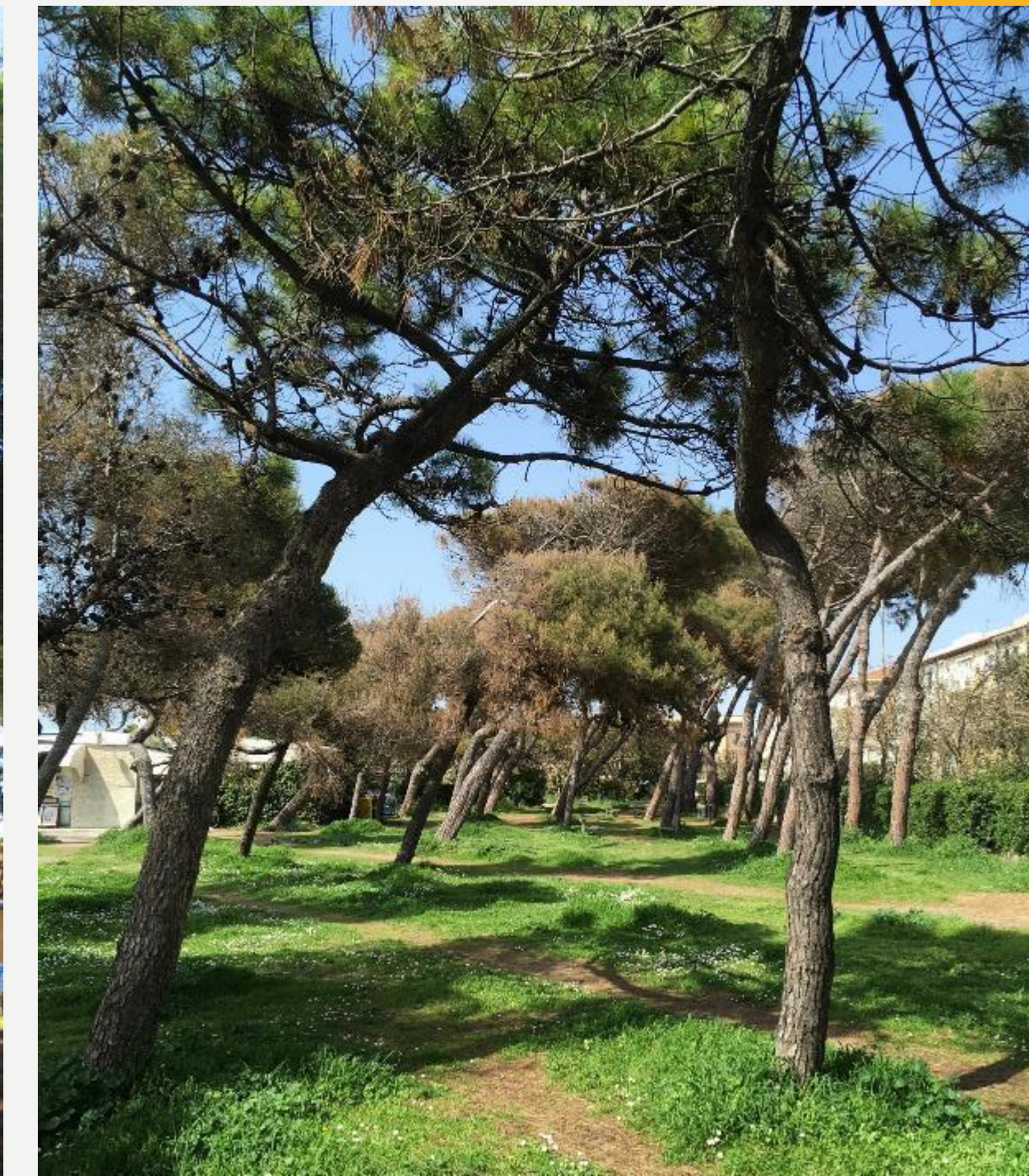
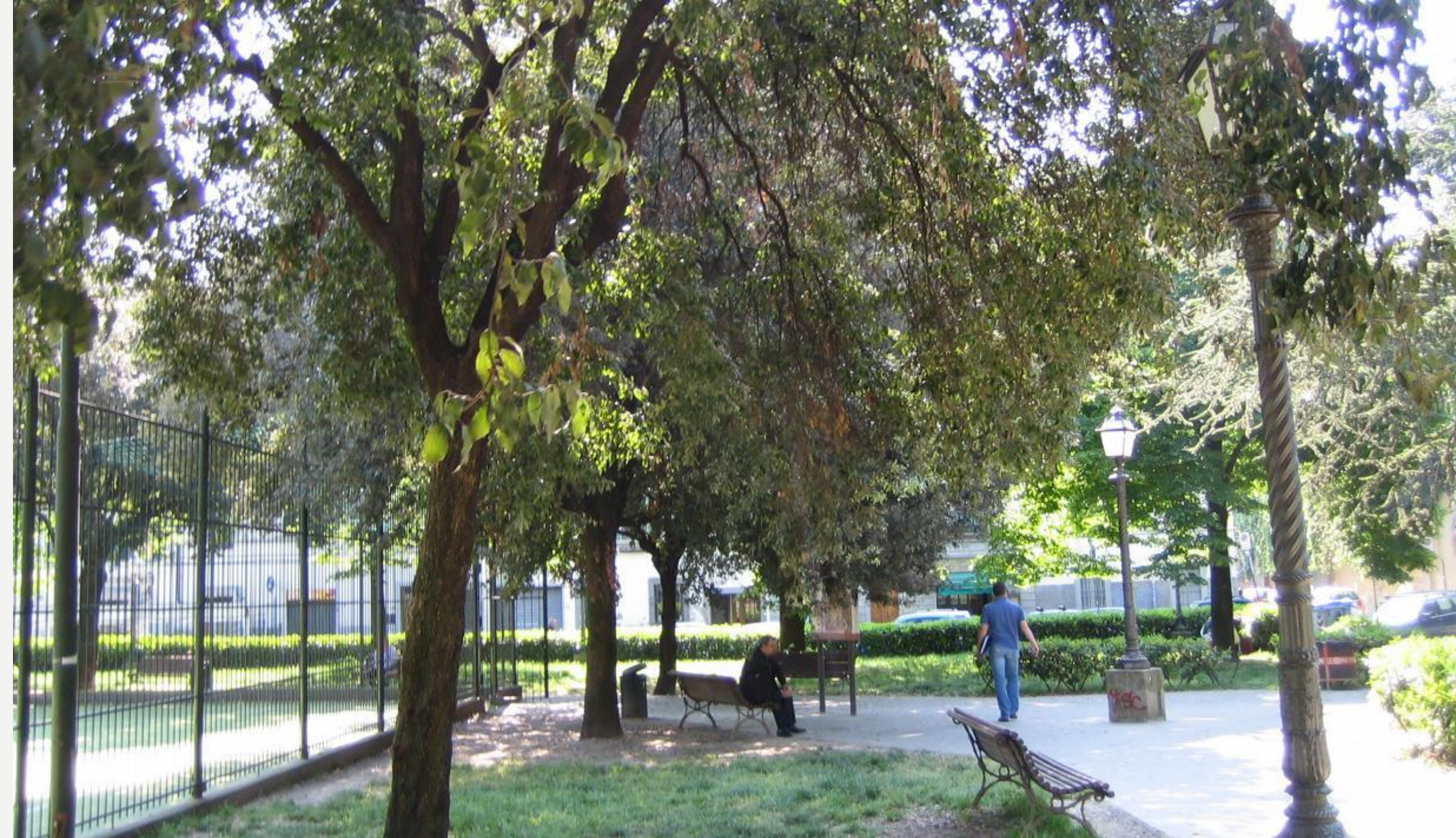
Phytophthora ramorum





Conclusions

- Trees tolerant/resistant to abiotic stress, pathogens and pests
- Improvement of management practices
- Implementation of international phytosanitary measures





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