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2013/163 Eradication of *Anoplophora glabripennis* in Braunau-am-Inn, Austria

In Austria, the presence of *Anoplophora glabripennis* was first reported in 2001 in Braunau-am-Inn (Oberösterreich) and strict eradication measures have been applied there since then. Intensive surveys in the infested area (covering the whole city territory) were carried out by specially trained inspectors and tree climbers, as well as by sniffer dogs. Detailed computerized maps (GIS) of approximately 13 000 trees were established. All potential host trees growing in the vicinity of 'hot spots', along roads, railways tracks and in small dense forests (5.5 ha in 2008/2009 and 8 ha in 2011/2012) were preventively felled. In the case of positive findings of the pest (morphological and molecular identification), entire trees were immediately felled, chipped and incinerated. Random monitoring of host trees and inspections of hardwood cuttings were also carried out in the buffer zone. As a result of this intensive monitoring and eradication programme, no new infestation or living specimens of *A. glabripennis* have been detected in the infestation zone or within the 2 km buffer zone since 2009-06-29. This means that for 4 years (corresponding to at least 2 complete development cycles of the pest), no signs of the pest have been identified. Therefore, the NPPO of Austria declared in July 2013 that the outbreak of *A. glabripennis* in Braunau-am-Inn has been successfully eradicated.

A distinct and isolated outbreak was detected at the end of July 2012 in Geinberg (district of Ried im Innkreis, Oberösterreich) where 1 exit hole and 3 trees with living larvae were found. Eradication measures were immediately taken with the establishment of a demarcated area and the destruction (felling, chipping, incineration) of all host trees within a clear cut zone of 500 m radius. An intensive monitoring program (visual inspections, sniffer dogs) is being carried out within an area of 1100 m radius. The source of the infestation was Chinese wood packaging material used for granite stone imports that was stored at the outbreak site. There is no correlation to the outbreak area in Braunau (>20 km distance) or Neukirchen in Germany (>27 km distance). Since July 2012, no further specimens or signs of infestation were detected. It is considered that the pest has probably been eradicated from Geinberg. However, the absence of the pest has to be verified during 2 complete development cycles (i.e. 4 years in the case of *A. glabripennis*) before eradication can officially be declared successful over the whole territory of Austria.

Source: NPPO of Austria (2013-07) and Federal Forest Office (2013-08).

Additional key words: eradication

Computer codes: ANOLGL, AT

2013/164 Situation of *Agrilus planipennis* in Canada

Since the previous EPPO report (EPPO RS 2012/049), *Agrilus planipennis* (Coleoptera: Buprestidae - EPPO A1 List) has been recorded in new areas in Ontario and Québec. As of mid-July 2013, it was considered that *A. planipennis* has been confirmed in 32 Ontario counties, and in 7 areas in the province of Québec. Biological control is being envisaged, and the parasitoid, *Tetrastichus planipennisi* (Hymenoptera: Eulophidae), has been released in limited areas in Southwestern Ontario.

The pest status of *Agrilus planipennis* in Canada is officially declared as: **Present only in some areas of Ontario and Québec and is subject to official control in Canada.**

- **Ontario**
 - Bruce county in July 2012.
 - Frontenac county in August 2012.

- Renfrew County, Northumberland County, and the United Counties of Stormont, Dundas and Glengarry in June 2013.
- City of Kawartha Lakes (in 2 private properties) reported in July 2013.
- Grey county in July 2013.

- **Québec**

- Trapped near Des Prairies River in the district of Laval-des-Rapides in August 2012.
- City of Longueuil in October 2012.
- Municipality of Ange-Gardien and in the Gatineau Park in the municipality of Chelsea in October 2012.
- Trapped in Lochaber (Municipalité régionale du comté de Papineau) in November 2012.

Source: NAPP0 Phytosanitary Pest Alert System. Official Pest Reports. Canada

- Emerald ash borer confirmed in the city of Kawartha Lakes, Ontario (2013-07-17) http://www.pestalert.org/oprDetail_print.cfm?oprid=552
- Emerald ash borer confirmed in Grey County, Ontario (2013-07-09) http://www.pestalert.org/oprDetail_print.cfm?oprid=551
- Emerald ash borer confirmed in three New Ontario Counties: Renfrew County, Northumberland County, and the United Counties of Stormont, Dundas and Glengarry (2013-06-24) http://www.pestalert.org/oprDetail_print.cfm?oprid=549
- Emerald ash borer confirmed in Papineau, Québec (2012-11-15) http://www.pestalert.org/oprDetail_print.cfm?oprid=535
- Emerald ash borer confirmed in the City of Longueuil, Québec (2012-10-01) http://www.pestalert.org/oprDetail_print.cfm?oprid=531
- Emerald ash borer (*Agrilus planipennis*) confirmed in Ange-Gardien and Chelsea, Québec (2012-10-09). http://www.pestalert.org/oprDetail_print.cfm?oprid=528
- Emerald ash borer (*Agrilus planipennis*) confirmed in Laval, Québec (2012-08-22) http://www.pestalert.org/oprDetail_print.cfm?oprid=526
- Emerald ash borer (*Agrilus planipennis*) confirmed in Frontenac County, Ontario (2012-08-08) http://www.pestalert.org/oprDetail_print.cfm?oprid=524
- Emerald ash borer confirmed in Bruce County, Ontario (2012-07-12) http://www.pestalert.org/oprDetail_print.cfm?oprid=522

Additional key words: detailed record

Computer codes: AGRLPL, CA

2013/165 Situation of *Agrilus planipennis* in the USA

Since the previous EPPO report (EPPO RS 2010/117), *Agrilus planipennis* (Coleoptera: Buprestidae - EPPO A1 List) has been recorded in new areas of the USA (see below). In infested areas, official control measures are implemented to contain *A. planipennis*. In many cases, it is suspected that the insect has been introduced into new areas with movements of infested firewood. At present, *A. planipennis* has been recorded in the following US states: Connecticut, District of Columbia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, Wisconsin.

A distribution map can be viewed on the Internet (Cooperative Emerald Ash Borer Project of 2013-07-01): http://www.emeraldashborer.info/files/MultiState_EABpos.pdf

The pest status of *Agrilus planipennis* in the USA is officially declared as: Present in some parts of the USA and subject to official control to prevent further spread.

- **Connecticut**
A. planipennis was detected for the first time in Connecticut in the town of Prospect on 2012-07-16. Infestations have now been detected in 9 Connecticut towns (Prospect, Naugatuck, Bethany, Beacon Falls, Waterbury, Cheshire, Oxford, Middlebury, Hamden) all in New Haven county.
- **Kansas**
The pest was first found in November 2012 in Wyandotte county, and in July 2013 in Johnson county.
- **Massachusetts**
It was first detected in Western Massachusetts, in the town of Dalton, on 2012-08-31.
- **New Hampshire**
It was first found in Concord (Merrimack county) in March 2013.
- **North Carolina**
It was detected for the first time in Granville county in June 2013.
- **Tennessee**
The pest was first detected in July 2010 in Knox county. As of July 2013, 19 counties are under quarantine for *A. planipennis* in Tennessee (Anderson, Campbell, Claiborne, Cocke, Blount, Grainger, Greene, Hamblen, Hamilton, Hancock, Hawkins, Jefferson, Knox, Loudon, Monroe, Roane, Sevier, Smith and Union).

Source: NAPPO Phytosanitary Pest Alert System. Official Pest Reports. USA
- Emerald ash borer (*Agrilus planipennis*): New counties in Kansas and New York added to the regulated area (2012-11-19)
http://www.pestalert.org/oprDetail_print.cfm?oprid=536
- Emerald ash borer (*Agrilus planipennis*) - Additional counties in Kentucky and New York added to the regulated area (2012-04-24).
http://www.pestalert.org/oprDetail_print.cfm?oprid=518
- Emerald Ash Borer (*Agrilus planipennis*): Counties in Kentucky, Missouri, North Carolina, and Tennessee added to the regulated area (2013-08-01).
http://www.pestalert.org/oprDetail_print.cfm?oprid=555

INTERNET

- Emerald ash borer. Where is EAB?
<http://www.emeraldashborer.info/surveyinfo.cfm#sthash.ShAJDfO3.dpbs>
- Kansas Department of Agriculture (2013-07-15) Temporary Emerald Ash Borer Quarantine. <https://agriculture.ks.gov/docs/default-source/pp-emerald-ash-borer/emerald-ash-borer-.pdf?sfvrsn=0>
- KCTV News - Kansas City. Tree-killing beetle found in Johnson county.
<http://www.kctv5.com/story/22850701/tree-killing-beetle-found-in-johnson-county>
- Massachusetts introduced pests outreach project (2012-08-01) Pest Alert: Emerald ash borer in Connecticut. <http://www.massnrc.org/pests>
- Massachusetts introduced pests outreach blog. Emerald ash borer found in Massachusetts (2012-09-12). <http://massnrc.org/pests/blog/2012/09/emerald-ash-borer-found-in-massachusetts.html>
- NC State University. Extension Forestry - Woodland owners update. Emerald ash borer identified in Granville county, NC.
<http://cnr.ncsu.edu/blogs/wou/2013/06/17/emerald-ash-borer-identified-in-granville-county-nc/>
- NH Bugs. Protecting trees and forests. Damaging insects and diseases.
<http://nhbugs.org/>

- University of New Hampshire. Cooperative Extension (2013-04-05) Invasive emerald ash borer detected in New Hampshire. <http://extension.unh.edu/articles/Invasive-emerald-ash-borer-detected-New-Hampshire>

Additional key words: detailed record

Computer codes: AGRLPL, US

2013/166 First report of *Cyrtogenius luteus* in Italy

In summer 2009, specimens of a bark beetle which was later identified as *Cyrtogenius luteus* (Coleoptera: Curculionidae) were trapped in the international harbours of Venice (Marghera) and Chioggia in the Veneto region, Northern Italy. In summer 2010 and 2012, many other specimens were caught again in the same harbours. In summer 2011, *C. luteus* was caught in traps located in the semi-urban areas in Martellago and San Biagio di Callalta, respectively at about 15 km and 40 km from the closest harbour (Marghera). It is noted that all specimens were collected in traps and that no dying or trees that recently died were found to be infested by *C. luteus*. This is the first time that *C. luteus* is reported from Italy and from Europe. *C. luteus* is a bark beetle which occurs in Asia (at least in China (Yunnan), Japan, Taiwan and Thailand) on pine trees (*Pinus* spp.). No data is available on its biology and impact on forest trees.

Interestingly, its introduction has recently been reported from Uruguay where it was first detected in December 2009 in the department of San José in *Pinus pinaster* and *P. taeda*. In 2010, it was also found in the departments of Rocha, Paysandú, Durazno and Tacuarembó. Following its initial finding in 2009, a monitoring programme was implemented and showed that the captures of *C. luteus* were more abundant and stable in the southern region, and increasing in the north. In Uruguay, *C. luteus* was found in commercial plantations of *P. taeda*, *P. elliotii* and *P. pinaster*. It is noted that although *C. luteus* appears to behave as a secondary pest in Asia (attacking only dying or dead trees), several infested areas with dead *P. taeda* trees were reported in Uruguay.

Source: Beaver RA, Liu LY (2010) An annotated synopsis of Taiwanese bark and ambrosia beetles, with new synonymy, new combinations and new records (Coleoptera: Curculionidae: Scolytinae). *Zootaxa* 2602, 1-47.

Bright DE, Skidmore RE (2002) A Catalog of Scolytidae and Platypodidae (Coleoptera). Supplement 2 (1995-1999), NRC Research Press, 511 pp.

Faccoli M, Simonato M, Toffolo EP (2012) First record of *Cyrtogenius* Strohmeier in Europe, with a key to the European genera of the tribe Dryocoetini (Coleoptera: Curculionidae, Scolytinae). *Zootaxa* 3423, 27-35 (abst.).

Gómez D, Martínez G, Beaver RA (2012) First record of *Cyrtogenius luteus* (Blandford) (Coleoptera: Curculionidae: Scolytinae) in the Americas and its distribution in Uruguay. *Coleopterists Bulletin* 66(4), 362-364 (abst.).

Additional key words: new record

Computer codes: CYRGLU, IT, UY

2013/167 First report of *Pseudaulacaspis brimblecombei* in Italy

In Italy, *Pseudaulacaspis brimblecombei* (Hemiptera: Diaspididae) was discovered in the province of Pistoia (Toscana region) in September 2012. *P. brimblecombei* was found in a nursery on 20 plants belonging to 2 varieties of *Telopea* spp. (Proteaceae). Scales were observed on the stems and leaves; damage was limited and mainly cosmetic. These plants had been imported from Australia in March 2011 and were grown in a glasshouse for breeding purposes. Chemical treatments were applied to eliminate the pest. Interestingly, an incursion of this scale was detected in September 2012 on 2 *Telopea* cv. 'Golden Globe' plants in a commercial glasshouse in Cambridge, United Kingdom. The infested plants had been imported from Italy six months earlier.

P. brimblecombei was originally described in 1973 in Australia on *Macadamia* sp. (Proteaceae). This scale also occurs in New Zealand (North and South Islands), and Hawaii (US). Its known host plants are *Telopea speciosissima* (waratah), *Macadamia* sp., and *Embothrium* sp. (Chilean firebush - Proteaceae).

Source: NPPPO of Italy (2013-07).

Charles JG, Henderson RC (2002) Catalogue of the exotic armoured scale insects (Hemiptera: Coccoidea: Diaspididae) in New Zealand. *Journal of The Royal Society of New Zealand* 32(4), 587-615.

Malumphy C, Halstead AJ (2012) First incursions in Europe of four Australasian species of armoured scale insect (Hemiptera: Diaspididae). *British Journal of Entomology and Natural History* 25(4), 193-197 (abst.).

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New and emerging pests in landscapes and nurseries, presentation by Arnold H Hara (dated 2012-05-18).

<http://www.ctahr.hawaii.edu/haraa/CPS%20Seminar%20May%202012%20smaller%20New%20Emerging%20Pests.pdf>

Additional key words: new record

Computer codes: PSEABR, IT

2013/168 First report of *Vespa velutina* in Italy

The presence of the invasive alien species, *Vespa velutina* (Hymenoptera: Vespidae - Indian hornet), is reported for the first time in Italy. An adult specimen was collected at the end of 2012 in the province of Savona, Liguria region. *V. velutina* is not a plant pest but is a predator of social insects, and in particular of honey bees, which has been introduced from Asia into France in 2005 (see EPPO RS 2007/197).

Source: NPPPO of Italy (2013-07).

Additional key words: new record

Computer codes: VESPVE, IT

2013/169 Korean oak wilt disease: associated with *Raffaelea quercus-mongolicae* and transmitted by *Platypus koryoensis*

Platypus koryoensis is an ambrosia beetle found in forests and native to Korea. Together with its symbiotic fungus *Raffaelea quercus-mongolicae* (a new fungal species described in 2009), it has been involved in a significant mortality of oak trees (*Quercus mongolica*) in the Republic of Korea. Korean oak wilt was first observed in 2004 and it is estimated that during 2006-2009, more than 16 000 oak trees have been killed in the Gyeonggi province. It can be recalled that in Japan, a similar type of association, *Platypus quercivorus/Raffaelea quercivora*, has also been reported to cause extensive mortality on oak trees (*Quercus serrata*, *Q. crispula*) since the 1980s (EPPO RS 2003/067, RS 2007/070). Morphological and phylogenetic studies have showed that *R. quercus-mongolicae* and *R. quercivora* are two distinct fungal species. Although different oak species are present in the EPPO region, it seems that the risks presented by the possible emergence of ambrosia beetles and their associated fungi should not be underestimated.

Source: Kim KH, Choi YJ, Seo ST, Shin HD (2009) *Raffaelea quercus-mongolicae* sp. nov. associated with *Platypus koryoensis* on oak in Korea. *Mycotaxon* 110, 189-197 (abst.).

Lee JS, Haack RA, Choi WI (2011) Attack pattern of *Platypus koryoensis* (Coleoptera: Curculionidae: Platypodinae) in relation to crown dieback of Mongolian oak in Korea. *Environmental Entomology* 40(6), 1363-1369.

Moon MJ, Park JG, Oh E, Kim KH (2008) External microstructure of the ambrosia beetle *Platypus koryoensis* (Coleoptera: Curculionidae: Platypodinae). *Entomological Research* 38(3), 202-210 (abst.).

Additional key words: new pest

Computer codes: PLTPKO, RAFFQM, KR

2013/170 *Meloidogyne enterolobii* detected on potatoes in South Africa

In South Africa, *Meloidogyne enterolobii* (EPPO A2 List) was first reported in 1997 in declining guava trees (*Psidium guajava*) in Mpumalanga province. During the 2011/2012 potato (*Solanum tuberosum*) growing season, 78 composite samples of potato tubers infected by root-knot nematodes were obtained from different potato-growing regions in South Africa. Molecular analysis (PCR, sequencing) detected *M. enterolobii* in 5 potato samples which had been collected from the KwaZulu-Natal province. None of the samples tested from the other regions were positive for *M. enterolobii*. The authors concluded that *M. enterolobii* could represent a threat to potato production in South Africa and that control methods should be investigated.

Source: Onkendi EM, Moleleki LN (2013) Detection of *Meloidogyne enterolobii* in potatoes in South Africa and phylogenetic analysis based on intergenic region and the mitochondrial DNA sequences. *European Journal of Plant Pathology* 136(1), 1-5.

Additional key words: detailed record, host plant

Computer codes: MELGMY, ZA

2013/171 First report of *Xanthomonas citri* pv. *citri* in Louisiana (US)

In 2013-06-21, USDA-APHIS confirmed the presence of *Xanthomonas citri* pv. *citri* (EPPO A1 List) in Louisiana (US). Three citrus trees were found infected in the City Park of New Orleans (Orleans Parish), as well as one tree in a nearby residential area. It is noted that in this urban area there is no citrus commercial production, nurseries or packing houses. Delimiting surveys are currently being implemented.

The pest status of *Xanthomonas axonopodis* pv. *citri* in the USA is officially declared as: **Present, only in Florida and in a city park in one Parish in Louisiana and subject to official control in the United States.**

Source: NAPPO Phytosanitary Pest Alert System. Official Pest Reports. USA (2013-07-01)
Detection of citrus canker (*Xanthomonas axonopodis* pv. *citri*) in Louisiana.
http://www.pestalert.org/oprDetail_print.cfm?oprid=550

Additional key words: detailed record

Computer codes: XANTCI, US

2013/172 First report of *Xanthomonas citri* pv. *citri* in Mayotte

Asiatic citrus canker, caused by *Xanthomonas citri* pv. *citri* (EPPO A1 List) has recently been detected in Mayotte. In May 2012, typical canker-like symptoms were observed on sweet orange (*Citrus sinensis*) groves on Mtsamboro islet and soon after on the main island of Mayotte, mainly on sweet oranges but also on Tahiti limes (*C. latifolia*) and mandarins (*C. reticulata*). 81 *Xanthomonas*-like strains were isolated on semi-selective medium (KC) from diseased samples collected from commercial groves and nurseries on various citrus species and from several locations across Mayotte. As a result, 16 isolates were tentatively identified (PCR) as *X. citri* pv. *citri*. Further analysis (sequence analysis) confirmed that 3 strains belonged to *X. citri* pv. *citri* pathotype A. In addition, Koch's postulates could be verified. This is the first time that *X. citri* pv. *citri* is reported from Mayotte. It can be recalled that citrus canker occurs in other islands of the Indian Ocean (i.e. Comoros, Mauritius, Réunion, Rodrigues and Seychelles).

The situation of *Xanthomonas citri* pv. *citri* in Mayotte can be described as follows: **Present, first found in 2012.**

Source: Hoarau J, Boyer C, Vital K, Chesneau T, Vernière C, Roux-Cuvelier M, Pruvost O, Moreau A, Hostachy B, Yahaya N, Abdoul-Karime AL (2013) First report of *Xanthomonas citri* pv. *citri*-A causing Asiatic citrus canker in Mayotte. *Plant Disease* 97(7), p 989.

Additional key words: new record

Computer codes: XANTCI, YT

2013/173 First report of '*Candidatus Phytoplasma mali*' in Finland

In Finland, '*Candidatus Phytoplasma mali*' (associated with apple proliferation - EPPO A2 List) was first detected in psyllid specimens (*Cacopsylla picta*) which had been collected in 2009-2010 from 2 localities. However, in these localities no symptoms of apple proliferation were observed at that time. In August 2012, a specific survey for apple proliferation was conducted in 17 apple orchards. The presence of '*Ca. Phytoplasma mali*' was detected in 2 samples which had been collected from 2 apple orchards, one located on

the mainland and the other on the Island of Åland. The survey will continue in 2013 to delimit the extent of the infestation both on the mainland and the Island of Åland. The situation of '*Candidatus Phytoplasma mali*' in Finland can be described as follows: Present, first confirmed in 2012 in two apple orchards (mainland and Island of Åland), under official control.

Source: INTERNET

Evira. Finnish Food Safety Authority (2013-01-17) New plant pests in horticultural production came as a surprise in 2012.

<http://www.evira.fi/portal/en/plants/current+issues/?bid=3290>

Lemmetty A, Mirkka Soukainen M, Tuovinen T (2013) First report of '*Candidatus Phytoplasma mali*', the causal agent of apple proliferation disease, in apple trees in Finland. *Plant Disease* (in press)

<http://apsjournals.apsnet.org/doi/abs/10.1094/PDIS-04-13-0397-PDN>

Lemmetty A, Tuovinen T, Kempainen R (2011) '*Candidatus Phytoplasma mali*' infected *Cacopsylla picta* found in apple orchards in South-Western Finland. *Bulletin of Insectology* 64 (Suppl.), S257-S258.

Additional key words: new record

Computer codes: PHYPMA, FI

2013/174 First report of *Phytophthora fragariae* in Finland

In 2012, the presence of *Phytophthora fragariae* (EPPO A2 List) was found for the first time in Finland during phytosanitary inspections conducted in 55 strawberry plantations in different parts of the country. It is supposed that the wet and cool weather of summer 2012 favoured disease spread and symptom expression. As the pathogen can survive in the soil for long periods without any host plant, eradication was not considered feasible but containment measures have been taken to prevent the spread of the disease from contaminated farms to other commercial production areas.

The situation of *Phytophthora fragariae* in Finland can be described as follows: Present, first found in 2012, under official control.

Source: INTERNET

Evira. Finnish Food Safety Authority (2013-01-17) New plant pests in horticultural production came as a surprise in 2012.

<http://www.evira.fi/portal/en/plants/current+issues/?bid=3290>

Additional key words: new record

Computer codes: PHYTFR, FI

2013/175 *Hosta virus X*: addition to the EPPO Alert List

Because *Hosta virus X* is an emerging disease of *Hosta* spp. in different parts of the world, the EPPO Secretariat decided to add this virus to the EPPO Alert List.

Hosta virus X (Potexvirus)

Why

Hosta virus X (Potexvirus, HVX) was first identified and described in Minnesota, USA in 1996. Since then, HVX has been reported from other US states, Canada, as well as from other continents. HVX is generally considered to be the most economically important virus infecting hostas. As HVX is an emerging disease that

Where	<p>is causing problems for growers, garden centres, and gardeners, the EPPO Secretariat felt that HVX could usefully be added to the EPPO Alert List.</p> <p>Because HVX can be easily spread by infected planting material and is mechanically transmissible, its distribution is probably wider than which is recorded in the literature.</p> <p>EPPO region: Czech Republic, Finland, France, Italy (transient, found once and all infected plants were destroyed), Netherlands, Poland.</p> <p>Asia: China (Beijing), Republic of Korea.</p> <p>North America: Canada (British Columbia, Québec, Ontario), USA (Connecticut, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Ohio, Pennsylvania, Tennessee, Virginia, Wisconsin).</p> <p>Oceania: New Zealand (North Island).</p>
On which plants	<p><i>Hosta</i> spp. However, among hostas there is a great diversity of cultivars presenting different levels of susceptibility to the virus (susceptible, tolerant, or immune).</p>
Damage	<p>Symptoms may vary according to the type of cultivar and time of infection. Leaves infected with HVX commonly show symptoms of mosaic, mottling, interveinal chlorosis between secondary veins, deformation and desiccation. Infected plants often exhibit reduced growth and dieback. Colour-breaking can also be observed on flowers of infected plants. HVX can also remain latent in infected plants for years without showing symptoms. On susceptible cultivars, HVX produces a serious and sometimes destructive disease.</p> <p>Pictures of symptoms can be viewed from the Internet: http://pestsurvey.wi.gov/plantdisease/pdf/ornamentals/GalleryOfPlantVirusSymptoms-2012.pdf http://www.invasive.org/browse/autthumb.cfm?aut=11521</p>
Transmission	<p>As HVX is sap-transmissible, it is easily transmitted during vegetative plant propagation. Hostas can also be propagated by seeds, but the possible seed transmission of HVX needs to be clarified. As is the case for other potexviruses, HVX is also spread by mechanical contact. Therefore, it is easily transmitted from plant to plant on hands and tools (e.g. pruning tools when removing old leaves or flowers). Over long distances, trade of infected plants has probably been the most significant source of the disease. In addition, it is suggested that some cultivars which have been selected and commercialized because of their 'interesting foliage' were in fact infected by HVX, which has contributed to further spreading the virus. There is no evidence that HVX might be transmitted by insects or other vectors.</p>
Pathway	<p>Plants for planting of <i>Hosta</i> spp. from countries where HVX occurs.</p>
Possible risks	<p><i>Hosta</i> spp. are popular herbaceous perennial plants with more than 7000 varieties, and widely cultivated due to their diversity in leaf shape and colour patterns, shade tolerance and pest resistance. In the USA, it is considered that HVX has had a significant economic impact on hosta growers (but no figures could be found). As is the case for other viruses, the control of the disease is difficult and essentially based on the use of resistant cultivars and of prophylactic measures to minimize the possibility of mechanical transmission of HVX. The production of virus-free planting material through the implementation of certification schemes could also contribute to limiting the spread of HVX.</p>
Sources	<p>Anonymous (2006) Fighting HVX in <i>Hosta</i>. <i>Naktuinbouw News</i> no. 7, p 3.</p> <p>Bellardi MG, Cavicchi L, Davino S (2011) First report of <i>Hosta virus X</i> infecting <i>Hosta</i> in Italy. <i>Journal of Plant Pathology</i> 93(suppl.), S4.26.</p> <p>CABI/EPPO (2012) <i>Hosta virus X</i>. Distribution Maps of Plant Diseases no. 1132. CABI, Wallingford (GB).</p> <p>Cajza M, Ziełńska, L (2007) <i>Hosta virus X</i> - A new pathogen of ornamental plants in Poland. <i>Progress in Plant Protection</i> 47, 69-72.</p> <p>Choi SH, Park MH, Ryu KH (2012) Phylogeny, coat protein genetic variability, and transmission via seeds of <i>Hosta Virus X</i>. <i>Acta Biologica Hungarica</i> 63(1), 151-161 (abst.).</p> <p>Currier S, Lockhart BEL (1996) Characterization of a potexvirus infecting <i>Hosta</i> spp. <i>Plant Disease</i> 80, 1040-1043.</p> <p>De la Torre CM (2009) Molecular characterization, differential movement and construction of infectious cDNA clones of an Ohio isolate of <i>Hosta virus X</i>. Ohio, USA: Ohio State University, thesis, 93 pp.</p> <p>INTERNET University of Arkansas System. Division of Agriculture. Research and Extension. <i>Hosta virus X</i> by S.</p>

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EPPO RS 2013/175

Panel review date -

Entry date 2013-08

2013/176 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2012 received since the previous report (EPPO RS 2013/149). Notifications have been sent directly to EPPO via Europhyt for the EU countries and Switzerland. The EPPO Secretariat has selected notifications of non-compliance made because of the detection of pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Anthonomus eugenii</i>	<i>Capsicum frutescens</i>	Vegetables	Dominican Rep.*	Netherlands	3
<i>Aonidiella aurantii</i> , Fungi	<i>Citrus limon</i>	Fruit	Argentina	Spain	1
<i>Bemisia tabaci</i>	<i>Alternanthera</i>	Aquarium plants	Indonesia	France	1
	<i>Alternanthera cardinalis</i>	Aquarium plants	Indonesia	France	1
	<i>Amaranthus</i>	Vegetables (leaves)	Bangladesh	United Kingdom	2
	<i>Amaranthus</i>	Vegetables (leaves)	Ghana	United Kingdom	1
	<i>Colocasia</i>	Vegetables	India	United Kingdom	6
	<i>Colocasia esculenta</i>	Vegetables	India	United Kingdom	1
	<i>Colocasia esculenta</i>	Vegetables	India	United Kingdom	2
	<i>Colocasia esculenta</i> var. <i>antiquorum</i>	Vegetables	India	United Kingdom	2
	<i>Corchorus</i>	Vegetables (leaves)	Lebanon	United Kingdom	1
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Ghana	United Kingdom	1
	<i>Corchorus olitorius</i>	Vegetables (leaves)	India	United Kingdom	5
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Jordan	United Kingdom	4
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Lebanon	United Kingdom	1
	<i>Dipladenia</i>	Plants for planting	Israel	Germany	1
	<i>Dipladenia</i>	Plants for planting	Netherlands	United Kingdom	3
	<i>Gomphrena globosa</i>	Vegetables	India	United Kingdom	1
	<i>Hibiscus</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Hibiscus</i>	Plants for planting	Belgium	United Kingdom	1
	<i>Hygrophila corymbosa</i>	Aquarium plants	Indonesia	France	1
	<i>Hygrophila polysperma</i>	Aquarium plants	Indonesia	France	1
<i>Ipomoea batatas</i>	Vegetables	Ghana	United Kingdom	1	
<i>Limnophila aromatica</i>	Vegetables (leaves)	Thailand	France	1	
<i>Mandevilla</i>	Plants for planting	Italy	United Kingdom	2	
<i>Manihot</i>	Vegetables	Bangladesh	United Kingdom	1	
<i>Nerium oleander</i>	Plants for planting	Netherlands	United Kingdom	3	

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>B. tabaci</i> (cont.)	<i>Ocimum basilicum</i>	Vegetables (leaves)	Cambodia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	United Kingdom	3
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Malaysia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	United Kingdom	1
	<i>Pterocarpus soyauxii</i>	Vegetables (leaves)	Nigeria	United Kingdom	1
	<i>Solanum macrocarpon</i>	Vegetables	Nigeria	United Kingdom	1
<i>Bemisia tabaci</i> , <i>Liriomyza trifolii</i>	<i>Chrysanthemum</i> , <i>Solidago</i>	Cut flowers	Egypt	Netherlands	1
Bruchidae	<i>Antirrhinum</i> , <i>Arecaceae</i> , <i>Canna</i> , <i>Nerium oleander</i>	Seeds and cuttings	USA	Czech Republic	1
<i>Cherry leafroll virus</i> , <i>Cherry virus A</i> , <i>Prune dwarf virus</i>	<i>Prunus avium</i> , <i>Prunus</i>	Pollen	USA	Italy	1
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	<i>Solanum lycopersicum</i>	Seeds	China	France	1
	<i>Solanum lycopersicum</i>	Seeds	India	France	1
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i>	<i>Solanum tuberosum</i>	Ware potatoes	Poland	Hungary	2
Coleoptera	<i>Diospyros kaki</i>	Fruit	Congo	Spain	1
<i>Cryptophlebia leucotreta</i>	<i>Capsicum frutescens</i>	Vegetables	Uganda	Netherlands	3
<i>Cucumber mosaic virus</i>	<i>Petunia</i>	Cuttings	Israel	Italy	1
<i>Diaphorina citri</i>	<i>Murraya koenigii</i>	Vegetables (leaves)	Dominican Rep.	United Kingdom	6
Diptera	<i>Momordica</i>	Vegetables	Kenya	United Kingdom	2
<i>Ditylenchus dipsaci</i>	<i>Tulipa</i>	Bulbs	Australia	Netherlands	1
<i>Elsinoe</i>	<i>Citrus limon</i>	Fruit	Argentina	Spain	1
<i>Ephestia</i>	<i>Cyperus esculentus</i>	Stored products	Burkina Faso	Spain	1
<i>Guignardia citricarpa</i>	<i>Citrus limon</i>	Fruit	Argentina	Netherlands	4
	<i>Citrus limon</i>	Fruit	Argentina	Poland	1
	<i>Citrus sinensis</i>	Fruit	Brazil	Netherlands	1
	<i>Citrus sinensis</i>	Fruit	South Africa	Netherlands	1
	<i>Citrus limon</i>	Fruit	Argentina	Germany	1
	<i>Citrus limon</i>	Fruit	Argentina	Italy	1
	<i>Citrus limon</i>	Fruit	Argentina	Netherlands	2
	<i>Citrus limon</i>	Fruit	Argentina	Poland	1
	<i>Citrus sinensis</i>	Fruit	Brazil	Netherlands	1
Lepidoptera	<i>Abelmoschus esculentus</i>	Vegetables	Sri Lanka	Italy	1
	<i>Solanum</i>	Vegetables	Sri Lanka	Italy	1
<i>Leucinodes orbonalis</i>	<i>Momordica</i>	Vegetables	Pakistan	Italy	1
	<i>Solanum aethiopicum</i>	Vegetables	Burundi	Belgium	1
	<i>Solanum melongena</i>	Vegetables	India	Sweden	1
<i>Liriomyza</i>	<i>Chrysanthemum</i>	Cut flowers	Colombia	United Kingdom	1
	<i>Chrysanthemum</i>	Cut flowers	Ecuador	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Liriomyza</i> (cont.)	<i>Gypsophila</i>	Cut flowers	Ethiopia	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Israel	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Kenya	United Kingdom	1
	<i>Gypsophila paniculata</i>	Cut flowers	Israel	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Cambodia	France	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Cambodia	United Kingdom	2
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Ethiopia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Tunisia	Czech Republic	1
<i>Liriomyza bryoniae</i> , <i>Liriomyza trifolii</i>	<i>Gypsophila</i>	Cut flowers	Israel	Germany	1
<i>Liriomyza huidobrensis</i>	<i>Gypsophila</i>	Cut flowers	Ecuador	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Kenya	Netherlands	2
	<i>Gypsophila</i>	Cuttings	Kenya	Netherlands	1
	<i>Trachelium</i>	Cut flowers	Ecuador	Netherlands	2
<i>Liriomyza huidobrensis</i> , <i>Liriomyza trifolii</i>	<i>Gypsophila paniculata</i>	Cut flowers	Kenya	Netherlands	1
<i>Liriomyza sativae</i>	<i>Apium graveolens</i>	Vegetables	Cambodia*	Sweden	1
	<i>Ocimum americanum</i>	Vegetables (leaves)	Cambodia*	Sweden	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	1
<i>Liriomyza trifolii</i>	<i>Dianthus barbatus</i>	Cut flowers	Ethiopia	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Ethiopia	Netherlands	1
	<i>Solidago</i>	Cut flowers	Ethiopia	Netherlands	2
<i>Listronotus bonariensis</i>	Ornamentals	Seeds	New Zealand	United Kingdom	1
<i>Meloidogyne</i>	<i>Anethum graveolens</i>	Vegetables	Cambodia	United Kingdom	1
	<i>Lonicera</i>	Plants for planting	Canada	Switzerland	1
<i>Meloidogyne chitwoodi</i>	<i>Solanum tuberosum</i>	Ware potatoes	Tunisia*	France	1
<i>Meloidogyne</i> , <i>Pratylenchus</i> , <i>Xiphinema</i>	<i>Chrysalidocarpus</i> , <i>Cycas revoluta</i>	Plants for planting	Costa Rica	Switzerland	1
<i>Opogona sacchari</i>	<i>Ficus</i>	Plants for planting	China	Netherlands	1
<i>Phthorimaea operculella</i>	<i>Solanum tuberosum</i>	Ware potatoes	Morocco	Spain	2
	<i>Solanum tuberosum</i>	Ware potatoes	Tunisia	Italy	1
<i>Phytophthora ramorum</i>	<i>Viburnum tinus</i>	Plants for planting	Netherlands	United Kingdom	1
<i>Plum pox virus</i>	<i>Prunus armeniaca</i> , <i>Prunus domestica</i> , <i>Prunus persica</i>	Plants for planting	Greece	Cyprus	1
<i>Pratylenchus</i>	<i>Codiaeum variegatum</i>	Plants for planting	Costa Rica	Switzerland	1
<i>Pratylenchus</i> , <i>Xiphinema</i>	<i>Chrysalidocarpus</i>	Plants for planting	Costa Rica	Switzerland	1
<i>Ralstonia solanacearum</i>	<i>Solanum tuberosum</i>	Ware potatoes	Egypt	Germany	1
<i>Scirtothrips dorsalis</i>	<i>Momordica charantia</i>	Vegetables	Cambodia*	Netherlands	1
<i>Spodoptera</i>	<i>Ananas</i>	Plants for planting	Costa Rica	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Spodoptera</i> (cont.)	<i>Basella alba</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Momordica charantia</i>	Vegetables	Pakistan	Ireland	1
<i>Spodoptera frugiperda</i>	<i>Capsicum frutescens</i>	Vegetables	Surinam	Netherlands	1
<i>Spodoptera littoralis</i>	<i>Rosa</i>	Cut flowers	Uganda	Netherlands	3
Thripidae	<i>Amaranthus tricolor</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Corchorus</i>	Vegetables (leaves)	India	United Kingdom	1
	<i>Luffa acutangula</i>	Vegetables	Ghana	United Kingdom	15
	<i>Luffa acutangula</i>	Vegetables	Pakistan	United Kingdom	2
	<i>Momordica</i>	Vegetables	Cambodia	United Kingdom	1
	<i>Momordica</i>	Vegetables	Dominican Rep.	United Kingdom	1
	<i>Momordica</i>	Vegetables	India	United Kingdom	6
	<i>Momordica</i>	Vegetables	Pakistan	United Kingdom	2
	<i>Momordica charantia</i>	Vegetables	Bangladesh	United Kingdom	1
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	United Kingdom	5
	<i>Solanum melongena</i>	Vegetables	Ghana	United Kingdom	2
<i>Thrips</i>	<i>Momordica charantia</i>	Vegetables	Sri Lanka	Italy	1
<i>Thrips palmi</i>	<i>Dendrobium</i>	Cut flowers	Thailand	France	1
	<i>Momordica</i>	Vegetables	India	United Kingdom	1
	<i>Momordica</i>	Vegetables	Pakistan	United Kingdom	3
	<i>Momordica</i>	Vegetables	Sri Lanka	United Kingdom	1
	<i>Momordica charantia</i>	Vegetables	Cambodia*	France	2
	<i>Momordica charantia</i>	Vegetables	Dominican Rep.	France	1
	<i>Momordica charantia</i>	Vegetables	Dominican Rep.	Italy	1
	<i>Momordica charantia</i>	Vegetables	Dominican Rep.	Netherlands	1
	<i>Momordica charantia</i>	Vegetables	Dominican Rep.	France	1
	<i>Solanum melongena</i>				
	<i>Orchidaceae</i>	Cut flowers	Thailand	Austria	1
	<i>Solanum aethiopicum</i>	Vegetables	Togo*	France	1
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	Netherlands	3
<i>Solanum melongena</i>	Vegetables	Surinam	Netherlands	1	
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	<i>Citrus latifolia</i>	Fruit	Pakistan	United Kingdom	1
<i>Xiphinema</i>	<i>Chrysalidocarpus</i>	Plants for planting	Costa Rica	Switzerland	1

• Fruit flies

Pest	Consignment	Country of origin	Destination	nb
<i>Anastrepha</i>	<i>Mangifera</i>	Dominican Rep.	Netherlands	2
	<i>Mangifera indica</i>	Dominican Rep.	Netherlands	2
	<i>Mangifera indica</i>	Grenada	United Kingdom	1
	<i>Mangifera indica</i>	Jamaica	United Kingdom	4
	<i>Mangifera indica</i>	Puerto Rico	Netherlands	1
	<i>Syzygium malaccense</i>	Surinam	Netherlands	2
<i>Bactrocera</i>	<i>Averrhoa carambola</i>	Malaysia	Netherlands	2
	<i>Capsicum frutescens</i>	Cambodia	Netherlands	5
	<i>Mangifera indica</i>	Burkina Faso	Germany	1
	<i>Mangifera indica</i>	Cameroon	France	1
	<i>Mangifera indica</i>	Cameroon	Switzerland	1

Pest	Consignment	Country of origin	Destination	nb
Bactrocera (cont.)	<i>Mangifera indica</i>	Cote d'Ivoire	France	3
	<i>Mangifera indica</i>	India	Netherlands	1
	<i>Mangifera indica</i>	India	United Kingdom	3
	<i>Mangifera indica</i>	Mali	France	4
	<i>Mangifera indica</i>	Mali	Spain	2
	<i>Mangifera indica</i>	Pakistan	Netherlands	2
	<i>Mangifera indica</i>	Pakistan	United Kingdom	13
	<i>Mangifera indica</i>	Thailand	France	1
	<i>Momordica</i>	India	United Kingdom	1
	<i>Psidium guajava</i>	Thailand	France	1
	<i>Syzygium samarangense</i>	Thailand	France	1
	<i>Ziziphus mauritiana</i>	Thailand	France	2
Bactrocera cucurbitae	<i>Momordica charantia</i>	Sri Lanka	France	1
Bactrocera dorsalis	<i>Mangifera indica</i>	Cameroon*	France	1
	<i>Mangifera indica</i>	India	France	3
	<i>Mangifera indica</i>	Thailand	France	5
	<i>Mangifera indica</i>	Vietnam	France	1
Bactrocera invadens	<i>Mangifera indica</i>	Cote d'Ivoire	Germany	1
Bactrocera zonata	<i>Mangifera indica</i>	India	France	2
	<i>Mangifera indica</i>	Pakistan	Sweden	1
Ceratitis cosyra	<i>Mangifera indica</i>	Burkina Faso	Belgium	1
	<i>Mangifera indica</i>	Burkina Faso	Germany	2
	<i>Mangifera indica</i>	Mali	Spain	1
Dacus	<i>Luffa acutangula</i>	Ghana	United Kingdom	1
Tephritidae (non-European)	<i>Capsicum</i>	Ghana	Germany	3
	<i>Capsicum</i>	Uganda	Germany	1
	<i>Capsicum frutescens</i>	Cambodia	Netherlands	1
	<i>Citrus reticulata</i>	Uruguay	Spain	1
	<i>Luffa acutangula</i>	Ghana	United Kingdom	1
	<i>Mangifera indica</i>	Burkina Faso	France	2
	<i>Mangifera indica</i>	Cameroon	France	2
	<i>Mangifera indica</i>	Cote d'Ivoire	Belgium	2
	<i>Mangifera indica</i>	Cote d'Ivoire	France	6
	<i>Mangifera indica</i>	Cote d'Ivoire	United Kingdom	1
	<i>Mangifera indica</i>	Dominican Rep.	Netherlands	1
	<i>Mangifera indica</i>	Dominican Rep.	Switzerland	1
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	1
	<i>Mangifera indica</i>	Guinea	United Kingdom	2
	<i>Mangifera indica</i>	India	France	1
	<i>Mangifera indica</i>	India	Switzerland	4
	<i>Mangifera indica</i>	India	United Kingdom	8
	<i>Mangifera indica</i>	Jamaica	United Kingdom	11
	<i>Mangifera indica</i>	Kenya	United Kingdom	4
	<i>Mangifera indica</i>	Mali	France	3
	<i>Mangifera indica</i>	Mali	Netherlands	1
	<i>Mangifera indica</i>	Pakistan	Netherlands	1
	<i>Mangifera indica</i>	Pakistan	Sweden	1
	<i>Mangifera indica</i>	Pakistan	United Kingdom	79
	<i>Mangifera indica</i>	Peru	France	1
	<i>Mangifera indica</i>	Senegal	Belgium	1

Pest	Consignment	Country of origin	Destination	nb
Tephritidae (non-European)	<i>Mangifera indica</i>	Senegal	France	1
	<i>Mangifera indica</i>	United Arab Emirates	United Kingdom	1
	<i>Mangifera indica</i>	Vietnam	United Kingdom	1
	<i>Manilkara zapota</i>	India	United Kingdom	1
	<i>Momordica</i>	India	United Kingdom	8
	<i>Momordica</i>	Kenya	United Kingdom	2
	<i>Momordica</i>	Sri Lanka	United Kingdom	1
	<i>Momordica charantia</i>	Pakistan	Ireland	1
	<i>Momordica charantia</i>	Sri Lanka	France	1
	<i>Psidium guajava</i>	Cameroon	France	1
	<i>Psidium guajava</i>	Nigeria	United Kingdom	1
	<i>Psidium guajava</i>	Thailand	Germany	1
	<i>Psidium guajava</i>	Thailand	United Kingdom	2
	<i>Pyrus communis</i>	South Africa	Germany	1
	<i>Solanum melongena</i>	Ghana	United Kingdom	1
	<i>Syzygium</i>	Thailand	United Kingdom	1
	<i>Syzygium samarangense</i>	Thailand	France	2
	<i>Trichosanthes cucumerina</i>	Sri Lanka	United Kingdom	1
	<i>Ziziphus mauritiana</i>	Thailand	United Kingdom	1

• Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Anoplophora</i>	Unspecified	Wood packing material (dunnage)	China	Czech Republic	1
<i>Anoplophora glabripennis</i>	Unspecified	Wood packing material	China	Germany	2
	Unspecified	Wood packing material	China	Switzerland	1
	Unspecified	Wood packing material (pallet)	China	Austria	2
	Unspecified	Wood packing material (pallet)	China	Germany	1
<i>Apriona germari</i>	Unspecified	Wood packing material (pallet)	China	Austria	1
<i>Batocera lineolata</i>	Unspecified	Wood packing material (pallet)	China	Switzerland	1
Bostrichidae	Unspecified	Wood packing material	Vietnam	Hungary	1
	Unspecified	Wood packing material (crate)	Pakistan	Poland	1
	Unspecified	Wood packing material (crate)	Malaysia	Switzerland	1
	Unspecified	Wood packing material (pallet)	India	Germany	1
	Unspecified	Wood packing material (pallet)	India	Poland	1
Cerambycidae	Unspecified	Wood packing material (pallet)	China	Austria	1
Coleoptera	Unspecified	Wood packing material	India	Spain	1
Insecta	Unspecified	Wood packing material (pallet)	Vietnam	Switzerland	1
	Unspecified	Wood packing material (pallet)	India	Switzerland	1
	Unspecified	Wood packing material (pallet)	China	Switzerland	2
	Unspecified	Wood packing material (pallet)	Brazil	Switzerland	1
	Unspecified	Wood packing material (pallet)	China	Switzerland	1
<i>Monochamus alternatus</i>	Unspecified	Wood packing material	China	United Kingdom	1
<i>Monochamus titillator</i>	Unspecified	Wood packing material	USA	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Scolytidae	Unspecified	Wood packing material (pallet)	China	Austria	2
	Unspecified	Wood packing material (pallet)	Brazil	Switzerland	1
<i>Sinoxylon</i>	Unspecified	Wood packing material	India	Germany	4
	Unspecified	Wood packing material	India	Poland	1
	Unspecified	Wood packing material	Vietnam	Poland	1
	Unspecified	Wood packing material (crate)	India	Germany	5
	Unspecified	Wood packing material (crate)	India	Switzerland	1
	Unspecified	Wood packing material (crate)	Sri Lanka	Switzerland	1
	Unspecified	Wood packing material (pallet)	India	Germany	9
	Unspecified	Wood packing material (pallet)	China	Germany	1
<i>Sinoxylon anale</i>	Unspecified	Wood packing material (crate)	India	Switzerland	1
<i>Tremex fuscicornis</i>	Unspecified	Wood packing material (crate)	China	Lithuania	1
<i>Xylothrips religiosus</i>	Unspecified	Wood packing material	Malaysia	Germany	1

• Bonsais

Pest	Consignment	Country of origin	Destination	nb
<i>Helicotylenchus, Pratylenchus</i>	<i>Juniperus chinensis, Juniperus rigida</i>	Japan	Italy	1
<i>Meloidogyne</i>	<i>Camellia sasanqua</i>	Japan	Italy	1
<i>Meloidogyne, Pratylenchus</i>	<i>Enkianthus perulatus, Taxus cuspidata</i>	Japan	Netherlands	1
<i>Pratylenchus</i>	<i>Juniperus chinensis, Rhododendron indicum</i>	Korea Rep.	Netherlands	1
<i>Pratylenchus, Xiphinema</i>	<i>Taxus cuspidata</i>	Japan	Netherlands	1
<i>Pseudaulacaspis pentagona</i>	<i>Ligustrum</i>	China	United Kingdom	1

Source: EPPO Secretariat, 2013-08.

2013/177 Phytophagous insects found on *Baccharis halimifolia* in France

Field surveys and a literature review were undertaken to develop an initial inventory of phytophagous insects found on the invasive alien plant *Baccharis halimifolia* (Asteraceae, EPPO List of Invasive Alien Plants) in its introduced range in France.

The field survey allowed the identification of 4 natural enemies of *B. halimifolia*: 2 soft scales (Coccidae), *Ceroplastes sinensis* and *Saissetia oleae*; and 2 aphids (Aphididae), *Aphis fabae* and *Aphis spiraecola*. The 2 aphid species were observed only on young leaves of new shoots without significant damage. Only *Ceroplastes sinensis* showed a capacity to alter the fertility of *B. halimifolia* and to lead to some mortality. However, *C. sinensis* is a polyphagous scale which is considered to be a crop pest, it is therefore not possible to consider it as a potential biological control agent.

Source: Fried G, Balmès V & Germain JF (2013) A contribution to the inventory and study of the impacts of phytophagous insects found on *Baccharis halimifolia* in its introduced range in France. *Bulletin OEPP/EPPO Bulletin* 43(2), 285-289.

Additional key words: invasive alien plants, biological control

Computer codes: APHIFA, APHISI, BACHA, CERPSI, SAISOL, FR

2013/178 Eradication and control of invasive alien plants in the Mediterranean Basin: results of the EPPO questionnaire

The EPPO Secretariat launched a questionnaire in 2010 to gather information on eradication and control actions against invasive alien plants in the Mediterranean Basin. Thirty-four (34) eradication actions were reported: 16 occurring in Spain, 7 in Italy, 7 in France, 1 in Portugal, 1 in Malta, and 2 on the southern rim of the Mediterranean, with 1 in Israel and 1 in Tunisia. Twenty-four (24) species were targeted, and the habitats where such actions were undertaken were most frequently coastal dunes, sandy shores and aquatic ecosystems. Control actions concerning 90 species were also reported. The results of this questionnaire show that a large number of eradication campaigns, as well as management actions, are being undertaken in Mediterranean countries.

The results of the EPPO questionnaire concerning eradication campaigns are summarized below.

Alien species targeted for eradication	Country
<i>Agave americana</i> (Agavaceae)	- Spain (on sand dunes in Andalucía)
<i>Ailanthus altissima</i> (Simaroubaceae, EPPO List of Invasive Alien Plants)	- Italy (Capraia island, Tuscany Archipelago National Park) - Italy (Montecristo island, Tuscany Archipelago National Park) - Italy (Isola delle Femmine, Nature reserve, Sicilia) - Spain
<i>Ambrosia confertiflora</i> (Asteraceae)	- Israel (Heffer valley)
<i>Asparagus asparagoides</i> (Asparagaceae, EPPO Alert List)	- Spain (Andalucía)
<i>Buddleia davidii</i> (Scrophulariaceae, EPPO List of IAP)	- Spain (Aragón)
<i>Carpobrotus edulis</i> (Aizoaceae, EPPO List of IAP)	- Spain (Minorca Island) - Spain (Valencia region)

Alien species targeted for eradication	Country
<i>Carpobrotus</i> spp. (= <i>C. edulis</i> & <i>C. acinaciformis</i>) (Aizoaceae, EPPO List of IAP)	- France (Bagaud Island) - Malta (Ir-Ramla tat-Torri (northern coast of the island of Malta) and Ir-Ramla l-Hamra (along the northern coast of the island of Gozo)) - Spain (Andalucía, on sand dunes)
<i>Cortaderia selloana</i> (Poaceae)	- Spain (Aragón)
<i>Cylindropuntia rosea</i> (Cactaceae)	- France (Salagou Lake) - Spain (Castellón, Valencia and Alicante)
<i>Eichhornia crassipes</i> (Pontederiaceae, EPPO A2 List)	- Spain (Valencia region)
<i>Leersia oryzoides</i> (Poaceae)	- Spain (Catalunia)
<i>Leptochloa fusca</i> subsp. <i>uninervia</i> (Poaceae)	- Spain (Catalunia)
<i>Ludwigia peploides</i> (Onagraceae, EPPO A2 List)	- Spain (Castellón, Valencia and Alicante)
<i>Marsilea drummondii</i> (Marsileaceae)	- France (Lac de l'Ecureuil, Esterel, domanial forest)
<i>Nicotiana glauca</i> (Solanaceae)	- France (Saint Laurent de Salanque)
<i>Oenothera biennis</i> (Onagraceae)	- Spain (Aragón)
<i>Opuntia stricta</i> (Cactaceae)	- Italy (Isola delle Femmine, Nature reserve, Sicilia).
<i>Pennisetum setaceum</i> (Poaceae, EPPO List of IAP) and <i>P. villosum</i> (Poaceae)	- France (Sète)
<i>Pistia stratiotes</i> (Araceae, EPPO List of IAP)	- Spain (Andalucía)
<i>Salvinia molesta</i> (Salviniaceae, EPPO List of IAP)	- France (Corse) - Italy (Pozzo del Merro) - Portugal (Southern Portugal)
<i>Solanum elaeagnifolium</i> (Solanaceae, EPPO A2 List)	- France (Etang de Berre) - Tunisia (Mahdia)
<i>Solanum linnaeanum</i> (Solanaceae)	- Italy (Isola delle Femmine, Nature reserve, Sicilia).
<i>Sicyos angulatus</i> (Cucurbitaceae, EPPO List of IAP)	- Italy (Parco del Serio, protected area) - Spain (Catalunia)

Source: Brunel S, Brundu G & Fried G (2013) Eradication and control of invasive alien plants in the Mediterranean Basin: towards better coordination to enhance existing initiatives. *Bulletin OEPP/EPPO Bulletin* 43(2), 290-308.

Additional key words: invasive alien plants, eradication, control

Computer codes: 1CBSG, AGVAM, AILAL, ASPAS, BUDDA, CBSSE, CDTSE, EICCR, FRSCO, LEFUN, LEROR, LUDPM, MASDR, NIOGL, OEOBI, OPURS, OPUST, PESSA, PESVI, PIIST, SAVMO, SIYAN, SOLEL, SOLSO, ES, FR, IL, IT, MT, PT, TN

2013/179 First report of *Sesbania punicea* in Corse (FR)

Sesbania punicea (Fabaceae, EPPO Observation List of Invasive Alien Plants) is reported as naturalized (= established) for the first time in Corse, France in 2012. The species had initially been recorded as casual (= transient) in Calvi and Galeria in 1996. Two populations of this plant are described, one of these is currently considered casual but the other is naturalized.

S. punicea is still used as an ornamental plant and was found in 2012 in Galeria again. The plant was found along a road, just north of a bridge over the Fango River close to where it had been planted. *S. punicea* is considered as casual there, even if it produces viable

seeds, and it may threaten the population of the protected *Delphinium pictum* (Ranunculaceae) growing nearby on the riverbed.

S. punicea was also recorded in Algajola in a ruderalized marsh along a road, close to the town, where it is considered as established. The plant escaped from an ornamental plantation and more than 50 individual plants were observed in the marsh, forming locally dense bushes covering several square meters, outcompeting other taxa. The number and age of the plants suggest that the population is more than 10 years old.

The two populations discovered in Corse do not currently represent major threats because the Galeria site suffers from drought and is not climatically optimal for *S. punicea*, and the Algajola site is a marsh with low biodiversity in a peri-urban area which probably will be built on in the near future. These observations nevertheless support the need for eradication of the species in Corse, to prevent it from spreading other sensitive sites.

Source: Tison JM (2013) Establishment of *Sesbania punicea* (Cav.) Benth. in Corsica. *Bulletin OEPP/EPPO Bulletin* 43(1), 193-194.

Additional key words: invasive alien plants, new record

Computer codes: SEBPU, FR

2013/180 First report of *Lemna valdiviana* in Italy

While *Lemna minuta* (Araceae) is already a widespread invasive alien plant in Europe, *Lemna valdiviana*, originating from the Americas, is reported for the first time in Italy. The species is reported as casual (= transient) in Lazio (Agro Pontino, Uffente river), and as naturalized (= established) in Sardegna (Valle di Palabanda, Cagliari) according to Podda *et al.* (2010).

L. valdiviana is a free-floating hydrophyte growing in aquatic habitats characterized by a very low waterflow. Italian populations show a vigorous vegetative reproduction, but no sexual reproduction.

Source: Iberite M, Iamónico D, Abati S & Abbate G (2011) *Lemna valdiviana* Phil. (Araceae) as a potential invasive species in Italy and Europe: taxonomic study and first observations on its ecology and distribution. *Plant Biosystems* 145(4), 751-757.

Podda L, Fraga Arguimbau P, Mayoral García-Berlanga O, Mascia F & Bacchetta G (2010) Comparación de la flora exótica vascular en sistemas de islas continentales: Cerdeña (Italia) y Baleares (España). *Anales del Jardín Botánico de Madrid* 67, 157-176.

Additional key words: invasive alien plants, new record

Computer codes: LEMVA, IT

2013/181 The impact of *Solanum elaeagnifolium* on the flower visitation and seed set of the native *Glaucium flavum*

Glaucium flavum (Papaveraceae) is a perennial herb that occurs along the Mediterranean shores and the coasts of Western Europe above sand dunes. The effect of the invasive alien plant *Solanum elaeagnifolium* (Solanaceae, EPPO A2 List) on flower visitation patterns and seed set of the co-flowering native *G. flavum* was examined. While observing flowering *G. flavum* plants in invaded and uninvaded sites, it appeared that *G. flavum* flowers in uninvaded sites received significantly more total visits.

In separate experiments it was shown that seed setting was not significantly affected by the presence of *S. elaeagnifolium* pollen.

Source: Tscheulin T, Petanidou, Potts SG & Settele J (2009) The impact of *Solanum elaeagnifolium*, an invasive plant in the Mediterranean, on the flower visitation and seed set of the native co-flowering species *Glaucium flavum*. *Plant Ecology* 205, 77-85.

Additional key words: invasive alien plants, impacts

Computer codes: GUCFL, SOLEL

2013/182 Distinguishing invasive alien plants from non-invasive ones through DNA barcoding

Certain plants belonging to the genera *Myriophyllum*, *Ludwigia* and *Cabomba* and to the Hydrocharitaceae family are particularly invasive in water bodies. However, many related species are commercially traded and non-invasive, and are very similar morphologically in a vegetative stage. Preventing the entry of the invasive alien plants belonging to these groups requires that they can be distinguished from non-invasive species. As DNA barcoding could be a useful identification tool to achieve this, a study has been undertaken on chloroplast loci and could distinguish the following species from their respective related species:

- *Egeria densa* (EPPO List of Invasive Alien Plants), *E. najas*, *Elodea canadensis*, *E. nuttallii* (EPPO List of IAP), *Lagarosiphon major* (EPPO List of IAP) and *L. muscoides* (Hydrocharitaceae);
- *Ludwigia adsendens*, *L. grandiflora* (EPPO A2 List), *L. inclinata*, *L. octovalvis*, *L. palustris*, *L. peploides* (EPPO A2 List), *L. repens* and *L. sedioides* (Onagraceae);
- *Myriophyllum alterniflorum*, *M. aquaticum* (EPPO List of IAP), *M. heterophyllum* (EPPO List of IAP), *M. robustum*, *M. simulans*, *M. spicatum*, *M. tuberculatum*, and *M. verticillatum* (Haloragaceae);

It appeared that a non-coding spacer (*trnH-psbA*) was the best performing barcode for the aquatic plant species studied. DNA barcoding may therefore be helpful with enforcing a ban on trade on such invasive alien plants, such as that which is already in place in the Netherlands.

Source: Ghahramanzadeh R, Esselink G, Kodde P, Duistermaat H, Van Valkenburg JLCH, Marashi SH, Smulders MJM & Van de Wiel CCM (2012) Efficient distinction of invasive aquatic plant species from non-invasive related species using DNA barcoding. *Molecular Ecology Resources*. doi: 10.1111/1755-0998.12020.

Additional key words: invasive alien plants, diagnostic

Computer codes: 1CABG, 1LUDG, 1MYPG, EERNA, ELDC, ELDE, ELDNA, LGAMA, LGAMU, LUDAC, LUDIN, LUDOC, LUDPA, LUDPE, LUDSD, LUDUR, LUDSD, MYPAL, MYPBR, MYPHE, MYPRO, MYPSM, MYPSP, MYPTU, MYPVE

2013/183 EPPO Expert Working Group for performing a PRA on *Parthenium hysterophorus*

Parthenium hysterophorus (Asteraceae) is an annual plant (or short-lived perennial under certain conditions) native to the subtropics of North and South America. Within the EPPO region, the species is so far only officially recorded in Israel. *P. hysterophorus* is reported as a weed in pastures and in several crops (e.g. cereals, vegetables, alfalfa, clover,

sugarcane, orchards). For example, in Ethiopia, the yield in *Sorghum bicolor* grain was reduced by 40 to 97% when *P. hysterophorus* was left uncontrolled throughout the season. Frequent contact with the plant or its pollen can produce serious allergic reactions such as dermatitis, hay fever and asthma in humans, but also in livestock.

The species was added to the EPPO Alert List in 2012. The Working Party on Phytosanitary Regulations decided in June 2012 that a Pest Risk Analysis (PRA) should be performed for this species. An Expert Working Group on *P. hysterophorus* met in Paris in 2013-07-02/05 to perform a PRA, on the basis of the hundreds of scientific publications available on the species. The overall conclusion of the PRA was that, if the pest spreads further in the EPPO region, it would be likely to establish in the EPPO Mediterranean countries and result in economic damage and health impacts.

A summary of the risk assessment is available on the EPPO website: http://www.eppo.int/MEETINGS/2013_meetings/EWG_PTNHY.htm

Source: EPPO Secretariat (2013-08).

Additional key words: invasive alien plants, pest risk analysis

Computer codes: PTNHY, IL