

Mini data sheet on *Psacotha hilaris*

Added in 2008 - Deleted in 2012

Reasons for deletion:

Psacotha hilaris has been included in EPPO Alert List for more than 3 years and during this period no particular international action was requested by the EPPO member countries. In 2012, it was therefore considered that sufficient alert has been given and the pest was deleted from the Alert List.

Psacotha hilaris (Coleoptera: Cerambycidae - yellow-spotted longhorn beetle)

Why	<i>Psacotha hilaris</i> has been occasionally found in Italy (in 2005 and 2008) and in the United Kingdom (in 2008). This wood borer of Asian origin has also been intercepted in trade in Europe (UK in 1997) and in North America (Canada in 1997, trapped in wood warehouses). As it is a serious pest of <i>Ficus</i> and <i>Morus</i> , the NPPO of the UK suggested that it could be added to the EPPO Alert List, in particular to warn NPPOs of Mediterranean countries.
Where	Asia: China, Japan (Honshu, Shikoku, Ryukyu Islands), Taiwan. <i>P. hilaris</i> is reported to occur in southern China but the EPPO Secretariat could not find more detailed information. The situation in the Republic of Korea needs clarification. In a short Internet publication, it is stated that <i>P. hilaris</i> is a rare insect species which survives only on Ulleung-do Island. Studies are being done to rear the insect and release it again in its natural environment on the Island. EPPO region: incursions of live beetles were reported in Italy (Lombardia) and the United Kingdom (East Midlands) in 2008. These have apparently not led to the establishment of the pest. In 2005, dead beetles had already been found in Lombardia near a wood warehouse (the pest had also been intercepted once in the UK in 1997). <i>P. hilaris</i> has also been intercepted several times in North America and Canada in warehouses, on wood and wooden spools imported from Asia (EPPO RS 98/202).
On which plants	<i>P. hilaris</i> attacks plant belonging to the Moraceae family, in particular <i>Ficus</i> (including fig trees, <i>F. carica</i>) and <i>Morus</i> spp. (mulberries).
Damage	Larvae bore tunnels inside tree trunks and adults feed on the leaves. In Japan, <i>P. hilaris</i> is considered as a serious pest of mulberry trees and fig orchards. In sericulture, it is causing problems because larvae bore tunnels in the trunks of mulberry trees which weaken the trees, while adults feed on the leaves which are the food source of <i>Bombyx mori</i> . Finally, it has been observed that <i>P. hilaris</i> could transport a newly described species of nematode, <i>Bursaphelenchus conicaudatus</i> , which was found associated with <i>Ficus carica</i> . This nematode is closely related to <i>B. xylophilus</i> , but its pathogenicity and economic importance remain unknown. No detailed description of the insect could be found, but adults are dark brown with conspicuous yellow spots on the elytra. Adult body length (excluding antennae) varies from 13 to 30 mm for males and from 15 to 31 mm for females. <i>P. hilaris</i> presents a large morphological variation across its geographic range (e.g. in the spot patterns) and 10 to 13 subspecies have been described. As it is a beautiful insect, many pictures can be found on the Internet: http://www.bjbug.com/special/friends/heisenlin/htmE/co0010.htm http://www.beetleskorea.com/cerambycidae/lamiinae/pages/uldo.htm http://www2.gol.com/users/nanacorp/ZUKAN/kibosi.htm
Dissemination	<i>P. hilaris</i> can complete its life cycle in 1 or 2 years and can have 2 generations per year depending on the time of egg-laying. Larval development varies with temperature and day-length. In Japan, the species usually overwinters as mature larvae and most adults emerge in mid-June the following year. No data is available on the potential of <i>P. hilaris</i> for natural spread. Over long distances, it can be moved with plants and wood of <i>Ficus</i> and <i>Morus</i> . There is no data indicating that it might be present in bonsai trees (as <i>Anoplophora chinensis</i> is for example).

Pathway	Plants for planting and wood of <i>Ficus</i> and <i>Morus</i> , bonsais?
Possible risks	Although sericulture has almost disappeared in Europe, <i>Morus</i> trees are still grown for ornamental purposes, particularly in the southern part of the EPPO region. The production of figs (<i>Ficus sericea</i>) is important around the Mediterranean Basin, and many ornamental <i>Ficus</i> species are grown across Europe (under glass in the north but also outdoors in the south). The control of <i>P. hilaris</i> is difficult because larvae bore into tree limbs so deeply that both chemical and mechanical control of the insect are difficult. Biological control with entomogenous fungi (i.e. <i>Beauveria brongniartii</i>) is being studied in Japan. Because larvae of <i>P. hilaris</i> spend most of their life cycle inside the trees, they are likely to be moved unnoticed in trade. Although data is lacking on the biology of the pest and in particular on its potential of establishment in the EPPO region, it seems that it could present a risk to <i>Morus</i> and <i>Ficus</i> trees growing in the Mediterranean part of the EPPO region.
Source(s)	<p>Allen EA, Humble LM (2002) Nonindigenous species introductions: a threat to Canada's forest and forest economy. <i>Canadian Journal of Plant Pathology</i> 24, 103-110.</p> <p>Amr TM, Saeb MS (2006) Phylogenetic and population genetic studies on some insect and plant associated nematodes. Dissertation. The Ohio State University. http://www.ohiolink.edu/etd/send-pdf.cgi/Saeb%20Amr.pdf?osu1158348092</p> <p>Anonymous (2001) Indoor mass rearing and natural habitat restoration of yellow spotted longicorn beetle. FFTC Research Highlights, no. 2001-8. http://www.agnet.org/library/rh/2001008d/</p> <p>Jucker C, Tantardini A, Colombo M (2006) First record of <i>Psacotha hilaris</i> (Pascoe) in Europe (Coleoptera Cerambycidae Lamiinae Lamiini). <i>Bolletino di Zoologia Agraria e di Bachicoltura Serie II</i> 38(2), 187-191.</p> <p>Kanzaki N, Tsuda K, Futai K (2000) Description of <i>Bursaphelenchus conicaudatus</i> n. sp. (Nematoda: Aphelenchoididae), isolated from the yellow-spotted longicorn beetle, <i>Psacotha hilaris</i> (Coleoptera: Cerambycidae) and fig trees, <i>Ficus carica</i>. <i>Nematology</i> 2, 65-168 (abst.).</p> <p>Kanzaki N, Kazuyoshi F (2001) Life history of <i>Bursaphelenchus conicaudatus</i> (Nematoda: Aphelenchoididae) in relation to the yellow-spotted longicorn beetle, <i>Psacotha hilaris</i> (Coleoptera: Cerambycidae). <i>Nematology</i> 3, 473-479.</p> <p>Takafumi T (1999) Study on the microbial control of the yellow spotted longicorn beetle, <i>Psacotha hilaris</i> (Pascoe), by an entomogenous fungus, <i>Beauveria brongniartii</i>, in fig tree fields. <i>Special Bulletin of the Fukuoka Agricultural Research Center</i> 12, p 59 (abst.).</p> <p>INTERNET (last accessed 2008-09) Regione Lombardia (IT) website. Tantardini A, Calvi M, Cavagna B (2006) <i>Psacotha hilaris</i> (Pascoe). Prima segnalazione in Italia ed Europa. http://www.cerambycoidea.com/titles/tantardinialii2006.pdf</p>