

Failure of the phytosanitary regulations to prevent *Rhynchophorus ferrugineus* dispersion in the European Mediterranean coast

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The red palm weevil: a rapid killer of the european ornamental palms, especially of the Phoenix canariensis



Palm killed in less than one year

2008 Annual Meeting of the Entomological Society of America

What is at stake?

For many municipality, high value urban landscape (historical patrimony, tourism attractiveness)



The famous
“Promenade des
anglais” in Nice



Palms are the main ornamental
species of the Mediterranean
coast urban landscape

Natural landscape of Canary Islands



Wild forests of *Phoenix canariensis*

2008 Annual Meeting of the Entomological Society of America

In Spain, Elche palm grove world heritage



The unique European date palm grove, heritage of Al Andalus

An important economic activity



Ornamental palms production

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The protection of this patrimony needed strict regulation to avoid the introduction of a seriously harmful organism as the red palm weevil

No specific regulation in Europe before the introduction of this well know mortal palms pest.

- importations of Phoenix sp. was forbidden only from Morocco and Algeria because of the bayoud disease
- 3 other quarantine organisms: cadang cadang viroid, Lethal yellowing phytoplasma and its vector *Myndus crudus*
- But nothing regarding the red palm weevil although the threat represented by this pest is similar or even superior

After its first discovery in 1994 in South Spain, no measure at the European level or national level excepted in Spain

Only, Spain forbad palms importation in 1996. But, allows again importation in 2000.



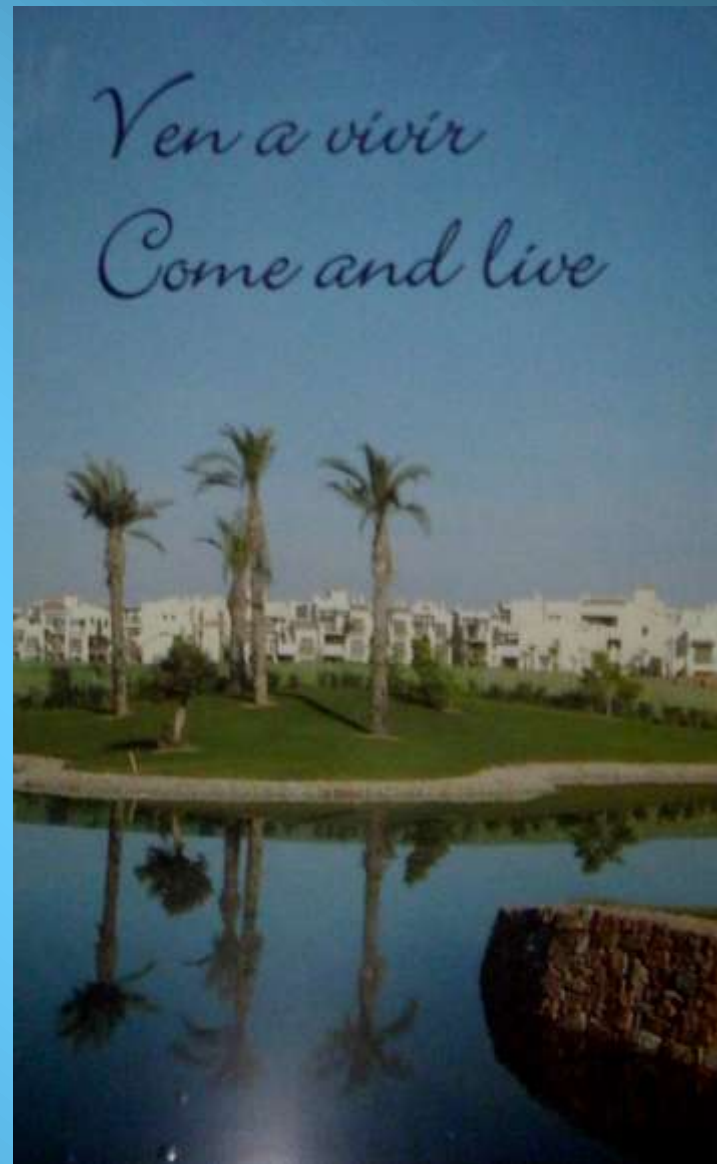
From 2000 to 2007, more than 300.000 huge date palms were imported and planted to respond to hundred of coastal municipalities demand for this exotic specie.



Importations were not prohibited to allow the development
a very lucrative market



- The defense of private commercial interest, linked to an uncontrolled explosive urban boom, has taken the place of the respect of elementary phytosanitary rules to preserve a high value public patrimony.



All the palms were imported and distributed along the European Mediterranean coast after official phytosanitary inspections

But it is generally impossible to detect the presence of the weevil in the imported palms. Eggs and larvae of the first cycle are undetectable.

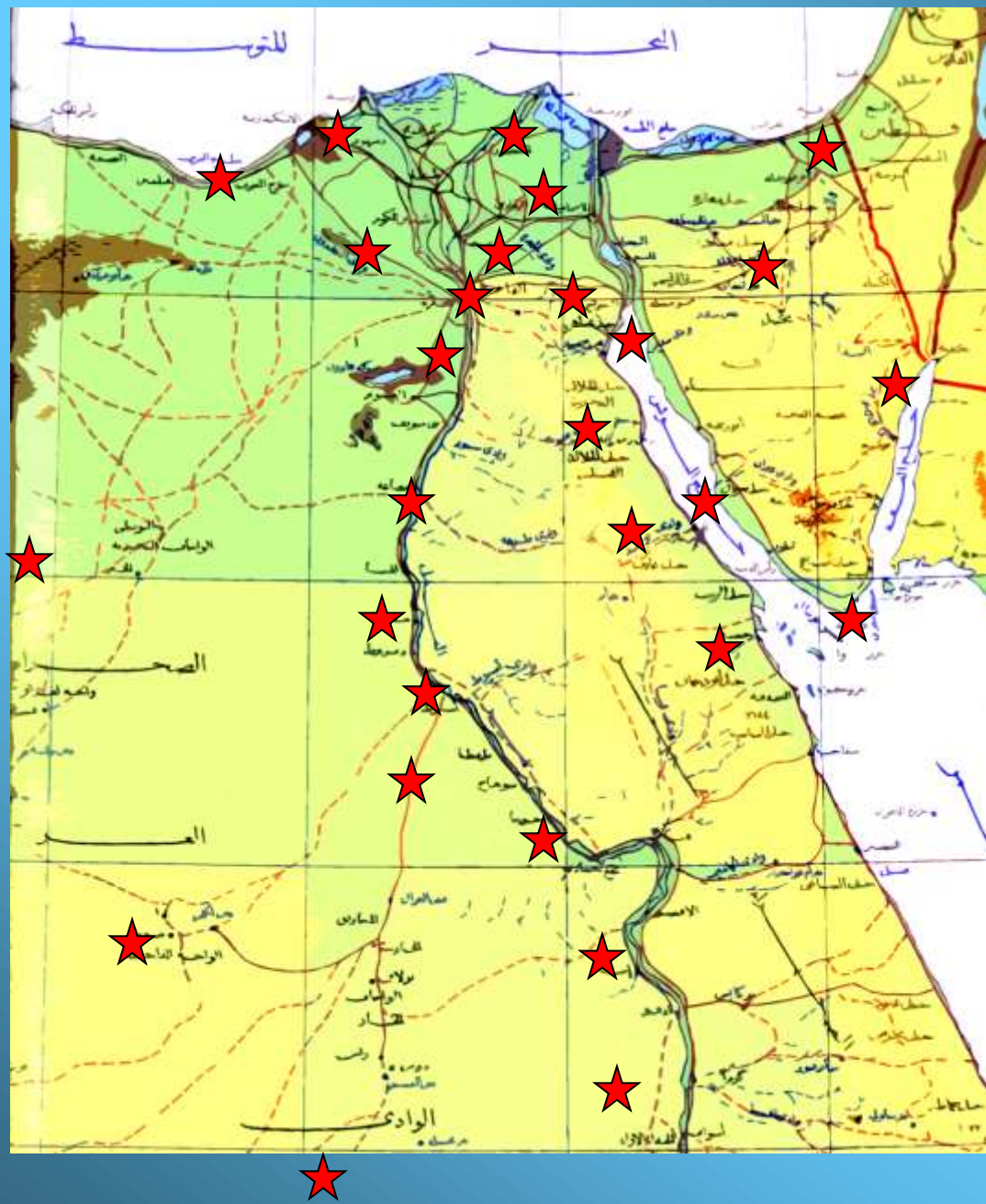
Furthermore, efficient inspections of plants that weight around 2000 kg are impossible.



Situation from 1994 to 2003



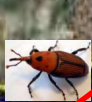
- Before 2004, very few focus of RPW but from beginning of 2000, explosion of ornamental date palms trade from Egypt and since 2004 explosion of infested palms detection



Distribution of
RPW in Egypt
in 2000

El Sebay, 2007

2003: Valencia (España)



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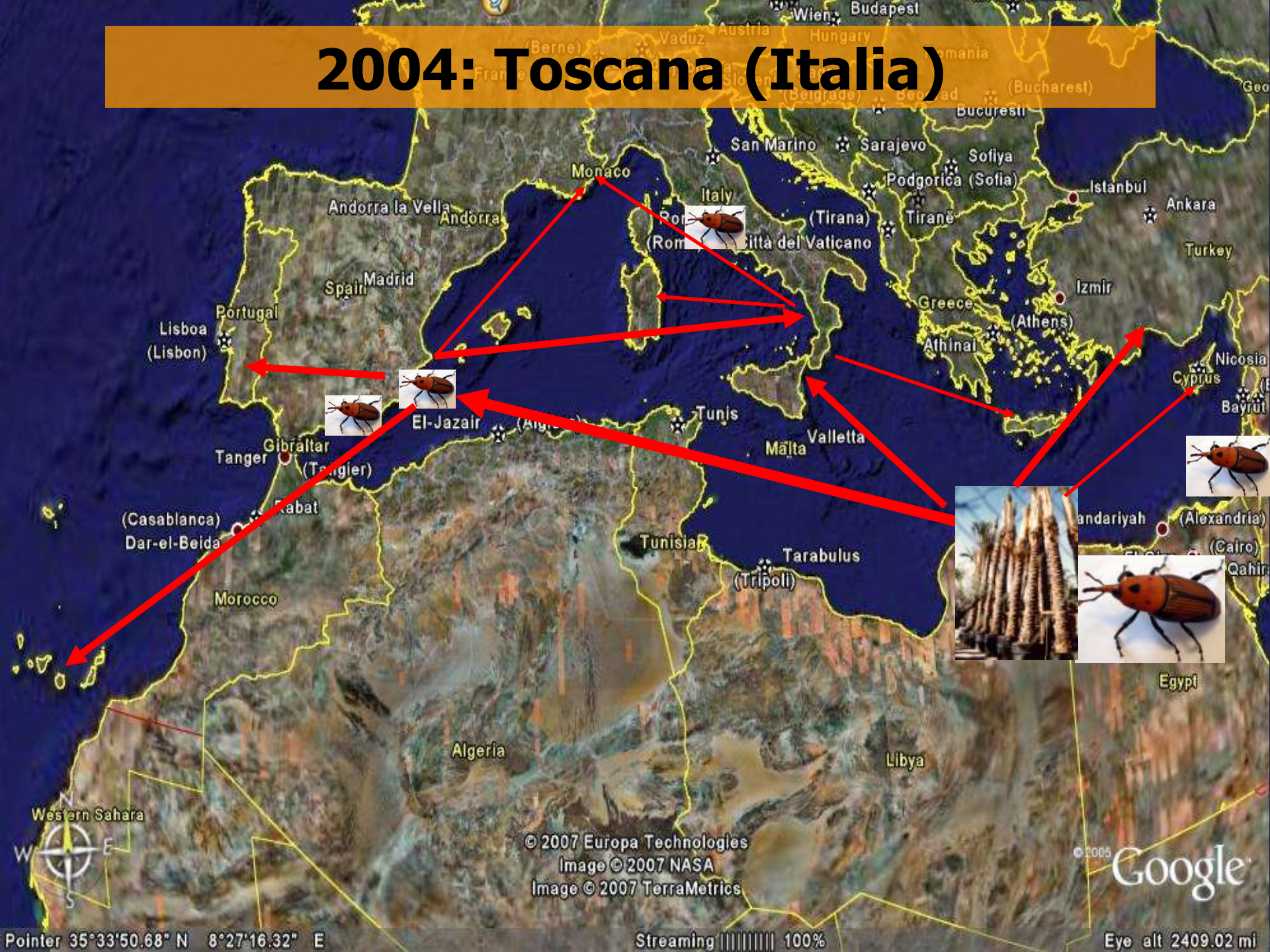
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Pointer 35°33'50.68" N 8°27'16.32" E

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2004: Toscana (Italia)



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Pointer 35°33'50.68" N 8°27'16.32" E

Streaming ||||| 100%

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2005: Alicante, Castellón, Murcia y Almería, Tarragona, Canarias (España). Campania y Sicilia (Italia). Turquía y Creta.



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2006: Corse (France), Huelva, Baleares, Barcelona (Spain), Sardegna(Italia), Cyprus



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2007: Algarve (Portugal), French and Italian Rivieras, Malta,



The extension of the pest in the European Mediterranean coast is not the result of an accidental introduction

It is not the result of a natural pest invasion

It is not the consequence of the climatic global warming

It is not the result of illegal introductions

The extension of the pest in the Mediterranean world is due to officially authorized trade of ornamental Phoenix when no efficient phytosanitary inspection of these palms were possible. It is the consequence of a serious phytosanitary regulation mistake and bad risk assessment

Once introduced, the fundamental preliminary measure to control a new pest is to forbid any movement of palms from and inside infested areas.

No regulation has been adopted to stop the palms movements

The weevils have passed from the infested imported date palms to the Phoenix canariensis that they appreciate much more



Consequences: distribution of the pest has been amplified till at least 2007

A disaster for the landscape patrimony



To control a new pest, urgency regulation measures must be taken rapidly

It is only on May 2007, when pest was already present in nearly the whole Mediterranean coast, that European Commission decided to establish *Rhynchophorus ferrugineus* as a quarantine pest.

But excepted fixing the quarantine duration (2 years), no precise technical measures were imposed regarding quarantine conditions and free zone delimitations.

In fact, despite the catastrophic situation, the purpose was to allow the continuation of the palm market.

To control this pest an other essential issue is to detect as soon as possible the infested palms and to treat them immediately

In urban environments, with very dispersed palms, the detection task needed an intensive activity of palms owners awareness. Frequent and prolonged palms control is impossible without their collaboration.

Unfortunately, in all the infested countries, Plant Protection Authorities (PPOs) have tried to maintain the infested palms detection very confidential.

The PPOs objective was not to create alarm when to detect the infested palms a very active system to alert public and private palms owners was indispensable.

The result of this PPOs behaviour has been very counterproductive. It has contributed to amplify the pest dispersion.

The automatic destruction regulation adopted by various PPOs has been also very counterproductive

- With this measure, when palms owners and maintenance workers detect infested palms, the PPOs oblige them to destroy them very often at their charge and without compensation.
- Such measure discourage the owners to maintain the vigilance of their palms. If, instead of the destruction, the owners are informed that their palms can be saved if they detect the infestation in time, their interest will be to realize their frequent control.



- To sanitize instead of eliminating the palms contribute to detect the infestation in time, to stop the pest dispersion and to save a high value patrimony.

Early detected infested palm can be cured by different ways

- Regular insecticide or nematodes spraying (true shower) to interrupt the pest life cycle.
- Systemic insecticide application by irrigation or endotherapy



Surgery treatments



Taking off the offshoots and cleaning the infested area for date palms



Elimination of all the parts where the pest is present for *Phoenix canariensis*: during several months after infestation, the pest is only present in leaves bases. Cutting these bases till reaching sane tissue allows to eliminate the weevil and the palm to recover.

Conclusion

The lack of efficient phytosanitary regulations first to avoid the introduction of the red palm weevil and then to control and eradicate this pest has led to a disaster for a palm patrimony of high value for many European municipalities.

To preserve a commercial activity instead of protecting a public interest patrimony and not to consider the indispensable role of the palm owners to control this pest explain mainly the regulations failure.

Radical and urgent regulations modifications should be adopted to avoid the disappearance of palms and a high direct and indirect economic consequences.



Thank you