



The longhorn beetle(*Cerambyx cerdo* L.), vulnerable or pest?

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INTRODUCTION

- Is a saproxylic species associated with dead wood and old trees with bad physiological state^[2]
- Is a vulnerable species by Berne Convention, Council Directive 97/62/EC and IUCN Red List of Threatened Species
- Is considered secondary pest ^[4]
- Distribution: (Figure 1. and 2)

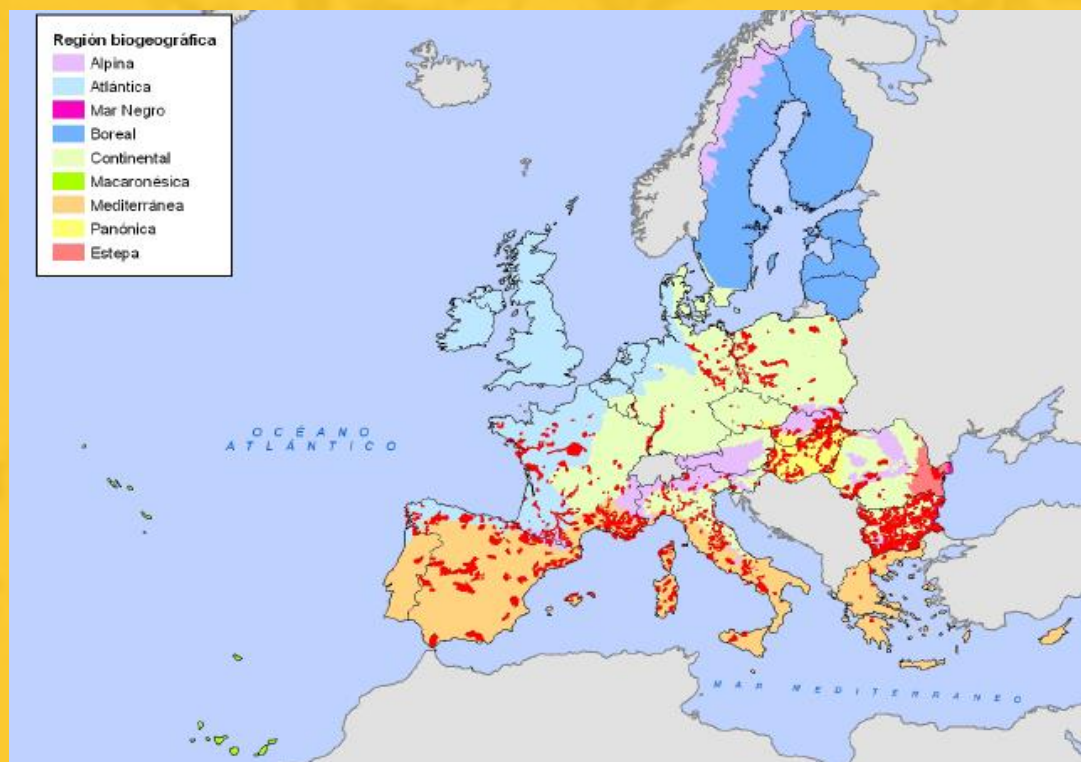


Figure 1. Distribution of *Cerambyx cerdo* in Europe. (Source: H EU Wildlife Sustainable Farming project, 2009)



Figure 2. Distribution of *Cerambyx cerdo* in Spain. (Source: EU Wildlife Sustainable Farming project, 2009)

BIOLOGICAL CYCLE

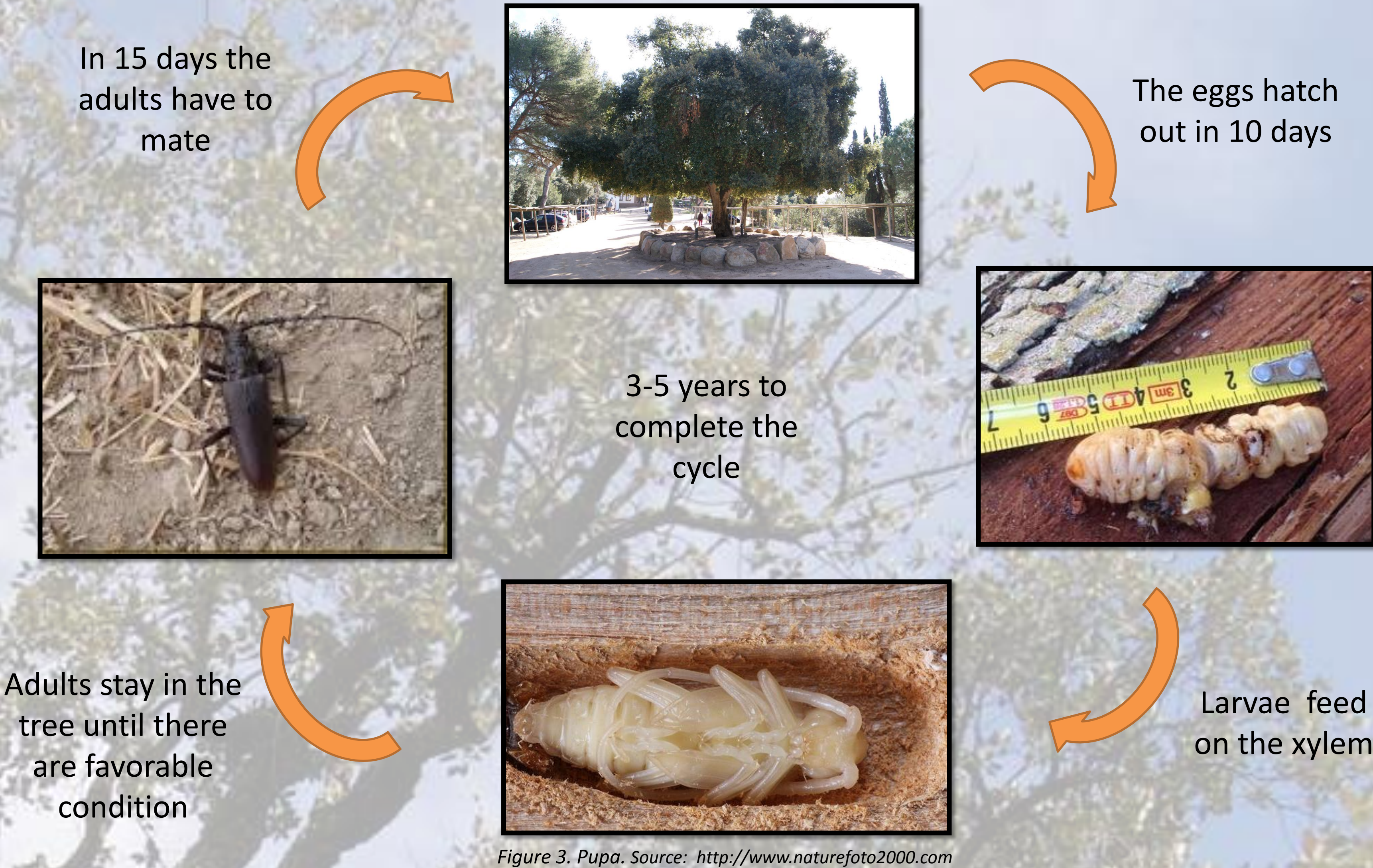


Figure 3. Pupa. Source: <http://www.naturefoto2000.com>

OBJECTIVE

Analyze the situation of *Cerambyx cerdo* in different countries of Europe because on determinate areas this species are decreasing (North Europe); while in other areas, like the Mediterranean Region, are in high population density. Here we studied this situation and try to give a control method in those areas of Southern Europe. In addition, a forestry technical card is created to distribute to sector experts.

RESISTANCE MECHANISMS BY THE TREE

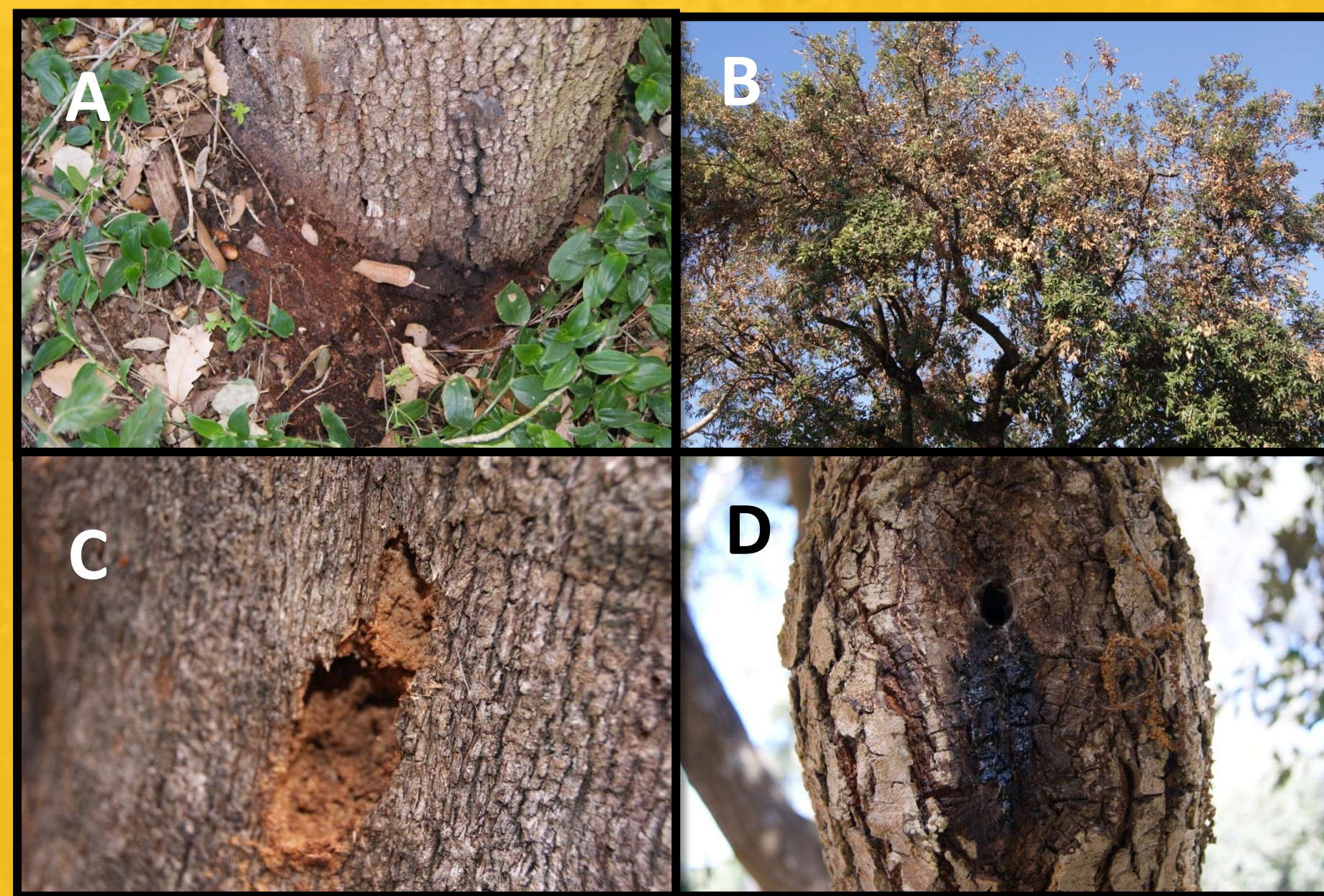
Primary disease/pest

- ↓ turgidity → wilting → ↓ defensive capacity → ↑ susceptibility to *C. cerdo*^[4]

Secondary disease/pest

- Compartmentalization of host tissues
 - Lignification of cell walls
 - Internal impervious tissue
- Necrophylactic periderm
- Callus formation in the cambial zone if the injury is quite deep^[4]

DAMAGE



- A. Sawdust accumulation in trunk base
- B. Dry branches and fallen leaves
- C. Reddish
- D. Elliptic exit holes (20mm)

LIKE A PEST?

South Europe

Control Strategies

LIKE VULNERABLE?

North Europe

Conservation Strategies

- Preventive strategies → Silviculture^[5]
- Active strategies
 - Physical measure
 - Chemical measure^[1]
 - Repellent and inhibitor insecticide of natural origin (Botanical and Bacterial)
 - Inorganic insecticide (minerals)
 - Chemical synthesis formulation
 - Biological control
 - Biorational measure → attractive and massive capture^[5]

- Keep or restore it like “favorable conservation state”
- Designed areas under Nature 2000
- Maximize microhabitat diversity by forestry strategies
- Keep natural or seminatural forest, increase dry wood and flock^[3]

- Change the protected state for *Cerambyx cerdo* → serious problem in Mallorca
- Determinate the specific volatile organic compounds that attract the insect

- In South Europe → Pest → Silviculture
- In North Europe → Vulnerable → measures to promote the development of the species
- Alteration of biotic and abiotic factor will affect *C. cerdo*