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# Predictive diffusion of palms pests *Rhynchophorus ferrugineus* & *Paysandisia archon* and perspectives about biological control

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More than 35 species of palms are actually infested by *Rhynchophorus ferrugineus* & *Paysandisia Archon*, according to the observations of our network of French & Italian Botanical Collections of ca 100 ornamental palm species. Predictive diffusion of these pests may also concern in the future the 2500 species of wild populations of palms in Asia, South America and Africa. The adaptation of these pests to new environments and climatic conditions, and the difficulties to detect early symptoms of infestation, were determining a failure of all eradication and suppression conventional control programs like Integrated Pest Management, based mainly upon the use of chemical or agronomic approaches. Our French & Italian Network is associated with the researches about biological control by Inra (France) & Enea (Italy).

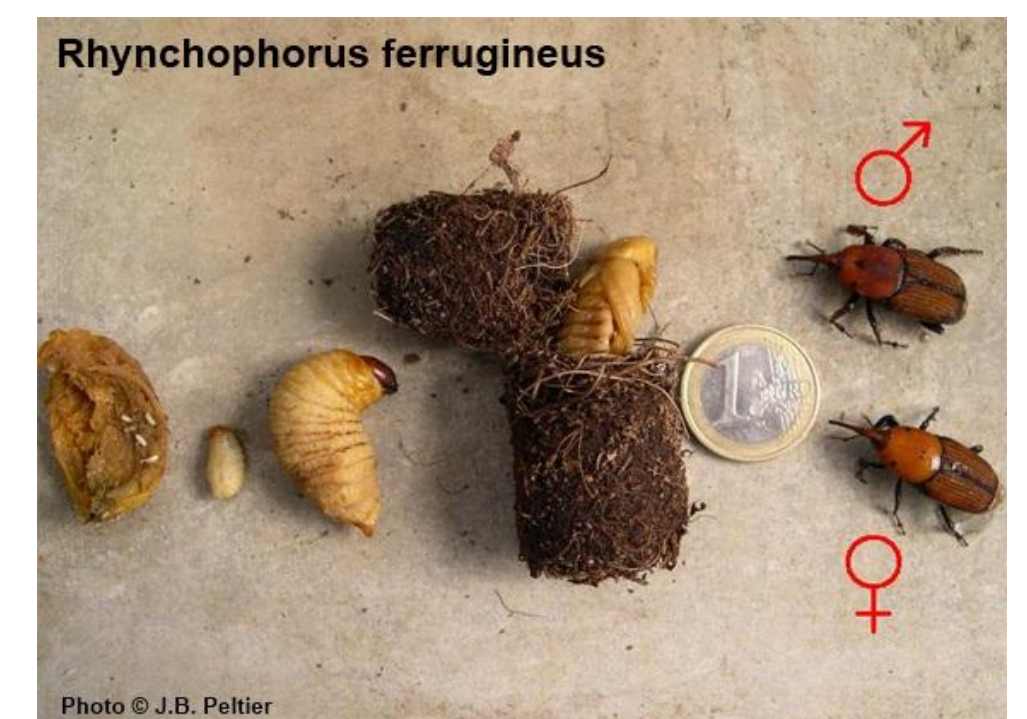


Figure 1: Phases of the cycle of *Paysandisia archon* from left to right: eggs, larva, cocoon, adults (male above and female below). (Picture kindly provided by Jean-Benoît Peltier, INRA, France)

## Our observations about infestation concerning ca 100 ornamental palms *Paysandisia archon* (PA) versus *Rhynchophorus ferrugineus* (RPW)

- |  |  |
|--|--|
| Acoelorrhaphes wrightii                    | Brahea armata & edulis                     |
| Arenga engleri                             | Butia capitata & yatay                     |
| Brahea aculeata, armata, dulcis, edulis    | Chamaerops humilis                         |
| Chamaerops humilis                         | Howea fosteriana                           |
| Howea fosteriana                           | Jubaea chilensis                           |
| Jubaea chilensis                           | Livistona australis, chinensis, decora     |
| Livistona australis, chinensis, decora     | (decipiens), saribus                       |
| (decipiens), saribus                       | Nannorrhops arabica                        |
| Nannorrhops arabica                        | Phoenix dactylifera, reclinata, robellini, |
| Phoenix dactylifera, reclinata, robellini, | theophrasti                                |
| theophrasti                                | Sabal bermudana, mauritiiformis, minor,    |
| Sabal bermudana, mauritiiformis, minor,    | palmetto                                   |
| palmetto                                   | Serenoa repens                             |
| Serenoa repens                             | Syagrus romanzoffiana                      |
| Syagrus romanzoffiana                      | Trachycarpus fortunei                      |
| Trachycarpus sp: 10 sp/15                  | Trithrinax campestris                      |
| Trithrinax acanthocoma                     | Washingtonia filifera & robusta            |

TOTAL PA: 35 SPECIES

TOTAL RPW: 19 SPECIES

