

### Plant Pest information note

#### What is it?

*Paysandisia archon* (Palm Borer) is a moth whose larvae feed on palm trees. This moth originates from South America (Brazil, Argentina and Uruguay). All these areas contain large amounts of palm trees which is the habitat of this pest. This moth was first detected in Europe in 2001 in the countries of Spain and France. This palm borer has since spread across Europe. It has yet to be detected in Ireland but was found in the UK in 2002.

#### How do I recognise it?

The larvae of this moth bore into the palm tree creating galleries and they can also cause severe damage to the leaves. *Paysandisia archon* is quite a large sized moth (Fig. 1) with olive brown fore-wings and bright hind-wings which contain red, black and white. The wingspan of this moth can be between 9-11cm. The female moth is larger than the male and can be easily recognised as the female as it has a large ovipositor. The female lays eggs between palm fibres. These eggs are cream in colour, oblong shape and are about 5mm in length with longitudinal ribs. When the larvae emerge they are pink in colour but as they develop they turn white and can grow up to 6-7cm in length. The larvae (Fig. 2) bore into the core of the tree forming galleries where they pupate. Pupation occurs in a cocoon made out of palm plant material.



Figure 1: Adult *Paysandisia archon* (Fera, 2010)



Figure 2: Larva *Paysandisia archon* (Fera, 2010)

#### What are its hosts?

*Paysandisia archon* only attacks trees of the palm family (Arecaceae), but feeds on numerous species within the family. In European countries such as Spain and France the moth appears to have attacked a large range of palm hosts which are,

*Chamaerops humilis*, *Livistona chinensis*, *L. decipiens*, *L. saribus*, *Phoenix canariensis*, *P. dactylifera*, *P. reclinata*, *Sabal* spp., *Trachycarpus fortunei*, *Trithrinax campestris* and *Washingtonia filifera*. Other hosts that have been recorded are in the genera *Brahea*, *Butia*, *Jubaea* and *Syagrus*.

## What are its symptoms?

Larvae bore galleries (Fig. 3) within the palm leaf and stem, leading to serious damage/deformation of the plant. This can even cause plant death if heavily infested. In Girona (Italy), it has been observed that females lay eggs on palm stipe (trunk) near the growing point of the tree.

The larvae also feed on the leaves of the plant which causes holes to appear in the plant as seen in Fig. 4.



Figure 3: Gallery with cocoon present (Fera, 2010)



Figure 4: Leaf Damage by the Larvae (Fera, 2010)

## Why should we be worried about it and how does this pest spread?

The damage caused by the larvae results in retarded growth and/or deformation of the crown. Heavily infested palms often die as a consequence of the larval attack. Serious damage and plant mortality have been reported in ornamental palm nurseries in southern Europe. In the Languedoc Roussillon region of France, 80-90% of *Trachycarpus fortunei* were lost between 2002 and 2012. Trade movement of palm trees within the EU for mostly ornamental purposes presents a risk of spread to more northern countries where the pest is not yet established. *Paysandisia archon* could over-winter under glass because the pupae are extremely frost tolerant and can survive temperatures as low as -23°C.

Detection of this pest is very difficult if they are hidden in the trunk. *Paysandisia archon* poses a threat to the two palm species native to Europe: *Chamaerops humilis* (a species protected in parts of Spain) and *Phoenix theophrasti* (registered on the IUCN Red List of Threatened Species). It could also be a threat to the subtropical species *Phoenix canariensis* which is native to the Canary Islands. Natural dispersal can also occur as the moths are long distance fliers and this may be how it has spread through some of Europe.

## Action in the event of suspect cases:

Even though the *Paysandisia Archon* is not a quarantine pest under EU legislation it is known to be an invasive pest. It has not yet been detected in Ireland and for this reason Ireland has been given Protected Zone status (PZ) for this pest under the European Plant Health Directive.

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