EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

## **EPPO**

## Reporting

## Service

Paris, 2003-04-01

Reporting Service 2003, No. 04

### **CONTENTS**

| 2003/049<br>2003/050<br>2003/051<br>2003/052<br>2003/053<br>2003/054<br>2003/055<br>2003/056<br>2003/057<br>2003/058<br>2003/059<br>2003/060<br>2003/061<br>2003/062<br>2003/063<br>2003/064<br>2003/065 | <ul> <li>New data on quarantine pests and pests of the EPPO Alert List</li> <li>Situation of several quarantine pests in Lithuania in 2002</li> <li>First report of <i>Xanthomonas axonopodis</i> pv. <i>dieffenbachiae</i> in Turkey</li> <li>Isolated finding of <i>Citrus tristeza closterovirus</i> in Algeria</li> <li>Results of the 2002 survey on <i>Plum pox potyvirus</i> in Canada</li> <li><i>Plum pox potyvirus</i> isolated from <i>Prunus spinosa</i> in Hungary</li> <li>Studies on <i>Plum pox potyvirus</i> recombinants</li> <li>First report of <i>Beet necrotic yellow vein benyvirus</i> (rhizomania) in Egypt</li> <li>First report of <i>Chrysanthemum stem necrosis tospovirus</i> in United Kingdom</li> <li>Situation of Grapevine flavescence dorée phytoplasma in Italy</li> <li>Grapevine flavescence dorée is suspected in Serbia (YU)</li> <li>First report of <i>Cameraria ohridella</i> in the United Kingdom</li> <li>Introduction of <i>Dryocosmus kuriphilus</i> into Piemonte, Italy: Addition to the EPPO Alert List</li> <li><i>Phyllonorycter issikii</i> (Lime leaf miner): addition to the EPPO Alert List</li> <li>Introduction of <i>Paratachardina lobata lobata</i> into Florida, US</li> <li>Further findings of <i>Ralstonia solanacearum</i> on <i>Pelargonium</i> in USA</li> <li>Detection methods for <i>Ralstonia solanacearum</i></li> </ul> |
|--|---|
| 2003/065   | - Detection methods for Ralstonia solanacearum  |
| <u>2003/066</u>  | - EPPO report on notifications of non-compliance (detection of regulated pests)   |

1, rue Le Nôtre Tel. : 33 1 45 20 77 94 E-mail : hq@eppo.fr 75016 Paris Fax : 33 1 42 24 89 43 Web : www.eppo.org



#### <u>2003/049</u> New data on quarantine pests and pests of the EPPO Alert List

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests and pests included on the EPPO Alert List. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

#### • New geographical records

*Peach latent mosaic pelamoviroid* (EU Annexes) is reported for the first time from Uruguay. PLMVd was detected in 2001 during a survey in 3 locations in the Canelones Department, the main peach-growing producing area (Promed posting, 2003). **Present, found in Canelones Department**.

*Peach latent mosaic pelamoviroid* (EU Annexes) is reported as present in Brazil, Nepal, Pakistan (Hadidi *et al.*, 1997). **Present no details.** 

Tomato ringspot nepovirus (EPPO A2 quarantine pest) was detected on soybean in Iran (Golnaraghi et al., 2002).

#### • Detailed records

During surveys carried out in Yucatán, Mexico, phytoplasmas related to but distinct from *Coconut lethal yellowing phytoplasma* (EPPO A1 quarantine pest) were detected. Samples had been collected from coconut trees showing leaf yellowing in Oaxaca in 1997 and in Guerrero in 1998 (trees were then destroyed for precautionary reasons). Nutfall and inflorescence necrosis symptoms which usually precede foliar yellowing were atypically absent or delayed on these trees (Harrison *et al.*, 2002).

*Xanthomonas axonopodis* pv. *citri* (EPPO A1 quarantine pest) was recently found in 3 new small areas in Florida (US), in the counties of Sarasota (first find in this county – in private gardens), Manatee (commercial citrus grove where infections had already been found in other parts of it) and Lee (private gardens). Eradication measures continue in Florida (DOACS Press Release, 2003).

#### • New host plants

Tomato spotted wilt tospovirus (EPPO A2 quarantine pest) is reported from the first time in Liguria, Italy, on *Euphorbia eritrea* (found in 2000 on glasshouse-grown pot plants) and on *Asclepias curassavica* (found in 2002 on a few glasshouse-grown pot plants). Salomone *et al.*, 2003.



#### Taxonomy

Considering morphological, molecular and serological characteristics, *Potato latent virus* (EPPO Alert list) is proposed as a new species in the genus *Carlavirus* (Brattey *et al.*, 2002).

#### **Source:**

- Brattey, C.; Badge, J.L.; Burns, R.; Foster, G.D.; George, E.; Goodfellow, H.A.; Mulholland, V.; McDonald, J.G.; Jeffries, C.J. (2002) Potato latent virus: a proposed new species in the genus Carlavirus. **Plant Pathology**, **51(4)**, **495-505**.
- Golnaraghi, A.R.; Shahraeen, N.; Pourrahim, R.; Farzadfar, S.; Ghasemi, A. (2002) First report of the natural occurrence of eight viruses affecting soybeans in Iran. **Plant Pathology**, **51(6)**, **p 794**.
- Hadidi, A.; Giunchedi, L.; Shamloul, A.M.; Poggi-Pollini, C.; Amer, M.A. (1997) Occurrence of peach latent mosaic viroid in stone fruits and its transmission with contaminated blades. **Plant Disease**, **81(2)**, **154-158**.
- Harrison, N.A.; Narváez, M.; Almeyda, H.; Cordova, I.; Carpio, M.L.; Oropeza, C. (2002) First report of group 16SrIV phytoplasmas infecting coconut palms with leaf yellowing symptoms on the Pacific Coast of Mexico. **Plant Pathology**, **51(6)**, **p 808**.
- Salomone, A.; Masenga, V.; Minuto, G.; Parodi, C.; Roggero, P. (2003) First report of *Tomato spotted wilt virus* (Tospovirus, Bunyaviridae) infecting *Euphorbia eritrea* and *Asclepias curassavica* in Liguria, Italy. New Disease Reports, Volume 7: February 2003 July 2003. http://www.bspp.org.uk/ndr/july2003/2003-33.htm
- Peach latent mosaic viroid Uruguay: first report. ProMED posting of 2002-30-11. http://www.promedmail.org
- Florida Department of Agriculture and Consumer Services DOACS Press Release of 2003-02-26. Commissioner Bronson announces new citrus canker quarantine areas in three Counties. http://www.doacs.state.fl.us/press/02262003\_2.html

**Additional key words:** new record, detailed record, new host plant, taxonomy

**Computer codes:** PHYP56, PLMVDO, TORSV0, TSWV00, XANTCI, BR, IT, MX, NP, PK, US, UY



### <u>2003/050</u> Situation of several quarantine pests in Lithuania in 2002

National surveys were carried in Lithuania for the presence of several quarantine pests. The results for 2002 are presented below. Earlier surveys (2000) had been presented in EPPO RS 2000/136.

Cacoecimorpha pronubana\* (EPPO A2 quarantine pest) was trapped (Delta traps) in 1 nursery of flowering and other ornamental plants. **Present, found in 1 nursery of ornamentals.** 

Clavibacter michiganensis subsp. michiganensis\*\* (EPPO A2 quarantine pest) was detected in one glasshouse of tomatoes. All infected tomatoes were destroyed, and other plants were put under strict surveillance. **Present, found in 1 glasshouse, under eradication.** 

Clavibacter michiganensis subsp. sepedonicus (EPPO A2 quarantine pest): 8 outbreaks were found, 6 of them were new. 8 potato cultivars were found infected (226.5 tons) by the bacterium, including 7 cultivars of seed potatoes (139 tons) and 1 cultivar of ware potatoes (87.5 tons). All contaminated potatoes were used for human or animal consumption. **Present, found in a few areas (8 outbreaks), under eradication.** 

Ditylenchus destructor (EU Annexes): 24 outbreaks were found in potato farms, including 17 new outbreaks. 628.4 tons of potatoes were infested by the nematode, including 476.9 tons of seed potatoes. All infested potatoes were used for human or animal consumption. **Present, found in a few areas (24 outbreaks), under eradication.** 

*Ditylenchus dipsaci* (EPPO A2 quarantine pest): 6 outbreaks were found in 2002. 4 outbreaks were found in peat bogs (14500 tons), and 2 outbreaks on flower bulbs grown on peat. All contaminated bulbs were destroyed, and commercialisation of infested peat was prohibited. **Present, found in a few areas (6 outbreaks), under eradication.** 

Frankliniella occidentalis (EPPO A2 quarantine pest): 4 outbreaks were observed in 1 botanical garden (50 plants) and in 3 glasshouses of flower production (0.264 ha). All infested plants were destroyed and glasshouses were disinfected. **Present, found in a few areas (4 outbreaks), under glasshouse only, under eradication.** 

Globodera rostochiensis (EPPO A2 quarantine pest): 61 outbreaks were found on a total of 344.059 ha. On infested areas it is now prohibited to grow potatoes and any other propagating material. **Present, found in some areas (61 outbreaks), under eradication.** 



Liriomyza bryoniae (EU Annexes): 24 outbreaks were found in vegetable and ornamental glasshouse crops. All infested plants were destroyed and glasshouses were disinfected. Present, found in a few areas (24 outbreaks), on glasshouse vegetable and ornamental crops only, under eradication.

Plum pox potyvirus (EPPO A2 quarantine pest): 28 orchards and nurseries were inspected (231.99 ha were inspected, out of a total area of 1195.05 ha). 3 outbreaks were found (one of them is new). 439 plum trees (*Prunus domestica*) were infected. 400 trees were pulled out and destroyed by burning. 39 trees could not be destroyed as the grower refused to do so without compensation. **Present, found in a few areas (3 outbreaks) on** *Prunus domestica*, **under eradication.** 

Source: NPPO of Lithuania, 2003-04.

**Additional key words:** new record, detailed record

**Computer codes:** CORBMI, CORBSE, DITYDE, DITYDI, FRANOC, HETDRO, LIRIBO, PPV000, TORTPR, LT

#### <u>2003/051</u> First report of *Xanthomonas axonopodis* pv. *dieffenbachiae* in Turkey

In spring 2001, a serious outbreak of a bacterial-like disease was observed on *Anthurium andreanum* plants grown for potted plant production in commercial glasshouses of the Mediterranean region, in Turkey. Disease incidence reached 20-25 %. Affected plants showed yellowish water-soaked lesions that enlarged and coalesced. Brown to black blighted areas were often observed together with a striking yellow zone along leaf margins. Bacterial ooze was also observed. 18 bacterial strains were isolated from diseased plants and identified as *Xanthomonas axonopodis* pv. *dieffenbachiae* (EPPO A1 quarantine pest) by using fatty acid profiles and pathogenicity tests on anthurium plants. This is the first report of this bacterium in Turkey. The situation of *Xanthomonas axonopodis* pv. *dieffenbachiae* in Turkey can be described as follows: **Present, only in protected cultivation. Found in 2001 on** *Anthurium andreanum***, in the Mediterranean region.** 

Source: Aysan, Y.; Sahin, F. (2003) First report of bacterial blight of anthurium caused

by *Xanthomonas axonopodis* pv. *dieffenbachiae* in Turkey. New Disease Reports, Volume 7: February 2003 - July 2003.

http://www.bspp.org.uk/ndr/july2003/2003-10.htm

Additional key words: new record Computer codes: XANTDF, TR

<sup>\*</sup> The EPPO Secretariat had previously no data on the occurrence of this pest in Lithuania.

<sup>\*\*</sup> This confirms earlier doubtful records.



#### <u>2003/052</u> <u>Isolated finding of Citrus tristeza closterovirus in Algeria</u>

The EPPO Secretariat has recently been informed by the NPPO of Algeria that an isolated focus of *Citrus tristeza closterovirus* (EPPO A2 quarantine pests) was found on two experimental plots of citrus propagation material. These plots were located at the experimental stations of Béni Tamou and Chébli (Wilaya of Blida). Until this finding, CTV had never been found at these two locations. Phytosanitary measures have immediately been taken: movement of citrus material from infected areas was prohibited and further tests (DAS-ELISA, immunoprinting, indexing) were done to delimit the extent of the infection. Samples were taken from 4869 trees and 4000 nursery plants grown at Béni Tamou and Chébli. CTV was not detected in the 4000 nursery plants tested. On trees used for the production of basic material, 4 trees out of 996 tested gave positive results (0.4%). On trees used for the production of pre-basic material, 18 trees out of the 580 tested gave positive results (3.1%). At Chébli, 70 positive trees were found out of the 3289 tested (2.1%). All 92 infected trees were destroyed. Surveys are continuing to verify the absence of the virus.

The situation of *Citrus tristeza closterovirus* in Algeria can be described as follows: **Present**, found only in 2 citrus multiplication plots at the experimental stations of Béni Tamou and Chébli (Wilaya of Blida), under eradication.

Source: NPPO of Algeria, 2003-05.

Additional key words: new record, eradication Computer codes: CTV000, DZ



### **2003/053** Results of the 2002 survey on *Plum pox potyvirus* in Canada

Plum pox potyvirus (PPV - EPPO A2 quarantine pest) was first found in Canada, in 2000, in limited areas of Ontario and Nova Scotia (see EPPO RS 2000/131). Since then, surveys and eradication measures have taken place in Canada. Results of the 2002 survey showed that the incidence of PPV is decreasing. In Ontario, all positive trees were located within existing quarantine areas. In the Niagara area, the number of positive samples was less in 2002 than in 2001. A small number of infected trees was detected in other isolated quarantine areas in Blenheim, Stoney Creek and Fonthill (PPV was no longer found in the Vittoria area). In Nova Scotia, as in 2001 PPV was no longer detected. PPV has never been found in British Columbia and Quebec fruit trees. In addition to orchards, PPV was not detected in all susceptible trees sampled as sources of budwood for propagation.

The situation of *Plum pox potyvirus* in Canada can be described as follows: **Present, found in a few places in Ontario, no longer found in Nova Scotia, under eradication.** 

Source: CFIA (Canadian Food Inspection Agency) web site

http://www.inspection.gc.ca/english/plaveg/hort/ppv/survey11e.shtml

Promed posting of 2003-02-02. Plum pox virus, fruit trees – Canada (ON &

NS). http://www.promedmail.org

Additional key words: detailed record Computer codes: PPV000, CA

#### <u>2003/054</u> Plum pox potyvirus isolated from Prunus spinosa in Hungary

Natural infections of *Prunus spinosa* (blackthorn) by *Plum pox potyvirus* (PPV – EPPO A2 quarantine pest) had previously been reported in Yugoslavia and Czech Republic but strains had not been characterized. In Hungary, PPV was found in *P. spinosa* plants in different regions. One isolate was characterized (inoculation to indicator plants, DAS-ELISA, RT-PCR) and results showed that it belonged to the M type of strains. It is felt that natural infection of *P. spinosa* is important from an epidemiological point of view. *P. spinosa* is a woody perennial and an overwintering host for aphid vectors (*Phorodon humuli* and *Brachycaudus helicrysi*), therefore it could act both as a primary source and plant reservoir for PPV.

Source: Salamon, P.; Palkovics, L. (2002) Characterization of *Plum pox virus* PPV-BT-

H isolated from naturally infected blackthorn (*Prunus spinosa* L. ) in Hungary.

European Journal of Plant Pathology, 108, 903-907.

Additional key words: host plant Computer codes: PPV000



#### 2003/055 Studies on *Plum pox potyvirus* recombinants

Recombination can occur in virus species, and recently a natural recombinant between an M and a D strain of *Plum pox potyvirus* (PPV – EPPO A2 quarantine pest) was detected in western Slovakia. Specific molecular tools were used to detect recombinants among isolates collected from *Prunus* orchards in Slovakia and in France. A relatively high number of recombinants was detected in several localities of western and central Slovakia on plums (*Prunus domestica*). No recombinant was found in France. In these studies, mixed populations of PPV-D and PPV-M strains were commonly found in Slovakia, whereas only one was detected in France. Under natural conditions, the recombinants did not develop particular symptoms on their hosts. Sequence analysis of the recombinants showed high homology. The authors concluded that PPV recombinants are viable and competitive with conventional PPV-M and D isolates, and that they might be more common than previously assumed.

Source: Glasa, M.; Marie-Jeanne, V.; Labonne, G.; Šubr, Z.; Kúdela, O.; Quiot, J.B.

(2002) A natural population of recombinant Plum pox virus is viable and

competitive under field conditions.

European Journal of Plant Pathology, 108, 843-853.

Additional key words: genetics Computer codes: PPV000

### <u>2003/056</u> First report of *Beet necrotic yellow vein benyvirus* (rhizomania) in Egypt

The EPPO Secretariat was informed by Prof. Abdel-Salam (University of Cairo) that *Beet necrotic yellow vein benyvirus* (causing rhizomania – EPPO A2 quarantine pest) has been found for the first time in Egypt. The virus was detected in some sugarbeet crops in the governorates of El-Fayoum and Giza.

The situation of *Beet necrotic yellow vein benyvirus* in Egypt can be described as follows: **Present, reported in 2002 in the governorates of El-Fayoum and Giza**.

**Source:** Abdel-Salam, A.M.; El-Shazly, M.A. (2002) Occurrence of rhizomania of

sugarbeet in Egypt associated with beet necrotic yellow vein benyvirus

infection.

Arab Journal of Biotechnology, 5(1), 135-150 (abstract).

Additional key words: new record Computer codes: BNYVV0, EG



<u>2003/057</u> First report of *Chrysanthemum stem necrosis tospovirus* in United Kingdom

In November 2002, diseased samples of chrysanthemum were sent for laboratory testing to CSL, United Kingdom. Samples showed distinct dark stem lesions and sometimes leaf necrosis. They had been collected from chrysanthemum plants (cv. Fiji and Calabria) grown under glasshouse in South West England. The crop originated from cuttings imported from Brazil. Considering these symptoms and the absence of fungal pathogens, samples were tested by ELISA for the presence of three tospoviruses: Chrysanthemum stem necrosis, Tomato spotted wilt and Impatiens necrotic spot. Only *Chrysanthemum stem necrosis tospovirus* (EPPO Alert List) was found in diseased samples. Its presence was confirmed by electron microscopy and mechanical inoculation to a range of indicator plants. This is the first report of *Chrysanthemum stem necrosis tospovirus* in United Kingdom. The infested crop has been removed and measures taken to eradicate the infection.

The situation of *Chrysanthemum stem necrosis tospovirus* in United Kingdom can be described as follows: **Present, only in protected cultivation. Found in 2002 on chrysanthemum in South West England, under eradication**.

Source: Mumford, R.A.; Jarvis, B.; Morris, J.; Blockley, A. (2003) The first report of

Chrysanthemum stem necrosis virus in United Kingdom.

New Disease Reports, Volume 7: February 2003 - July 2003.

http://www.bspp.org.uk/ndr/july2003/2003-06.htm

Additional key words: new record Computer codes: CSNV00, GB

#### 2003/058 Situation of Grapevine flavescence dorée phytoplasma in Italy

Considering the economic importance of Grapevine flavescence dorée phytoplasma (EPPO A2 quarantine pest) surveys and compulsory control are being implemented in Italy. Efforts are also being made to identify the phytoplasma species which are associated with grapevine yellows.

So far, Grapevine flavescence dorée phytoplasma has only been found in northern Italy (Osler & Refatti, 2002). Its vector, *Scaphoideus titanus*, is present in most grapevine-growing areas of northern Italy. Severe outbreaks of the disease are observed in the grapevine-growing regions of Piemonte, Lombardia and Veneto. The disease is expanding in Liguria and Emilia-Romagna (Piacenza and Reggio Emilia) but growers are trying to delay or prevent its spread by eliminating diseased plants and controlling the vector. In areas where the first severe outbreaks of the disease had been detected and where the vector had been controlled, the



number of new diseased grapevines is decreasing. Bois noir (stolbur) occurs practically in all regions of northern Italy and in several instances together with flavescence dorée. Symptoms of bois noir are rarely severe, and plant recovery may be observed. In the eastern provinces of Emilia-Romagna (Valtellina), in most part of Friuli-Venezia Giulia, and in the province of Trento (Trentino-Alto Adige) only bois noir is present.

Details on the situation in northern Italy

**Emilia-Romagna**: found recently in the west part of this region, particularly in the provinces of Piacenza, Reggio Emilia. Isolated foci were found in the province of Parma and Modena.

**Liguria**: found on the west part of the coast.

**Lombardia**: found in most parts of this region, severe outbreaks were seen in Oltrepó pavese and provinces of Mantova and Brescia. Isolated findings were made in the provinces of Cremona, Mantova, and Vicenza.

Friuli-Venezia Giulia: found near Pordenone (see EPPO RS 2003/042).

Piemonte: found in 3 provinces (Alessandria, Asti, and Cuneo).

**Trentino-Alto Adige**: first foci were found in 2001 near the infested zones in Veneto.

Veneto: found in a large part of this region (provinces of Padova, Treviso, Vicenza, Verona).

In central and southern Italy (Barba & Albanese, 2002), bois noir was frequently detected. Grapevine flavescence dorée phytoplasma was not detected, with the exception of one finding in Marche in 2002. The phytoplasma was detected in a few grapevines 35 years old, but its vector *Scaphoideus titanus* could not be found. Therefore, it is difficult to evaluate the significance from an epidemiological point of view of such finding. But this could indicate that there is a risk of spread of the disease towards the south of the country.

The situation of Grapevine flavescence dorée phytoplasma in Italy can be described as follows: Present, found in northern Italy (Emilia-Romagna, Liguria, Lombardia, Friuli-Venezia Guilia, Piemonte, Trentino-Alto Adige, Veneto), under official control.

Source: Osler, R.; Refatti, E. (2002) [Focus on the grapevine phytoplasma diseases –

Situation in northern Italy.]

Informatore Fitopatologico, 10, 42-48.

Barba, M.; Albanese, G. (2002) [Focus on the grapevine phytoplasma diseases

- Situation in central-southern Italy.]

Informatore Fitopatologico, 10, 49-52.

Additional key words: detailed record Computer codes: PHYP64, IT



### <u>2003/059</u> Grapevine flavescence dorée is suspected in Serbia (YU)

During a survey done in 2002 in Serbia, samples were collected from grapevines showing typical symptoms of a phytoplasma disease: leaf rolling, red discoloration, vein chlorosis and necrosis, and absence of lignification. Plant material was collected in one grapevine-growing region (Zupa Aleksandrovac) where the disease has been observed since 2000 with an increasing incidence from year to year. Molecular studies revealed the presence of phytoplasmas belonging to the Elm yellows subgroup 16SrV-C, therefore suggesting the presence of Grapevine flavescence dorée phytoplasma (EPPO A2 quarantine pest). Further studies are being carried out to verify the presence of the insect vector, *Scaphoideus titanus*, and confirm that this grapevine yellows is associated with Grapevine flavescence dorée phytoplasma.

Source: Duduk, B.; Ivanovic, M.; Dukic, N.; Botti, S.; Bertaccini, A. (2003) First report

of an Elm yellows subgroup 16SrV-C phytoplasma infecting grapevine in

Serbia.

Plant Disease, 87(5), p 599.

Additional key words: new record Computer codes: PHYP64, YU

#### **2003/060** First report of *Cameraria ohridella* in the United Kingdom

The NPPO of United Kingdom has recently informed the EPPO Secretariat of the occurrence of *Cameraria ohridella* (formerly on the EPPO Alert List) on *Aesculus hippocastanum* on its territory.

'In April 2002 the Forestry Commission of Great Britain published an Exotic Pest Alert (see http://www.forestry.gov.uk/website/pdf.nsf/pdf/horsechestnut.pdf/\$FILE/horsechestnut.pdf) warning of the imminent threat from *Cameraria ohridella*. In July 2002 the first finding of the moth in the UK was confirmed from Wimbledon, South-west London. Surveys of the area, which has significant numbers of Horse chestnut both as parkland and street trees, confirmed that a localised population of *C. ohridella* was present and had probably passed through one generation already. Surveys were carried out in adjoining London Boroughs and pheromone traps were erected at a number of sites along the southern English coast but no further reports have been received.

The situation of *Cameraria ohridella* in the UK can be described as follows: **Present, found** in one location, no official controls in place.'

**Source: NPPO of GB, 2003-05.** 

Additional key words: new record Computer codes: LITHOD, GB



<u>2003/061</u> <u>Introduction of *Dryocosmus kuriphilus* into Piemonte, Italy: Addition to the EPPO Alert List</u>

In spring 2002, in the south of Cuneo (Piemonte, Italy), a sample of *Castanea* showing unusual swollen buds was sent by a grower to the regional phytosanitary service. Examination revealed the presence of *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae), a species originating from China, which is considered as one of the most serious pest of *Castanea*. This insect has been introduced into Japan (in 1941), Korea (in 1963) and into the south-east of USA (in 1974) where it caused serious damage to *Castanea* plantations (as these were mainly planted with susceptible Chinese and Japanese cultivars). Losses of up to 60-80% of chestnut production have been observed, as well as tree mortality.

In Italy, it is suspected that the insect was introduced on planting material as eggs or first larval instars inside asymptomatic buds. The presence of *D. kuriphilus* was recorded in a few places in the communes of Boves, Peveragno, Robilante, Chiusa Pesio and Borgo San Dalmazzo, on Euro-Japanese hybrids of chestnut (*Castanea crenata x C. sativa*). The severity of the attack was high on some hybrid cultivars, but less severe on European chestnuts (although a few trees showed some damage). In Italy, phytosanitary inspections are being made in nurseries to avoid commercialization of infested plants, information is being sent to chestnut growers, and surveys are being done to delimitate the area of infestation. So far, the insect has not been found outside Piemonte. This information was presented to the EPPO Panel on Phytosanitary Measures which felt that this new dangerous pest of chestnut should be added to the EPPO Alert List. The information which has been used for the Alert List essentially came from a datasheet drafted by Dr Vettorazo, Servizi Fitosanitario, Regione Veneto) and a PRA report prepared by Dr Bosio (Settore Fitosanitario, Regione Piemonte) for the EPPO Panels on Phytosanitary Measures and on Quarantine Pests for Forestry.

<u>Dryocosmus kuriphilus</u> (Hymenoptera: Cynipidae – Oriental chestnut gall wasp)

Why Considering the recent introduction of *Dryocosmus kuriphilus*, a serious pest of chestnut,

into Europe (Piemonte, Italy), the EPPO Panel on Phytosanitary Measures considered that

it should be added to the EPPO Alert List.

Where **EPPO region:** Italy (Piemonte region, South of Cuneo province).

Asia: China, Korea, Japan.

America: USA (south east: Alabama, Georgia, North Carolina and Tennessee).

On which plants Dryocosmus kuriphilus attacks Castanea crenata (Japanese chestnut), C. dentata

(American chestnut), *C. mollissima* (Chinese chestnut), *C. sativa* (European chestnut) and their hybrids. This species also infests *C. seguinii* in China, but not yet other wild North American species of *Castanea*: *C. pumila* and *C. alnifolia*, which are very often grown

adjacent to infested chestnuts.

Damage D. kuriphilus is a univoltine species with female populations reproducing by

parthenogenesis. Females lay eggs inside buds. Early instar larvae overwinter inside buds. At the time of bud burst in spring, their presence induce the formation of a 5-20 mm diameter green or rose-coloured galls. Larvae feed inside these galls and adult wasps emerge in summer. By attacking vegetative buds and forming a gall, *D. kuriphilus* disrupts the twig growth and reduce fruiting. Yield reductions of up to 60-80% have been



Dissemination

observed. Severe infestations may result in the decline and death of chestnut trees. *D. kuriphilus* is considered in the areas where it is present, as the most severe pest of chestnut. *D. kuriphilus* can be spread over long distances by movements of infested twigs or shoots and young plants. Natural spread is also ensured by flying adult females.

Pathway

Plants for planting, cut branches, shoots, buds of *Castanea* from countries where *D. kuriphilus* occurs.

Possible risks

C. sativa is widely spread in the EPPO region in forests and plantations for wood and fruit production. D. kuriphilus is considered as the most serious pest of chestnut worldwide. It is very likely to be able to establish in many EPPO countries particularly in the centre and south where cultivated or wild chestnuts grow. Spread of the pest from the infested area in south Piemonte is very likely by females flying and movement of infested young chestnut plants and grafts. Detection and control of the pest is difficult (hidden mode of life). Transfer of the pest from infested areas in Asia and America to EPPO countries may occur, on limited scale, by introduction of infested grafting materials with eggs or first instar larvae inside the buds.

Source(s)

Draft EPPO Data Sheets. Dryocosmus kuriphilus, drafted by Dr Vettorazzo, 2003.

EPPO document. PRA for Dryocosmus kuriphilus by Dr. Bosio, 2003.

Bosio, G., Brussino, G.; Baudino, M.; Giordano, R.; Ramello, F. (2003) Una nuova minaccia per la castanicoltura piemontese. In provincia di Cuneo si sta diffondendo uno degli insectti più nocivi per il castagno. Quaderni della Regione Piemonte, Agricoltura no. 35, 24-25.

Available on Internet:

http://www.regione.piemonte.it/agri/ita/news/pubblic/quaderni/corrente/dwd/35\_pag\_24\_25.pdf

Melika, G.; Brussino, G.; Bosio, G.; Csóka, G. (2003) [Chestnut gall wasp (*Dryocosmus kuriphilus* Yasumatsu 1951 – Hymnoptera: Cynipidae), a new pest of chestnuts in Europe]. Növényvédelem, 39(2), 59-63.

Web site of the Regione Piemonte - Montagna et Foreste.

Un nuovo pericoloso parassita del castano: il cinipide galligeno *Dryocosmus kuriphilus* Yasumatsu by G. Bosio and G. Brussino. http://www.regione.piemonte.it/montagna/foreste/cinipide.htm

EPPO RS 2003/061 Panel review date

Entry date 2003-05



#### **2003/062** Phyllonorycter issikii (Lime leaf miner): addition to the EPPO Alert List

The EPPO Panel on Quarantine Pests for Forestry is currently reviewing the risks presented by forestry pests originating from the Russian Far East. During this process, it has studied *Phyllonorycter issikii* (Lepidoptera: Gracillariidae) and concluded that this leaf miner which attacks lime trees (*Tilia* spp.) and which has recently been introduced into new areas should be added to the EPPO Alert List. The information used for the EPPO Alert list has been taken from an EPPO Data sheet originally drafted by Dr Bassova (Russia) and from a PRA done by the EPPO Panel on Quarantine Pests for Forestry.

Phyllonorycter issikii (Lepidoptera: Gracillariidae – Lime leaf miner)

Why The EPPO Panel on Quarantine Pests for Forestry decided that *Phyllonorycter issikii*, a leaf

miner of *Tilia* spp., should be added to the EPPO Alert List because it has recently been found into new areas (e.g. in Lithuania, Noreika, 1998, Ukraine and several locations in

European Russia).

Where **EPPO region**: Lithuania (recently introduced, found in Pagegiai park in Silute district and

Vilnius city on *T. cordata*), Russia (South of the Far East; South and centre of the European part – introduced into the cities of Voronezh, Samara, Ufa, Moscow and their

vicinities), Ukraine (introduced).

Asia: Korea, Russia (South of the Far East), Japan.

On which plants Tilia cordata (preferred host), T. amurensis, T. mandshurica, T. maximowicziana and other

Tilia, but also Betula platyphylla. More data is needed on the susceptibility of T.

platyphyllos or T. europaea, which are widely planted in western Europe.

Damage P. issikii has two generations. Adults (brownish moths with a wingspan of 7-7.5 mm) are

characterized by seasonal dimorphism. Moths fly from the end of June till the middle of July. The second generation develops from the end of July till the end of August. Overwintering stages are pupae and adults. Larvae make rather large elliptical mines in the lower side of leaves of *Tilia* trees. For example, in 1987 in Voronezh region of European Russia, 70% of lime leaves were damaged. Presence of many leaf mines may lead to a

considerable reduction of the ornamental quality and vigour of *Tilia* trees.

Dissemination Data on the natural spread of *P. issikii* (adults are flying) is lacking. Over long distances,

the introduction of eggs, larvae and pupae to new areas is possible with plants for planting with leaves originating in areas of its distribution. Pupae can be introduced with fallen

leaves (with soil).

Pathway Plants for planting, leaves of *Tilia* with soil or vehicles, cut branches from countries where

P. issikii occurs.

Possible risks Tilia species are widely grown in the EPPO region, especially for ornamental purposes.

The pest causes serious damage to ornamental trees in countries where it occurs. It has entered and established in several new regions and is probably able to establish in many

other EPPO countries.

Source(s) EPPO Data sheet originally drafted by Dr Bassova (Russia), 2003.

Pest Risk Assessment done by the EPPO Panel on Quarantine Pests for Forestry, 2003.

Noreika, R. (1998) Phyllonorycter issikii (Kumata) (Lepidoptera: Gracillariidaee) in Lithuania. Acta Zoologica

Lituanica, Entomologia, 8(3), 34-37.

Available also on Internet - http://server.ekoi.lt/library/acta\_zoologica/1998/AZL98-3-34-37.pdf

EPPO RS 2003/062

Panel review date - Entry date 2003-05



#### **2003/063** Introduction of *Paratachardina lobata lobata* into Florida, US

Prof. F.W. Howard from the University of Florida, Fort Lauderdale (US), has attracted the attention of the EPPO Secretariat to a recent pest introduction into Florida.

In August 1999, the lobate lac scale, *Paratachardina lobata lobata* (Hemiptera: Keriidae) was first collected in the USA, in Florida, on a plant of *Hibiscus rosa-sinensis* in the town of Davie (Broward County). The infested plant was destroyed. However, the pest was later found in several other locations in Florida on a very wide range of host plants grown as ornamental shrubs or trees, or as fruit trees. As of October 2002, *P. lobata lobata* was found from Lake Worth (Palm Beach County) to Homestead (Miami-Dade County), covering an area of 128 km along the coast and from the coast to 28 km inland. It is also reported that in 1992, specimens of scale insects from the Bahamas had been identified as *P. lobata lobata*. This pest is thought to originate from Asia, and is reported in India and Sri Lanka.

The following species are considered as highly susceptible host plants: Averrhoa carambola, Bucida buceras, Chrysobalanus icaco, Conocarpus erectus, Ficus aurea, F. benjamina, F. microcarpa, Litchi chinensis, Mangifera indica, Myrsine guianensis, Myrica cerifera, Persea borbonia, Psychotria nervosa, Quercus geminata.

Attacked plants are covered with scales. The resinous scale covering is light to dark reddish brown (the resinous secretions of some Kerriidae species have traditionally been used for making lacquer, but the resinous secretions of *P. lobata lobata* have no commercial value). Sooty mould then develops on infested branches. Highly infested shrubs and small trees may die. In Florida, this new scale is considered as an unusually serious pest which has the potential to invade other tropical and sub-tropical areas via the movements of infested plants.

Source: Personal communication with Prof. Howard, University of Florida, Fort

Lauderdale, 2002-12-05.

Pest Alert. Lobate lac scale, Paratachardina lobata lobata (Chamberlin) (Hemiptera: Kerriideae) by A.B. Hamon, June 2001.

http://doacs.state.fl.us/~pi/enpp/ento/paratachardina.html

University of Florida. Featured Creatures http://creatures.ifas.ufl.edu/orn/scales/lobate\_lac.htm

Additional key words: new record, new pest Computer codes: US



### <u>2003/064</u> Further findings of *Ralstonia solanacearum* on *Pelargonium* in USA

Outbreaks of *Ralstonia solanacearum* race 3, biovar 2 (EPPO A2 quarantine pest) on *Pelargonium* have recently been reported from USA.

In 1999, *R. solanacearum* race 3 biovar 2 was detected in commercially grown *Pelargonium* in several glasshouses in New Jersey, New York, Pennsylvania, South Dakota and Wisconsin (see also EPPO RS 2002/166). Infected plants were subsequently destroyed and the glasshouses disinfected.

In February 2003, USDA confirmed the presence of *R. solanacearum* race 3 biovar 2 in *Pelargonium* in 4 glasshouses in Illinois, Indiana, Michigan and Wisconsin. The source of these infections was traced to imports of cuttings from Kenya (via rooting stations in Michigan and New Hampshire). Phytosanitary measures are being taken to eradicate the bacterium and prevent any further introduction: all infected plants have been destroyed and glasshouses disinfected, surveys are being done in USA to determine the extent of the disease in *Pelargonium*, and imports of *Pelargonium* from Kenya are prohibited until further notice.

**Note**: This is not the first time that outbreaks of *R. solanacearum* race 3, biovar 2 are reported on *Pelargonium* either from USA or from European countries (see EPPO RS 2001/106, 2001/124, 2002/115, 2002/166). In several instances, the sources of infection were imports of propagation material (e.g. cuttings) from Kenya or Guatemala. The risk of moving *R. solanacearum* race 3 biovar 2 on host plants other than Solanaceae, and in particular on *Pelargonium*, may need to be re-assessed.

**Source:** APHIS-PPQ – Factsheet. March 2003. Detection of *Ralstonia solanacearum* 

race 3 biovar 2 in the United States.

**APHIS Web site** 

http://www.aphis.usda.gov/lpa/pubs/fsheet faq notice/fs phralstonia.html

Additional key words: detailed record, eradication Computer codes: PSDMSO, US



#### <u>2003/065</u> Detection methods for *Ralstonia solanacearum*

Ralstonia solanacearum (EPPO A2 quarantine pest) is an heterogeneous species. Comparison of ITS sequences have shown that strains could be separated into 2 divisions, in accordance with RFLP data and 16S rRNA gene sequences: division I and II (including strains of biovar 2 race 3). Specific primers were selected for the identification of these two divisions. In addition, a new multiplex PCR was developed for the routine detection of *R. solanacearum* in host plants (in particular in potato tubers).

Source: Pastrik, K.H.; Elphinstone, J.G.; Pukall, R. (2002) Sequence analysis and

detection of Ralstonia solanacearum by multiplex PCR amplification of 16S-

23S ribosomal intergenic spacer region with internal positive control.

European Journal of Plant Pathology, 108(9), 831-842.

Additional key words: diagnostics Computer codes: PSDMSO

### <u>2003/066</u> EPPO report on notifications of non-compliance (detection of regulated pests)

The EPPO Secretariat has gathered the notifications of non-compliance (as they are now called by FAO ISPM no. 13) for 2003 received since the previous report (EPPO RS 2003/048) from the following countries: Algeria, Austria, Cyprus, Denmark, France, Finland, Germany, Ireland, Malta, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom. 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 (\*).

The EPPO Secretariat has selected notifications of non-compliance made because of the detection of regulated 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.

| Pest                     | Consignment  | Type of commodity                         | Country of origin                      | C. of destination          | nb          |
|--------------------------|--|---|--|----------------------------|-------------|
| Agromyzidae              | Artemisia dracunculus<br>Lisianthus<br>Unspecified | Cut flowers<br>Cut flowers<br>Unspecified | Israel<br>South Africa<br>South Africa | France<br>France<br>France | 2<br>1<br>1 |
| Ambrosia                 | Helianthus annuus                                  | Stored products                           | Czech Republic                         | Poland                     | 1           |
| Aphelenchoides fragariae | Astilbe  | Plants for planting                       | Netherlands                            | Poland                     | 3           |



| Pest   | Consignment   | Type of commodity  | Country of origin  | C. of destination  | nb   |
|--|---|--|--|--|--|
| Bemisia tabaci                               | Ajuga reptans Gelsemium sempervirens Hemigraphis alternata Hibiscus Hygrophila polysperma Hypericum androsaemum Hypericum androsaemum Nomaphila Ocimum basilicum Origanum Salvia hybrida Salvia hybrida Unspecified | Cuttings Plants for planting Aquarium plants Plants for planting Aquarium plants Cut flowers Cut flowers Aquarium plants Vegetables Vegetables Pot plants Pot plants Aquarium plants | Israel France Singapore Guatemala Singapore (Netherlands) Israel Singapore Israel Israel Israel Israel Singapore | United Kingdom United Kingdom United Kingdom France France United Kingdom United Kingdom France France France United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom | 1<br>1<br>1<br>1<br>1<br>2<br>1<br>2<br>1<br>1<br>1<br>1 |
| Bemisia tabaci, Icerya<br>seychellarum       | Manihot esculenta   | Vegetables   | Gambia   | United Kingdom   | 1  |
| Bemisia tabaci,<br>Mononychellus             | Manihot esculenta   | Vegetables   | Sierra Leone   | United Kingdom   | 1  |
| Citrus tristeza closterovirus                | Fortunella japonica   | Unspecified  | Italy  | Malta  | 1  |
| Cuscuta                                      | Trifolium resupinatum   | Seeds  | Italy  | Poland   | 2  |
| Erwinia                                      | Solanum tuberosum<br>Solanum tuberosum<br>Solanum tuberosum   | Seed potatoes<br>Seed potatoes<br>Seed potatoes  | Belgium<br>France<br>Netherlands   | Cyprus<br>Cyprus<br>Cyprus   | 3<br>1<br>3  |
| Erwinia, Fusarium                            | Solanum tuberosum   | Seed potatoes  | Netherlands  | Cyprus   | 9  |
| Erwinia, Fusarium,<br>Phytophthora infestans | Solanum tuberosum   | Seed potatoes  | Netherlands  | Cyprus   | 1  |
| Erwinia, Phytophthora infestans              | Solanum tuberosum   | Seed potatoes  | Belgium  | Cyprus   | 1  |
| Frankliniella occidentalis                   | Gypsophila<br>Gypsophila  | Cut flowers<br>Cut flowers   | South Africa<br>South Africa   | France<br>France   | 1<br>1   |
| Fusarium                                     | Solanum tuberosum   | Seed potatoes  | Germany  | Cyprus   | 1  |
| Globodera                                    | Solanum tuberosum   | Seed potatoes  | Netherlands  | Germany  | 1  |
| Globodera pallida,<br>Heterodera             | Machinery (excavators)  | Soil   | Japan  | United Kingdom   | 1  |
| Helicoverpa armigera                         | Dianthus Dianthus Pelargonium Phaseolus Phaseolus Pisum Pisum sativum Pisum sativum   | Cut flowers Cut flowers Cuttings Vegetables Vegetables Vegetables Vegetables Vegetables  | Kenya<br>Kenya<br>Kenya<br>Egypt<br>Kenya<br>Kenya<br>Egypt<br>Kenya   | Netherlands United Kingdom United Kingdom Netherlands Netherlands United Kingdom Netherlands Netherlands   | 1<br>1<br>1<br>1<br>1<br>1<br>1<br>7                     |



| Pest  | Consignment  | Type of commodity   | Country of origin   | C. of destination  | nb                                   |
|---|--|---|---|--|--------------------------------------|
| Helicoverpa armigera and many other pests       | Leucadendron   | Cut flowers   | South Africa  | United Kingdom   | 1                                    |
| Helicoverpa armigera,<br>Lampides boeticus      | Pisum sativum  | Vegetables  | Kenya   | United Kingdom   | 1                                    |
| Helicoverpa armigera,<br>Spoladea recurvalis    | Pisum sativum  | Vegetables  | Gambia  | United Kingdom   | 1                                    |
| Lepidoptera                                     | Arachis hypogea  | Stored products   | South Africa  | France   | 1                                    |
| Leptinotarsa decemlineata                       | Petroselinum crispum<br>Spinacia oleracea  | Vegetables<br>Vegetables  | Italy<br>France   | United Kingdom<br>United Kingdom   | 1<br>1                               |
| Liriomyza                                       | Allium fistulosum<br>Allium fistulosum<br>Dendranthema<br>Dendrenthema<br>Ocimum basilicum<br>Verbena<br>Verbena | Vegetables Vegetables Cut flowers Cut flowers Vegetables Vegetables Cuttings Cuttings | Mexico<br>Mexico<br>Colombia<br>Netherlands<br>Israel<br>Thailand<br>Denmark<br>Kenya | United Kingdom United Kingdom France United Kingdom France Denmark Norway United Kingdom | 1<br>1<br>1<br>1<br>1<br>3<br>1<br>1 |
| Liriomyza (suspect huidobrensis)                | Eryngium   | Cut flowers   | Kenya   | United Kingdom   | 1                                    |
| Liriomyza huidobrensis                          | Pisum<br>Pisum sativum<br>Pisum sativum<br>Trigonella foenum-graecum<br>Verbena                                  | Vegetables<br>Vegetables<br>Vegetables<br>Vegetables<br>Cuttings                      | Kenya<br>Kenya<br>Kenya<br>Cyprus<br>Kenya  | United Kingdom<br>Netherlands<br>United Kingdom<br>United Kingdom<br>United Kingdom      | 1<br>3<br>1<br>1                     |
| Liriomyza huidobrensis,<br>Helicoverpa armigera | Pisum  | Vegetables  | Kenya   | United Kingdom   | 1                                    |
| Maruca vitrata, Virachola antalus, Pyralidae    | Phaseolus  | Vegetables  | Kenya   | United Kingdom   | 1                                    |
| Monilinia fructicola                            | Prunus domestica<br>Prunus domestica   | Fruits<br>Fruits  | Argentina<br>South Africa   | United Kingdom<br>United Kingdom   | 1<br>1                               |
| Oryctes rhinoceros                              | Sanseviera   | Pot plants  | Malaysia  | United Kingdom   | 1                                    |
| Pepino mosaic potexvirus                        | Lycopersicon esculentum<br>Lycopersicon esculentum<br>Lycopersicon esculentum                                    | Vegetables<br>Vegetables<br>Vegetables  | Spain<br>Spain (Canary isl.)<br>Spain (Canary isl.)                                   | United Kingdom<br>Guernsey<br>United Kingdom   | 1<br>1<br>2                          |
| Phoma, Erwinia                                  | Solanum tuberosum  | Seed potatoes   | United Kingdom<br>(Northern Ireland)  | Cyprus   | 2                                    |
| Phoma, Erwinia,<br>Phytophthora infestans       | Solanum tuberosum  | Seed potatoes   | United Kingdom<br>(Northern Ireland)  | Cyprus   | 2                                    |



| Pest                                      | Consignment  | Type of commodity  | Country of origin  | C. of destination   | nb  |
|---|--|--|--|---|---|
| Phytophthora ramorum                      | Rhododendron<br>Rhododendron<br>Rhododendron<br>Rhododendron catawbiense<br>Rhododendron catawbiense<br>Rhododendron, Viburnum<br>Viburnum tinus<br>Viburnum tinus | Plants for planting Pot plants Pot plants Plants for planting Pot plants | Belgium<br>Germany<br>Netherlands<br>Netherlands<br>Germany<br>Netherlands<br>Netherlands<br>Netherlands | United Kingdom United Kingdom United Kingdom United Kingdom Sweden Norway United Kingdom United Kingdom United Kingdom United Kingdom | 2<br>1<br>1<br>2<br>1<br>1<br>1<br>3<br>2 |
| Ralstonia solanacearum                    | Solanum tuberosum  | Ware potatoes  | Bangladesh   | United Kingdom  | 2   |
| Rhizopertha dominica                      | Triticum   | Stored products  | Czech Republic   | Poland  | 1   |
| Sesia apiformis                           | Populus  | Plants for planting  | Italy  | Malta   | 1   |
| Sitophilus oryzae                         | Triticosecale hybrids<br>Triticum  | Stored products<br>Stored products   | Czech Republic<br>Czech Republic   | Poland<br>Poland  | 2<br>2                                    |
| Spodoptera                                | Rosa alba  | Cut flowers  | South Africa   | United Kingdom  | 1   |
| Spodoptera littoralis                     | Pelargonium<br>Pelargonium zonale  | Cuttings<br>Cuttings   | Israel<br>Israel   | Netherlands<br>United Kingdom   | 1 2                                       |
| Tetranychus urticae                       | Bracteantha bracteata  | Plants for planting  | Australia  | United Kingdom  | 1   |
| Thripidae (suspect Thrips palmi)          | Momordica charantia  | Vegetables   | Dominican Rep.   | United Kingdom  | 1   |
| Thrips                                    | Dianthus<br>Unspecified  | Cut flowers<br>Leaves  | Kenya<br>South Africa  | France<br>France  | 1<br>1                                    |
| Thrips palmi                              | Dendrobium<br>Orchidaceae  | Cut flowers<br>Plants for planting   | Thailand<br>Thailand   | Netherlands<br>France   | 2<br>1                                    |
| Thysanoptera                              | Momordica charantia<br>Solanum aculeatissimum<br>Solanum melongena   | Vegetables<br>Vegetables<br>Vegetables   | Vietnam<br>Thailand<br>Thailand  | France<br>France<br>France  | 1<br>1<br>1                               |
| Tingidae (suspect<br>Stephanitis takeyai) | Pieris japonica  | Plants for planting  | Italy  | United Kingdom  | 1   |
| Trialeurodes vaporariorum                 | Hypericum  | Cut flowers  | Zimbabwe   | France  | 1   |
| Tribolium                                 | Hordeum vulgare<br>Triticosecale hybrids<br>Triticum   | Stored products<br>Stored products<br>Stored products  | Czech Republic<br>Czech Republic<br>Czech Republic   | Poland<br>Poland<br>Poland  | 3<br>1<br>1                               |



#### • Fruit flies

| Pest                     | Consignment                         | Country of origin  | C. of destination | nb |
|--------------------------|-------------------------------------|--------------------|-------------------|----|
| Ceratitis                | Mangifera indica                    | Zimbabwe           | France            | 1  |
| Ceratitis capitata       | Citrus nobilis                      | Italy              | Poland            | 1  |
|                          | Citrus nobilis<br>Citrus reticulata | Spain<br>(Germany) | Poland<br>Poland  | 1  |
|                          | Citrus reticulata                   | Greece             | Poland            | 1  |
|                          | Citrus reticulata                   | Italy              | Poland            | 1  |
| non-European Tephritidae | Mangifera indica                    | Brazil             | France            | 1  |
| • •                      | Mangifera indica                    | Indonesia          | France            | 1  |
|                          | Mangifera indica                    | Kenya              | France            | 1  |
|                          | Mangifera indica                    | Peru               | France            | 1  |
|                          | Mangifera indica                    | Thailand           | France            | 1  |
|                          | Psidium guajava                     | Thailand           | France            | 6  |
|                          | Syzygium samarangense               | Thailand           | France            | 1  |
|                          | Ziziphus                            | Thailand           | France            | 1  |

#### • Wood

| Pest                               | Consignment  | Type of commodity   | <b>Country of origin</b>                             | C. of destination   | nb                    |
|------------------------------------|--|---|--|---|-----------------------|
| Anoplophora (suspect glabripennis) | Non coniferous   | Packing material  | China  | Sweden  | 1                     |
| Coleoptera                         | Entandrophragma candollei                                      | Wood and bark   | Cameroon   | France  | 1                     |
| Grub holes > 3 mm                  | Larix sibirica Larix sibirica Non-coniferous Picea Unspecified | Wood and bark<br>Dunnage<br>Packing material<br>Wood and bark<br>Packing material | Russia<br>Russia<br>China<br>Czech Republic<br>China | Austria<br>Austria<br>Germany<br>United Kingdom<br>France | 3<br>1<br>1<br>1<br>1 |
| Monochamus, grub holes > 3 mm      | Larix  | Wood  | Russia   | Finland   | 3                     |

#### • Bonsais

| Pest                      | Consignment          | Country of origin | Country of destination           | nb     |
|---------------------------|----------------------|-------------------|----------------------------------|--------|
| Dialeurodes citri         | Ligustrum<br>Serissa | China<br>China    | United Kingdom<br>United Kingdom | 1<br>1 |
| Helicotylenchus dihystera | Acer platanoides     | China             | United Kingdom                   | 1      |
| Rhizoecus hibisci         | Ficus, Serissa       | (Netherlands)     | United Kingdom                   | 1      |

**Source:** EPPO Secretariat, 2003-05.