

### Mini data sheet on *Metamasius hemipterus*

*Metamasius hemipterus* was added to the EPPO A1 List in 2009. A full datasheet will be prepared, in the meantime you can view here the data which was previously available from the EPPO Alert List (added to the EPPO Alert List in 2006 - deleted in 2009).

#### *Metamasius hemipterus* (Coleoptera: Curculionidae)

Why	In 2006, larvae of <i>Metamasius hemipterus</i> (Coleoptera: Curculionidae) were intercepted by the Dutch NPPO on a consignment of plants for planting of <i>Phoenix</i> from Costa Rica. Considering the risk which may be presented by <i>M. hemipterus</i> especially for ornamental palm species, the NPPO of the Netherlands suggested that it should be added to the EPPO Alert List.
Where	<p>EPPO region: Absent. It was intercepted by the Netherlands on a consignment of <i>Phoenix</i> plants from Costa Rica. There is also a record of this pest on imported banana material in the UK (Whitehead, 1991).</p> <p><b>Africa:</b> Cameroon, Congo, Equatorial Guinea, Gabon, Nigeria.</p> <p><b>Asia:</b> according to the CABI Crop Protection Compendium, <i>M. hemipterus</i> has a very limited distribution in Indonesia and the Philippines and is subject to phytosanitary measures.</p> <p><b>North America:</b> Mexico, USA (Florida).</p> <p><b>Central America and Caribbean:</b> Antigua and Barbuda, Barbados, Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Montserrat, Nicaragua, Panama, Puerto Rico, Saint Lucia, St Kitts-Nevis, St Vincent and the Grenadines, Trinidad and Tobago, Virgin Islands (US).</p> <p><b>South America:</b> Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Mexico, Paraguay, Peru, Suriname, Uruguay, Venezuela.</p>
On which plants	Major hosts of <i>M. hemipterus</i> are <i>Cocos nucifera</i> (coconut), <i>Musa</i> (banana) and <i>Saccharum officinarum</i> (sugarcane), but the pest has also been recorded on other plants such as <i>Ananas comosus</i> (pineapple), <i>Manihot esculenta</i> (cassava), <i>Sorghum bicolor</i> (sorghum), <i>Zea mays</i> (maize), <i>Carica papaya</i> (papaya), <i>Psidium guajava</i> (guava), as well on many palm species ( <i>Bactris gasipaes</i> , <i>Hyophorbe verschaffeltii</i> , <i>Iriarteia ventricosa</i> , <i>Jessenia bataua</i> , <i>Phoenix canariensis</i> , <i>Ptychosperma macarthurii</i> , <i>Ravenea rivularis</i> , <i>Roystonea borinquena</i> , <i>R. regia</i> , <i>Washingtonia robusta</i> ). There is no indication from the literature of whether date palm ( <i>Phoenix dactylifera</i> ) is a host plant of <i>M. hemipterus</i> .
Damage	<p>Larvae bore galleries into petioles and stems of their host plants, usually in wounds but which can extend to healthy tissues. On palms, larval feeding through stems, petioles and leaves usually result in production of a gummy, amber-coloured exudate, and in chewed tissue issuing from windows in the galleries at the bases of fronds, where they break prematurely. In Florida (US), it is observed that in some cases damage can be severe on ornamental palms, but that infestations are rarely lethal. Losses in palm nursery production due to weevils (such as <i>M. hemipterus</i>, <i>Rhynchophorus cruentatus</i> and <i>Diaprepes abbreviatus</i>) are high and contribute to a large part of pest control costs. Adults (9 to 14 mm long) vary in colour from red to orange and black. Females are attracted to and oviposit in damaged or stressed stalks (sugarcane), ripe fruits (pineapple, mango, papaya) or palm fronds or stems. On average, a female can lay 500 eggs. Eggs hatch in about 4 days and larvae begin to feed. After about 7 weeks, larvae construct fibrous pupal cases and adults emerge 10 days later.</p> <p>Pictures of <i>M. hemipterus</i> and its damage can be viewed on the Internet at: <a href="http://creatures.ifas.ufl.edu/ORN/silky_cane_weevil.htm">http://creatures.ifas.ufl.edu/ORN/silky_cane_weevil.htm</a></p>
Dissemination	Adults are mobile but there is no data on their natural spread. Over long distances, all stages living inside the plants can be moved with their host species.
Pathway	Plants for planting of host plants, cut branches.

Possible risks	Ornamental palms are important crops in the EPPO region, particularly around the Mediterranean Basin. There is no data on the susceptibility of date palm ( <i>P. dactylifera</i> ) to <i>M. hemipterus</i> . Data is also lacking on the climatic requirements of this species in order to evaluate its potential of establishment. Control measures are available (chemical treatments, use of biological control agents such <i>Beauveria bassiana</i> or <i>Steinernema carpocapsae</i> ) but due to the cryptic habitat of the boring stages, treatments must be applied frequently and over a long period of time. Like many other palm borers, <i>M. hemipterus</i> is likely to be moved undetected in traded plants for planting. Because it might present a risk, especially to Mediterranean countries where various palm species are grown, it seems desirable that precautions should be taken to avoid its entry into the EPPO region.
Source(s)	<p>Giblin-Davis (2001) Borers of palms. In: Insects on palms. Edited by FW Howard, Moore, D, Giblin-Davis RM, Abad, RG. CABI Publishing, Wallingford, GB, 267-304.</p> <p>Lepesme P (1947) Les insectes des palmiers. Edition Paul Lechevalier, Paris, France, 904 pp.</p> <p>Whitehead PF (1991) Some British records of exotic invertebrates. Entomologist's Monthly Magazine 127, 1520-1523 (abst.)</p> <p>NPPO of the Netherlands, 2006-07.</p> <p>INTERNET</p> <p>CABI Crop Protection Compendium. <a href="http://www.cabicompendium.org/cpc/home.asp">http://www.cabicompendium.org/cpc/home.asp</a></p> <p>University of Florida website. Featured Creatures. <a href="http://creatures.ifas.ufl.edu/ORN/silky_cane_weevil.htm">http://creatures.ifas.ufl.edu/ORN/silky_cane_weevil.htm</a></p>
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