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Invasive Plants

2015/065 Recruitment of the Co-ordinator for the EU Minor Uses Co-ordination Facility

The EPP0 Secretariat is pleased to announce the establishment of an EU Minor Uses Co-ordination Facility, hosted by EPP0 and jointly funded by the EU and by the governments of France, Germany and the Netherlands. This new Facility will address gaps in pest and disease control measures available for 'minor crops' and for minor pests and diseases on other crops. The Facility already has its own account and budget, as well as a Steering Group comprising representatives of the funders. The Steering Group held its first meeting on the 29th April 2015, and agreed to start the process of recruiting a Co-ordinator to lead the work of the Facility.

The advertisement for the Co-ordinator post is available from the EPP0 website. All applications should be made online before Monday 15th of June 2015 (midday 12.00): <http://www.eppo.int/News&Events/minor-uses.htm>

Source: EPP0 Secretariat (2015-05).

2015/066 *Anoplophora chinensis* found again in Croatia

In Croatia, *Anoplophora chinensis* (Coleoptera: Cerambycidae - EPP0 A2 List) was first found in a nursery in Turanj, near Zadar, in 2007 (see EPP0 RS 2009/047). The infested plants belonged to a consignment of potted plants (600 *Magnolia* sp., *Lagerstroemia* sp. and 9 200 *Acer palmatum*) which had been imported from China in February 2007. The infestation was discovered six months later when 1 dead adult and about 50 trees infested with larvae were found. A survey program was initiated in 2008, and phytosanitary measures were implemented to eradicate the pest and prevent any further spread. During the following years, visual inspections were performed 6 times per year, from May to October. From 2008 to 2010, 112 larvae of *A. chinensis* were detected, and all of them were found in the nursery in Turanj. Although mixed with highly infested plants, not a single magnolia was found to be infested with *A. chinensis*, whereas roses growing nearby were found to be infested (7 positive samples). In 2011, sniffer dogs were used for the first time in Croatia for the detection of *A. chinensis*, in cooperation with the Austrian team which has initiated this non-destructive inspection method. The investigation of the same area resulted in the finding of only 1 infested *Lagerstroemia indica* plant in the same nursery in Turanj.

In 2014, during the *A. chinensis* official survey, 101 visual inspections were carried out in 76 locations (7 nurseries, 25 garden centres, and 44 public areas and private gardens). Out of the 29 collected samples, 28 were positive. The presence of *A. chinensis* was confirmed in the coastal and urban areas of Sveti Filip i Jakov and Turanj (both in Zadar county). The pest was found on plants of *Acer* sp. and *Melia azedarach* in family-run campsites, private gardens, one nursery and a public area (at the beach). In addition, one outbreak of *A. chinensis* was detected in the continental part of Northern Croatia, in one nursery in Rugvica (Zagreb county). In this nursery, larvae of the pest were detected in 3 *Acer* plants. During this survey, forest areas were also inspected. In total, 9 visual inspections were carried out in forests located in the vicinity of garden centres, as well as around the nurseries in Turanj and Rugvica. 14 samples of larvae were collected (including 2 from Turanj and 11 from Rugvica), but all PCR results were negative. Eradication measures were immediately put into place and included: destruction of 41 infested trees (*Acer* sp., *M. azedarach*) and of 162 potential host plants present within a radius of 100 m around infested trees (*Acer*, *Citrus*, *Malus*, *Platanus*, *Populus*, *Pyrus*, *Rosa*, *M. azedarach* and

Prunus laurocerasus); prohibition to move potentially infested plants out of the demarcated area; prohibition to plant new host plants in the demarcated area; information campaign to raise public awareness (leaflets, brochures and web pages inviting the public to notify the NPPO of any suspicious findings).

The situation of *Anoplophora chinensis* in Croatia can be described as follows: **Transient, under eradication.**

Source: NPPO of Croatia (2015-04-14).

Personal communication with Andrija Vukadin (Institute for Plant Protection, Zagreb, Croatia, 2015-03).

Vukadin A (2015) [New findings of *Anoplophora chinensis* on *Acer negundo* and *Melia azedarach* in public areas in Sveti Filip i Jakov and Turanj]. *Glasiilo Biljne Zastite* 15(1/2), 12-13 (in Croatian).

Additional key words: detailed record

Computer codes: ANOLCN, HR

2015/067 First report of *Anoplophora chinensis* in Turkey

In 2014-06-12, the presence of *Anoplophora chinensis* (Coleoptera: Cerambycidae - EPPO A2 List) was reported on *Acer palmatum*, *A. saccharum* and *Salix* sp. in a nursery located in Şile, near Istanbul (on the Black Sea coast). The NPPO of Turkey informed the EPPO Secretariat that all infested trees have been destroyed. Surveys were carried out in the region concerned and all trees belonging to the same lot were examined. In addition, survey activities have been initiated across the country. Control measures were applied in accordance with the Turkish legislation ('Regulation on the control of *Phytophthora ramorum*, *Gibberella circinata*, *Anoplophora chinensis* and *Dryocosmus kuriphilus*'), which is in line with the EU legislation. As a result of these surveys, no other findings have been made, and it is considered that the pest has been found only once and eradicated.

The situation of *Anoplophora chinensis* in Turkey can be described as follows: **Transient, under eradication.**

Source: Hızal E, Arslangündoğdu Z, Göç A, Ak M (2015) [The new record for Turkish invasive alien insect fauna *Anoplophora chinensis* (Forster; 1771) (Coleoptera: Cerambycidae)]. *Journal of the Faculty of Forestry Istanbul University* 65(1), 7-10 (in Turkish).

http://dergipark.ulakbim.gov.tr/jffiu/article/viewFile/5000046301/pdf_364

NPPO of Turkey (2015-04).

Official Gazette (Resmî Gazete) no. 29033 of 2014-06-17 (in Turkish).

<http://www.resmigazete.gov.tr/eskiler/2014/06/20140617.pdf>

Additional key words: new record

Computer codes: ANOLCN, TR

2015/068 Unconfirmed report of *Anoplophora glabripennis* in Turkey

In 2014-07-07, several specimens of *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 List) were reported by scientists in Zeytinburnu, near Istanbul. The insect was found on trees of *Acer negundo* in the garden of Abdi Ipekçi Sport Hall and along a street. Zeytinburnu is located in the European part of the Istanbul province along the Marmara Sea coast. Adult beetles, egg-laying sites and exit holes were observed (Ayberk *et al.*, 2014). However, this finding is not confirmed by the Turkish NPPO, as official investigations are still ongoing and have not detected the pest.

The situation of *Anoplophora glabripennis* in Turkey can be described as follows: **Absent, a report published in 2014 is not confirmed by the NPPO.**

Source: Ayberk H, Ozdikmen H, Cebect H (2014) A serious pest alert for Turkey: a newly introduced invasive longhorned beetle, *Anoplophora glabripennis* (Cerambycidae: Lamiinae). *Florida Entomologist* 97(4), 1852-1855.
<http://journals.fcla.edu/flaent/article/view/83906/80796>

NPPO of Turkey (2015-04).

Additional key words: unconfirmed record

Computer codes: ANOLGL, TR

2015/069 Unconfirmed report of *Malacosoma americanum* in Turkey

During a study on nucleopolyhedroviruses infecting *Malacosoma* species in Turkey, the presence of *Malacosoma americanum* (Lepidoptera: Lasiocampidae - EPPO A1 List) was reported. The pest was found on various host plants (unspecified), in Gümüşhane (Black Sea region). A new nucleopolyhedrovirus was isolated from naturally infected specimens of *M. americanum*. However, the Turkish NPPO considers that the identification of the pest is unreliable and is currently checking the identity of the collected specimens.

The situation of *Malacosoma americanum* in Turkey can be described as follows: **Absent, a report published in 2014 is not confirmed by the NPPO.**

Source: Demir I, Nałçacıoğlu R, Mohammad Gholizad L, Demirbag Z (2014) A highly effective nucleopolyhedrovirus against *Malacosoma* spp. (Lepidoptera: Lasiocampidae) from Turkey: isolation, characterization, phylogeny, and virulence. *Turkish Journal of Agriculture and Forestry* 38, 462-470.
<http://journals.tubitak.gov.tr/agriculture/issues/tar-14-38-4/tar-38-4-5-1307-32.pdf>

NPPO of Turkey (2014-04).

Additional key words: unconfirmed record

Computer codes: MALAAM, TR

2015/070 First reports of *Maconellicoccus hirsutus* and *Phenacoccus peruvianus* in Tunisia

In 2014, two mealybugs, *Maconellicoccus hirsutus* (EPPO A2 List) and *Phenacoccus peruvianus* (both Hemiptera: Pseudococcidae) were observed for the first time in Tunisia.

The first specimens of *M. hirsutus* were collected during July and August from *Hibiscus rosa-sinensis* in different localities of Sousse governorate (Akouda, Chott Mariem, Port

Kantaoui). Considering the number of attacked plants (e.g. 40 hibiscus plants at Port Kantaoui spread over a 2-4 km² area), it is concluded that the pest is well established. The situation of *Maconellicoccus hirsutus* in Tunisia can be described as follows: **Present, first found in 2014 in Sousse governorate.**

P. peruvianus, the bougainvillea mealybug, is an invasive species which is currently spreading around the Mediterranean Basin. In Tunisia, it was collected on *Bougainvillea glabra* and *Citharexylum quadrangularis* in several locations of Sousse governorate (Akouda, Sousse and Port Kantaoui) during summer 2014.

Source: Ben Halima-Kamel M, Germain JF, Mdellel F (2015) First records of two mealybugs, *Maconellicoccus hirsutus* (Green) and *Phenacoccus peruvianus* Granara de Willink, in Tunisia and the North of Africa. *Bulletin OEPP/EPPO Bulletin* 45(1), 139-143.

Additional key words: new record

Computer codes: PHENHI, PHENPR, TN

2015/071 *Ceratitis capitata* found in Puerto Rico

In 2015-04-02, the presence of *Ceratitis capitata* (Diptera: Tephritidae - EPPO A2 List) was officially confirmed in Puerto Rico. Two specimens were caught in traps (in 2015-03-04 and 2015-03-19) in the southern part of the municipality of Cabo Rojo. Eradication measures are being implemented and a communication campaign will be launched to inform the public about the risks of moving fruits and vegetables from the infested area.

The situation of *Ceratitis capitata* in Puerto Rico can be described as follows: **Transient, under eradication.**

Source: INTERNET
Departamento de Agricultura. Comunicado de prensa. Gobierno Federal nos alerta sobre presencia de Mosca del Mediterraneo en el Municipio de Cabo Rojo (2015-04-02). <http://www.agricultura.pr.gov/>

Additional key words: detailed record

Computer codes: CERTCA, PR

2015/072 Situation of several thrips species in Guadeloupe and Martinique

A recent paper provides a detailed check-list of thrips species present in Guadeloupe and Martinique. This check-list is based on previously published records and results from a survey carried out over more than 20 years on both islands. Information on host plants and natural enemies is also included. The EPPO Secretariat has extracted below the information regarding regulated thrips species and species which were formerly on the EPPO Alert List.

Echinothrips americanus (formerly EPPO Alert List): was collected on *Gossypium* sp. in Guadeloupe (new record).

On both islands, *Frankliniella occidentalis* (EPPO A2 List) has been a pest of greenhouse chrysanthemums and roses over the years (it was also collected on *Fragaria vesca* and *Lactuca sativa*). Its presence was linked to imports of chrysanthemum plants from Europe. However, as chrysanthemum production has ceased, *F. occidentalis* has not established and has now virtually disappeared from Guadeloupe and Martinique.

Microcephalothrips abdominalis (formerly EPPO Alert List) occurs in Martinique.

Scirtothrips dorsalis (EPPO A2 List) was collected on *Vitis vinifera* in Guadeloupe (new record).

Thrips palmi (EPPO A1 List) was first recorded in Guadeloupe and Martinique in 1985, it was a very important pest of several crops (melon, cucumber, chili pepper and eggplant) but its populations decreased considerably over the last 15 years and its economic importance is now limited. During this study, *T. palmi* has been recorded on the following plants: *Alternanthera sessilis*, *Amaranthus* sp., *Brachiaria purpurascens*, *Capsicum annuum*, *Cleome* sp., *Cucumis melo*, *Cucumis sativus*, *Cucurbita pepo*, *Cyperus rotundus*, *Echinochloa colona*, *Eleusine indica*, *Eleutheranthera ruderalis*, *Euphorbia heterophylla*, *Gossypium* sp., *Hibiscus esculentus*, *Ipomoea congesta*, *Lactuca* sp., *Momordica charantia*, *Phaseolus lunatus*, *Phyllanthus niruri*, *Physalis angulata*, *Piper nigrum*, *Rottboellia cochinchinensis*, *Sida acuta*, *Solanum lycopersicum*, *Solanum melongena*, *Spinacia oleracea*, *Synedrella nodiflora*, *Urena lobata*.

Source: Etienne J, Ryckewaert P, Michel B (2015) Thrips (Insecta: Thysanoptera of Guadeloupe and Martinique: updated check-list with new information on their ecology and natural enemies. *Florida Entomologist* 98(1), 298-304.

Additional key words: new record, detailed record

Computer codes: ECHTAM, FRANOC, MCCTAB, SCITDO, THRIPL, GP, MQ

2015/073 Situation of *Lissorhoptrus oryzophilus* in Italy

The rice water weevil, *Lissorhoptrus oryzophilus* (Coleoptera: Curculionidae - formerly EPPO Alert List), was first detected in Lombardia, Northern Italy, in 2004 (see EPPO RS 2005/005). This was also the first report of this North American pest in Europe. Studies have recently been carried out in Italy to determine its spread and better understand its biology. Results showed that, as of 2010, *L. oryzophilus* had invaded the entire rice-growing area in the Piemonte and Lombardia regions. The first detection outside this area was made in 2013 near Ferrara (Emilia-Romagna region) nearly 270 km away from the initial finding site of 2004. In 2014, the pest was also detected near Verona (Veneto region) and in 4 other localities near Ferrara. As rice is not grown continuously between Piemonte/Lombardia and the newly invaded areas, these long range movements might be explained by anthropogenic activities or the presence of many waterways with wild host plants which were able to sustain the development of the pest. It is noted that although *L. oryzophilus* is showing an invasive behaviour in Italy, economic damage has remained minimal and limited to small areas every year. Finally, these studies also confirmed that in Italy, *L. oryzophilus* behaves as a monovoltine parthenogenetic species.

Source: Lupi D, Jucker C, Rocco A, Giudici ML, Boattin S, Colombo M (2015) Current status of the rice water weevil *Lissorhoptrus oryzophilus* in Italy: eleven-year invasion. *Bulletin OEPP/EPPO Bulletin* 45(1), 123-127.

Additional key words: detailed record

Computer codes: LISSOR, IT

2015/074 *Toxoptera citricidus* does not occur in Chile

The presence of *Toxoptera citricidus* (Hemiptera: Aphididae - EPPO A1 List) in Chile has been debated for a long time. A meticulous literature survey has recently been conducted and concluded that *T. citricidus* does not occur in Chile. This study could demonstrate that previous records were never based on first-hand information or observations made in Chile, but referred to old (and now abandoned) taxonomic interpretation which has been erroneously repeated in subsequent publications and databases.

The situation of *Toxoptera citricidus* in Chile can be described as follows: **Absent, invalid record.**

Source: Nieto Nafría JM, Fuentes-Contreras E, Pérez Hidalgo N (2015) *Aphis (Toxoptera) citricidus* (Kirkaldy) [Hemiptera: Aphididae] and Chile. *Bulletin OEPP/EPPO Bulletin* 45(1), 99-102.

Additional key words: denied record

Computer codes: TOXOCI, CL

2015/075 *Vespa velutina* in the Iberian Peninsula

In Europe, *Vespa velutina* (Hymenoptera: Vespidae - Asian hornet) was first recorded in France in 2005 (see EPPO RS 2017/197). It is thought that this predator of bees was introduced with imports of goods (probably pottery) from China. In Spain, *V. velutina* was found for the first time in August 2010 near Amaiur (Navarra), and then in several other localities of the Gipúzkoa province (País Vasco). More recent studies have shown that the insect has continued to spread in Northern Spain, as it is now found in all 3 provinces of País Vasco (Alava, Gipúzkoa, Vizcaya). Some reports have also been made in Girona (Cataluña) although it seems that *V. velutina* is not established in this area. In 2012, a few specimens were found in some apiaries in Northern Portugal, in the municipality of Viana do Castelo.

Finally, it can be recalled that this insect was first noticed in Northern Italy at the end of 2012, in the province of Savona (Liguria) (see EPPO RS 2013/168). A world distribution of *V. velutina* can now be viewed in EPPO Global Database:

<https://gd.eppo.int/taxon/VESPVE/distribution>.

Source: Goldarazena A, de Heredia IP, Romon P, Iturrodobeitia JC, Gonzalez M, Lopez S (2015) Spread of the yellow-legged hornet *Vespa velutina nigrithorax* du Buysson (Hymenoptera: Vespidae) across Northern Spain. *Bulletin OEPP/EPPO Bulletin* 45(1), 133-138.

Grosso-Silva JM, Maia M (2012) *Vespa velutina* Lepelletier, 1836 (Hymenoptera: Vespidae), new species for Portugal. *Arquivos Entomológicos* 6, 53-54.

Additional key words: new record, detailed record

Computer codes: VESPVE, ES, PT

2015/076 First report of *Sirococcus tsugae* in Germany: addition to the EPPO Alert List

The NPPO of Germany recently informed the EPPO Secretariat of the first record of *Sirococcus tsugae* on its territory. In June 2014, unusual symptoms were observed on two *Cedrus atlantica* trees: one was located in a private garden in Bad Zwischenahn and the other in a public area in Rastede (both in Niedersachsen). These 30-50 year old trees showed yellow-brown needles, needle cast, and shoot dieback. In 2014-09-17, the identity of the fungus was confirmed by morphological and molecular methods (sequencing). It is assumed that the first symptoms caused by *S. tsugae* may have occurred since 2011. It is noted that at Rastede, an old dead *Cedrus* plant had been felled several years ago without any inspection. Another cedar, close to the heavily infected *C. atlantica* also displays suspicious symptoms, but infestation with *S. tsugae* could not yet be verified. The origin of this infection is unclear. At the moment, appropriate phytosanitary measures are under investigation and surveillance will be implemented during the next growing season. An express-PRA has been carried out in Germany which concluded that this fungus might present a risk for Germany but that many unresolved questions on its geographical distribution (due to recent taxonomic changes) biology and pathways rendered the analysis highly uncertain.

The pest status of *Sirococcus tsugae* in Germany is officially declared as: **Present in two locations in Lower Saxony (Niedersachsen).**

***Sirococcus tsugae* - shoot blight**

Why: *Sirococcus tsugae* is a recently described fungal species which was recorded for the first time in Germany in 2014. Previously, *S. tsugae* was only known to occur in North America. This new species was described following studies on isolates previously regarded as *Sirococcus conigerus*. In these studies, three distinct species could be identified: *Sirococcus conigerus* (sensu stricto, occurring in Europe and North America on various conifers), *Sirococcus tsugae* (isolates from *Cedrus* and *Tsuga* in Western North America), *Sirococcus piceicola* (isolates from *Picea* in Canada and Switzerland). These recent taxonomic changes render the geographical distribution, host range, and biology difficult to ascertain. However, the Panel on Phytosanitary Measures considered that this fungus could usefully be added to the EPPO Alert List, even with a minimal amount of data.

Where: the currently known distribution is as follows, but is probably incomplete.

EPPO region: Germany. It was first found in June 2014 in Niedersachsen on 2 *Cedrus atlantica* mature trees (1 in a private garden in Bad Zwischenahn and 1 a public area in Rastede).

North America: Canada (British Columbia), USA (Alaska, Georgia, Maine, Oregon, Vermont, Washington).

On which plants: *Cedrus* spp. (*C. atlantica*, *C. deodara*) and *Tsuga* spp. (*T. canadensis*, *T. heterophylla*, *T. mertensiana*). It is reported that *S. tsugae* appears to be less aggressive on *T. canadensis* than on *T. heterophylla*.

Damage: *S. tsugae* causes shoot tip blight. The disease is characterised by light brown discoloration of needles, followed by dieback of the affected shoots and partial shedding of needles. Blight affects the distal parts of branches, seldom killing more than 4 cm (1.5 inch) of the shoot tip growth. In some cases, it can affect many shoot tips on a single tree. *S. tsugae* can attack seedlings, saplings and larger ornamental and forest trees. On seedlings, blighting may render them unmarketable or cause mortality. Primary infection is believed to occur in the spring, probably shortly after new shoot growth starts.

Pictures can be viewed on the Internet:

<http://www.invasive.org/browse/subthumb.cfm?sub=69861>

Dissemination: conidia of the fungus are dispersed by rain splashes and it is probable that strong winds can also disperse them over longer distances. Seed transmission has been reported for *S. conigerus*, but there is no information about possible seed transmission for *S. tsugae*.

Pathway: Plants for planting, cut foliage? seeds? of *Cedrus* and *Tsuga* spp. from countries where *S. tsugae* occurs.

Possible risks: *Cedrus* and *Tsuga* species are valuable ornamental trees in the EPPO region, planted for forestry purposes in some countries. Currently, there are no known effective control measures in North America against *S. tsugae* in forest stands, and information is scarce about possible control methods in nurseries or in parks and gardens (mainly hygiene methods). Although, much uncertainty remains concerning the geographical distribution of *S. tsugae* its biology and its potential impact in the EPPO region, it cannot be excluded that *S. tsugae* might cause damage to valuable ornamental trees in the public and private gardens and economic losses, in particular for the nursery sector.

Sources:

NPPO of Germany (2014-10).

INTERNET

- JKI website. Express PRA on *Sirococcus tsugae* (in German).

http://pflanzenegesundheit.jki.bund.de/dokumente/upload/4d8f8_sirococcus-tsugae_pra.pdf

- State of Vermont. Agency of Natural Resources. Forest Insect and Disease conditions in Vermont 2012.

http://fpr.vermont.gov/sites/fpr/files/Forest_and_Forestry/Forest_Health/Library/2012condition_sFINAL.pdf

- USDA. Forest Service (2010) Pest Alert. *Sirococcus tsugae*. Tip blight on Eastern hemlocks.

http://na.fs.fed.us/pubs/palerts/tip_blight/tip_blight_lo_res.pdf

Rossmann AY, Castlebury LA, Farr DF, Stanosz GR (2008) *Sirococcus conigerus*, *Sirococcus piceicola* sp. nov. and *Sirococcus tsugae* sp. nov. on conifers: anamorphic fungi in the Gnomoniaceae, Diaporthales. *Forest Pathology* 38(1), 47-60.

Smith DR, Stanosz GR (2008) PCR primers for identification of *Sirococcus conigerus* and *S. tsugae*, and detection of *S. conigerus* from symptomatic and asymptomatic red pine shoots. *Forest Pathology* 38(3), 156-168.

Stanosz GR (2012) *Sirococcus* Shoot Blight. In: USDA Forest Nursery Pests Agricultural Handbook No. 680, 68-70. (available online http://www.rngr.net/publications/forest-nursery-pests/conifer-diseases/sirococcus-shoot-blight/at_download/file)

Stanosz GR, Smith DR, Sullivan JP, Mech AM, Gandhi KJK, Dalusky MJ, Mayfield AE, Fraedrich SW (2013) Expansion in the known geographic distribution and host range of the shoot blight pathogen *Sirococcus tsugae*. Poster presented at the 24th USDA Interagency Research Forum on Invasive Species (Annapolis, US, 2013-01-08/11), p 95.

Stanosz GR, Smith DR, Sullivan JP, Mech AM, Gandhi KJK, Dalusky MJ, Mayfield AE, Fraedrich SW (2011) Shoot blight caused by *Sirococcus tsugae* on Eastern hemlock (*Tsuga canadensis*) in Georgia. *Plant Disease* 95(5), 612-612.

EPPO RS 2015/076

Panel review date

Entry date 2015-04

Additional key words: new record, Alert List

Computer codes: SIROTS, DE

2015/077 First report of *Acidovorax citrulli* in Serbia

During August 2014, fruit blotch symptoms were observed on mature fruits of watermelon (*Citrullus lanatus*) in a 3 ha-field in the Bačka region (Vojvodina province) in Serbia. Disease symptoms on the fruit started as water-soaked lesions with irregular margins that rapidly enlarged, with brown discolouration and brown cracks on surface. In the mesocarp of the fruit underneath the lesions, water-soaked spots appeared, followed by a watery flesh rot. Samples were collected from diseased fruit and tested in the laboratory (physiological, biochemical and pathogenicity tests, PCR). Results confirmed the presence of *Acidovorax citrulli* (EPPO A1 List). This is the first time that *A. citrulli* causing bacterial fruit blotch on watermelon is reported from Serbia.

The situation of *Acidovorax citrulli* in Serbia can be described as follows: **Present, first found in 2014 in 1 production site (Bačka region).**

Source: Popović T, Ivanović Ž (2015) Occurrence of *Acidovorax citrulli* causing Bacterial fruit blotch of watermelon in Serbia. *Plant Disease* (in press).
<http://apsjournals.apsnet.org/doi/abs/10.1094/PDIS-12-14-1276-PDN>

Additional key words: new record

Computer codes: PSDMAC, RS

2015/078 First report of *Kabatiella microsticta* on hemerocallis in Norway

Since 2009, distinct leaf spots have been observed on daylily (*Hemerocallis* spp.) in areas where it is planted at the Norwegian University of Life Sciences, located in Ås (Akershus county), Norway. In spring, initial leaf spots were small, circular with a water-soaked appearance, but turning brown as they enlarged (eventually becoming greyish in the center). Leaf spots developed faster longitudinally than transversely and often coalesced. By mid-summer, affected plants were often severely disfigured. Incubation of symptomatic leaves in high moisture chambers resulted in growth of a fungus that was morphologically identified as *Kabatiella microsticta* (= *Aureobasidium microstictum*). Little information is available on this fungus but according to the literature, *K. microsticta* occurs in the following countries:

Asia: China (first found in 2011 in a nursery in Jilin province), Japan (Honshu).

North America: USA (Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Pennsylvania, Virginia).

This is the first time that *K. microsticta* is reported from Norway, and according to the available data, this is also a first record for Europe.

Source: Bai QR, Han S, Xie YY, Dong R, Gao J, Li Y (2012) First report of daylily leaf streak caused by *Kabatiella microsticta* in China. *Plant Disease* 96(10), 1579-1579.

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<https://www.freshfromflorida.com/content/download/9808/135116/pp376.pdf>

Yoshikawa M, Yokoyama T (1987) Leaf blight of day lily caused by *Aureobasidium microstictum* (Bubák) W.B. Cooke. *Annals of the Phytopathological Society of Japan* 53, 606-615.

Additional key words: new record

Computer codes: KABAMI, NO

2015/079 New data on quarantine pests and pests of the EPPO Alert List

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

- New records

Bactericera cockerelli (Hemiptera: Triozidae - EPPO A1 List) was found for the first time, caught in a trap in 2015 in Norfolk Island (Promed posting, 2015). **Present, no details.**

Cherry rasp leaf virus (*Cheravirus*, CRLV - EPPO A1 List) occurs in China. It was first reported in 2002 in Liaoning province. During a survey carried out in May and June 2013, the virus was also detected in asymptomatic leaf samples collected from a sweet cherry (*Prunus avium*) orchard near Zoucheng city, Shandong province (Ma *et al.*, 2014). **Present, locally present in Liaoning and Shandong provinces.**

During summer 2013, *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* (EPPO A2 List) was found in Northwestern Iran. The bacterium was detected in plants of *Phaseolus lunatus* cv. 'Christmas Pole' showing interveinal necrotic lesions and marginal chlorosis (Osdaghi, 2014). **Present, first found in 2013.**

Cowpea mild mottle virus (*Carlavirus*, CPMMV - EU Annexes) occurs in Venezuela. It was first found in 2012 in experimental and commercial fields of *Vigna unguiculata* subsp. *sesquipedalis* in Aragua state (Brito *et al.*, 2012). **Present, first found in 2012 in Aragua state.**

Glycaspis brimblecombei (Hemiptera: Aphalaridae - formerly EPPO Alert List) is reported for the first time from Turkey. The pest was found in 2014 on *Eucalyptus camaldulensis* trees near Izmir (Karaca *et al.*, 2015). **Present, no details.**

Hymenoscyphus fraxineus (synonym of *Hymenoscyphus pseudoalbidus*, associated with ash dieback in Europe - formerly EPPO Alert List) occurs in the Republic of Korea. The fungus was detected during a fungal biodiversity survey on fallen leaves, rachises and petioles of *Fraxinus rhynchophylla* (Han *et al.*, 2014). **Present, no details.**

The presence of *Hymenoscyphus fraxineus* (synonym of *Hymenoscyphus pseudoalbidus*, associated with ash dieback in Europe - formerly EPPO Alert List) is also reported from China. The fungus was isolated from leaves of *Fraxinus mandschurica* collected in the province of Jilin (Zheng & Zhuang, 2014). **Present, no details.**

In Greece, *Phenacoccus madeirensis* (Hemiptera: Pseudococcidae - bougainvillea mealybug) was first collected in April 2010 in Chania (Crete) on *Hibiscus rosa-sinensis* (Jansen *et al.*, 2010). In June 2010, it was found in Thessaloniki region (Northern Greece), causing damage to leaves and stems of *Ocimum basilicum*. In 2010 and 2011, its presence was recorded in the regions of Kavala (Eastern Greece) and Xanthi (Thrace) (Papadopoulou *et al.*, 2012). In May 2014, it was observed in Kalamata (Peloponnese) on *Aloysia citriodora* and on *Osteospermum jucundum* (Stathas *et al.*, 2015). **Present, only in some areas.**

In Greece, *Phenacoccus peruvianus* (Hemiptera: Pseudococcidae) was first found in Voutakos Bay on the island of Paros on *Bougainvillea* sp. (Gkounti & Milonas). In September 2013, it was also observed in the suburbs of Athens on *Cestrum nocturnum* (Stathas *et al.*, 2015). **Present, only in some areas.**

- Detailed records

In Brazil *Cowpea mild mottle virus* (*Carlavirus*, CPMMV - EU Annexes) also occurs in the states of Bahia, Goiás, Maranhão, Mato Grosso, and Paraná (Zanardo *et al.*, 2014).

In February 2015, 1 male of *Ceratitis capitata* (Diptera: Tephritidae - EPPO A2 List) was found in the urban area of Villa Regina, in the Rio Negro province, Argentina. In March, 1 female was caught in a trap near the initial detection site. Phytosanitary measures are being taken to eradicate the pest (SENASA, 2015).

During a survey carried out in July 2013, *Watermelon silver mottle virus* (*Tospovirus*, WSMoV - EPPO A1 List) was found in Yunnan province (Menghai county), China. WSMoV was detected in watermelon (*Citrullus lanatus*) plants showing symptoms of silver mottle on fruits and bud necrosis (Yin *et al.*, 2014).

- New pests

In a recent study, the use of deep sequencing molecular techniques has revealed the presence of a new *Tepovirus*, tentatively called Prunus virus T (PrVT) in *Prunus* spp. This virus was found in a *Prunus avium* (sweet cherry) tree collected in Italy and in *P. domestica* (plum) and *P. cerasifera* (sour cherry) trees collected from Azerbaijan. However, no specific symptoms could be associated with PrVT due to the occurrence of mixed viral infections in the studied trees (Marais *et al.*, 2015).

Rust fungi were collected from weeping willow trees (*Salix* spp.) in different areas in the central USA, as well as from Taiwan, and were analysed by morphological and molecular methods. In addition, available weeping willow rust herbarium specimens from North and South America were also included in this study. Results revealed that a new rust species, *Melampsora ferrinii* sp. nov., could be detected in weeping willows (*Salix babylonica* and *S. matsudana* cv. 'Tortuosa') collected from the USA (Florida, Indiana, Louisiana) and Argentina. Analysis of herbarium specimens showed that this species has been present in the Americas since at least the 1990s but had been misidentified as *M. epitea* (Toome and Aime, 2015).

- New host plants

During surveys carried out in Central Iran (provinces of Isfahan and Chahar Mahal-o-Bakhtiari), apple (*Malus domestica*) trees showing symptoms of phytoplasma disease were noticed. Molecular tests (PCRs, sequencing) showed that the isolates found were '*Candidatus* Phytoplasma asteris' and '*Candidatus* Phytoplasma aurantifolia' (EU Annexes as lime witches' broom). The authors noted that this is the first time that '*Ca. P. aurantifolia*' is found in association with a disease on apple (Hashemi-Tameh *et al.*, 2014).

During a survey carried out in New Zealand (North Island) during summers 2011 and 2012, *Strawberry latent ringspot virus* (EU Annexes) was detected in *Vaccinium darrowii*, a host not previously reported (Woo & Pearson, 2014).

- Epidemiology

Experiments conducted in China have shown that *Frankliniella occidentalis* (Thysanoptera: Thripidae - EPPO A2 List) can transmit *Maize chlorotic mottle virus* (Machlomovirus) to maize plants (*Zea mays*) (Zhao *et al.*, 2014). However, the role of *F. occidentalis* in the epidemiology of the disease remains to be studied in field conditions.

- Taxonomy

It has recently been proposed that the correct name for the fungus causing ash dieback should be *Hymenoscyphus fraxineus*, with *Chalara fraxinea* and *Hymenoscyphus pseudoalbidus* as synonyms (Baral *et al.*, 2014).

- Source:
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- ProMed posting (no. 20150417.3303297) of 2015-04-17. Liberibacter, solanaceous crops - Norfolk Island: 1st rep. <http://www.promedmail.org>
- SENASA (via Pest Lens)
- Plan de emergencia fitosanitaria en Villa Regina tras la detección de Mosca del Mediterráneo (2015-03-17). <http://www.senasa.gov.ar/contenido.php?to=n&in=&io=29949>
 - Resolucion no. 98/2015 del Ministerio de Agricultura, Ganaderia y Pesca. Servicio Nacional de Sanidad y Calidad Agroalimentaria. (2015-03-17). http://www.senasa.gov.ar/Archivos/File/File8030-R_SENASA_98-2015.PDF
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Additional key words: new record, detailed record, diagnostic, new pest, new host plant, epidemiology, taxonomy

Computer codes: CERTCA, CHAAFR, CORBFL, CPMMVO, CRLV00, FRANOC, GKYSBR, MELMFE, PARZCO, PHENMD, PHENPR, PHYPAF, PRVTOO, SLRSVO, WMSMOV, AR, BR, CN, GR, IR, KR, NF, NZ, TR, VZ

2015/080 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2015 received since the previous report (EPPO RS 2015/012). Notifications have been sent 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
Acari	<i>Dasyliirion longissimum</i> , <i>Yucca rostrata</i>	Plants for planting	Mexico	Spain	1
Acari, Coleoptera	<i>Dasyliirion longissimum</i> , <i>Yucca elephantipes</i> , <i>Yucca rostrata</i>	Plants for planting	Mexico	Spain	1
Agromyzidae	<i>Ocimum basilicum</i>	Vegetables (leaves)	Laos	France	2
<i>Anthonomus eugenii</i>	<i>Capsicum</i>	Vegetables	Dominican Rep.	France	1
	<i>Capsicum chinense</i>	Vegetables	Mexico	Netherlands	1
	<i>Capsicum frutescens</i>	Vegetables	Dominican Rep.	Netherlands	1
Aphididae	<i>Gypsophila</i>	Cut flowers	Ecuador	Spain	1
<i>Bemisia</i>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Spain (Canary Isl.)	United Kingdom	1
<i>Bemisia tabaci</i>	<i>Bacopa</i>	Cuttings	Indonesia	United Kingdom	1
	<i>Citrofortunella microcarpa</i>	Plants for planting	Italy	United Kingdom	1
	<i>Colocasia</i>	Vegetables	Ghana	United Kingdom	1
	<i>Convolvulus</i>	Cuttings	Kenya	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Bemisia tabaci</i> (cont.)	<i>Corchorus</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Corchorus</i>	Vegetables (leaves)	Ghana	United Kingdom	3
	<i>Corchorus</i>	Vegetables (leaves)	Ghana	United Kingdom	1
	<i>Corchorus</i>	Vegetables (leaves)	Nigeria	United Kingdom	2
	<i>Corchorus capsularis</i>	Vegetables (leaves)	Ghana	United Kingdom	1
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Ghana	United Kingdom	3
	<i>Corchorus olitorius</i>	Vegetables (leaves)	Nigeria	United Kingdom	3
	<i>Dipladenia</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Echinodorus</i>	Plants for planting (aquatic plants)	Sri Lanka	Germany	1
	<i>Eryngium</i>	Vegetables (leaves)	Malaysia	United Kingdom	1
	<i>Eryngium foetidum</i>	Vegetables (leaves)	Laos*	Denmark	1
	<i>Eryngium foetidum</i>	Vegetables (leaves)	Laos*	France	1
	<i>Eryngium foetidum</i>	Vegetables (leaves)	Malaysia	Netherlands	1
	<i>Eupatorium</i>	Cuttings	Costa Rica	Netherlands	1
	<i>Eusteralis stellata</i>	Vegetables (leaves)	Thailand	United Kingdom	1
	<i>Hibiscus sabdariffa</i>	Vegetables (leaves)	Nigeria	United Kingdom	1
	<i>Hibiscus sabdariffa</i>	Vegetables (leaves)	Togo	Belgium	1
	<i>Houttuynia</i>	Vegetables (leaves)	Laos*	United Kingdom	1
	<i>Houttuynia</i>	Vegetables (leaves)	Vietnam	United Kingdom	1
	<i>Houttuynia cordata</i>	Vegetables (leaves)	Laos*	United Kingdom	1
	<i>Houttuynia cordata</i>	Vegetables (leaves)	Vietnam	United Kingdom	2
	<i>Ipomoea</i>	Vegetables	Ghana	United Kingdom	2
	<i>Ipomoea batatas</i>	Vegetables	Ghana	United Kingdom	3
	<i>Lavatera</i>	Cuttings	Israel	Netherlands	1
	<i>Limnophila</i>	Vegetables (leaves)	Laos*	United Kingdom	1
	<i>Limnophila aromatica</i>	Vegetables (leaves)	Thailand	Austria	3
	<i>Limnophila aromatica</i>	Vegetables (leaves)	Thailand	Sweden	3
	<i>Lisianthus</i>	Cut flowers	Netherlands	United Kingdom	13
	<i>Lisianthus</i>	Cut flowers	Tanzania	Netherlands	3
	<i>Mandevilla</i>	Plants for planting	Germany	United Kingdom	1
	<i>Mandevilla</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Manihot</i>	Vegetables	Cameroon	Belgium	1
	<i>Manihot</i>	Vegetables	Ghana	United Kingdom	2
	<i>Manihot</i>	Vegetables	Togo	France	7
	<i>Manihot esculenta</i>	Vegetables	Burundi	Belgium	2
	<i>Manihot esculenta</i>	Vegetables	Sierra Leone	United Kingdom	2
	<i>Manihot esculenta</i>	Vegetables	Togo	Belgium	1
	<i>Melissa officinalis</i>	Vegetables (leaves)	Uganda	Netherlands	1
	<i>Mentha</i>	Vegetables (leaves)	Spain (Canary Isl.)	Switzerland	1
	<i>Nerium oleander</i>	Plants for planting	Netherlands	United Kingdom	2
	<i>Ocimum</i>	Vegetables (leaves)	Laos*	Netherlands	2
	<i>Ocimum</i>	Vegetables (leaves)	Laos*	Sweden	1
	<i>Ocimum</i>	Vegetables (leaves)	Malaysia	Netherlands	1
	<i>Ocimum</i>	Vegetables (leaves)	Mexico	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Netherlands	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Laos*	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Malaysia	Netherlands	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Mexico	France	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Mexico	United Kingdom	4
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Spain (Canary Isl.)	Spain	1
	<i>Ocimum tenuiflorum</i>	Vegetables (leaves)	Vietnam	Switzerland	3
	<i>Origanum</i>	Vegetables (leaves)	Nigeria	United Kingdom	1
	<i>Paederia</i>	Vegetables (leaves)	Vietnam	United Kingdom	1
	<i>Perilla</i>	Vegetables (leaves)	Vietnam	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Bemisia tabaci</i> (cont.)	<i>Perilla frutescens</i>	Vegetables (leaves)	Laos*	United Kingdom	2
	<i>Perilla frutescens</i>	Vegetables (leaves)	Vietnam	United Kingdom	1
	<i>Persicaria</i>	Vegetables (leaves)	Vietnam	United Kingdom	1
	<i>Persicaria odorata</i>	Vegetables (leaves)	Laos*	United Kingdom	1
	<i>Persicaria odorata</i>	Vegetables (leaves)	Thailand	Sweden	2
	<i>Piper betle</i>	Vegetables	India	Ireland	1
	<i>Piper sarmentosum</i>	Vegetables	Vietnam	Sweden	1
	<i>Polygonum</i>	Vegetables (leaves)	Vietnam	United Kingdom	1
	<i>Rumex</i>	Vegetables (leaves)	Nigeria	United Kingdom	1
	<i>Shinnersia rivularis</i>	Cuttings	Malaysia	United Kingdom	1
	<i>Solanum macrocarpon</i>	Vegetables	Ghana	United Kingdom	4
	<i>Solanum macrocarpon</i>	Vegetables	Nigeria	United Kingdom	2
	<i>Solanum melongena</i>	Vegetables	Kenya	United Kingdom	1
	<i>Telfairia occidentalis</i>	Vegetables (leaves)	Nigeria	United Kingdom	2
	<i>Thymus</i>	Vegetables (leaves)	Mexico	United Kingdom	1
	<i>Unspecified</i>	Vegetables	Thailand	Sweden	2
<i>Vernonia amygdalina</i>	Vegetables (leaves)	Nigeria	United Kingdom	1	
<i>Bephratelloides</i>	<i>Annona</i>	Fruits	Colombia	France	1
<i>Blissus diplopterus</i>	<i>Prunus persica</i>	Fruits	South Africa	United Kingdom	4
	<i>Prunus persica</i> var. <i>nucipersica</i>	Fruits	South Africa	United Kingdom	6
	<i>Pyrus</i>	Fruits	South Africa	United Kingdom	1
<i>Ceratocystis platani</i>	<i>Platanus orientalis</i>	Plants for planting	Greece	Cyprus	1
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	<i>Solanum lycopersicum</i>	Vegetables	Brazil	Italy	1
	<i>Solanum lycopersicum</i>	Vegetables	China	Netherlands	1
Coccidae	<i>Chamaedorea</i>	Plants for planting	Spain (Canary Isl.)	Spain	2
	<i>Howea</i>	Plants for planting	Spain (Canary Isl.)	Spain	3
	<i>Rhapis excelsa</i>	Plants for planting	Spain (Canary Isl.)	Spain	1
Coleoptera	<i>Ceratonia siliqua</i>	Stored products	Tunisia	Spain	1
<i>Diaphorina citri</i>	<i>Murraya koenigii</i>	Vegetables (leaves)	Malaysia	Switzerland	1
	<i>Murraya koenigii</i>	Vegetables (leaves)	Vietnam	Switzerland	1
Diptera	<i>Capsicum</i>	Vegetables	Cameroon	France	1
	<i>Luffa</i>	Vegetables	Ghana	United Kingdom	1
	<i>Luffa acutangula</i>	Vegetables	Ghana	United Kingdom	1
	<i>Momordica</i>	Vegetables	Uganda	United Kingdom	1
	<i>Pisum sativum</i>	Vegetables	Kenya	Ireland	1
	<i>Solanum melongena</i>	Vegetables	Kenya	United Kingdom	1
<i>Epitrix</i>	<i>Solanum tuberosum</i>	Ware potatoes	Spain	United Kingdom	1
Formicidae	<i>Liriodendron tulipifera</i>	Wood and bark	USA	Spain	1
<i>Frankliniella occidentalis</i>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	United Kingdom	1
<i>Frankliniella platensis</i>	<i>Tulbaghia violacea</i>	Plants for planting	Brazil	Netherlands	1
<i>Globodera</i>	<i>Solanum tuberosum</i>	Seed potatoes	Denmark	Germany	1
<i>Globodera pallida</i>	<i>Solanum tuberosum</i>	Ware potatoes	Cyprus	Germany	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Globodera rostochiensis</i>	<i>Solanum tuberosum</i>	Ware potatoes	Cyprus	Germany	1
<i>Helicoverpa</i>	<i>Capsicum</i>	Vegetables	Jamaica	United Kingdom	2
	<i>Capsicum</i>	Vegetables	Pakistan	United Kingdom	1
	<i>Solanum melongena</i>	Vegetables	Mexico	United Kingdom	2
<i>Helicoverpa armigera</i>	<i>Capsicum</i>	Vegetables	Gambia	United Kingdom	1
<i>Helicoverpa armigera</i>	<i>Capsicum annuum</i>	Vegetables	Bangladesh	Sweden	1
	<i>Capsicum annuum</i>	Vegetables	Uganda	Sweden	2
	<i>Pisum sativum</i>	Vegetables	Egypt	Ireland	3
<i>Helicoverpa zea</i>	<i>Physalis</i>	Vegetables	Mexico	Netherlands	1
<i>Impatiens necrotic spot virus</i>	<i>Streptocarpus</i>	Plants for planting	Germany	Sweden	3
Insecta	<i>Amphimas pterocarpoides</i>	Wood and bark	Cameroon	Spain	1
	<i>Ceratonia siliqua</i>	Stored products	Morocco	Spain	1
	<i>Entandrophragma candollei</i>	Wood and bark	Cameroon	Spain	1
	<i>Entandrophragma cylindricum</i>	Wood and bark	Central African Rep.	Spain	1
	<i>Helianthus annuus</i>	Seeds	USA	France	1
	<i>Juglans regia</i>	Wood and bark	USA	Spain	1
<i>Ips</i>	<i>Picea</i>	Wood and bark	Ukraine	Cyprus	1
Lepidoptera	<i>Capsicum</i>	Vegetables	Bangladesh	Italy	1
	<i>Capsicum frutescens</i>	Vegetables	Bangladesh	Italy	2
	<i>Phaseolus vulgaris</i>	Vegetables	India	Ireland	1
	<i>Tillandsia usneoides</i>	Cuttings	Costa Rica	Netherlands	1
<i>Leptoglossus clypealis</i>	<i>Dasyllirion</i>	Plants for planting	Mexico	Italy	1
	<i>Yucca</i>	Plants for planting	Mexico	Italy	1
<i>Leucinodes orbonalis</i>	<i>Solanum aethiopicum</i>	Vegetables	Cameroon	Belgium	1
	<i>Solanum virginianum</i>	Vegetables	Sri Lanka	Italy	1
<i>Liriomyza</i>	<i>Allium</i>	Vegetables	Laos	United Kingdom	1
	<i>Allium fistulosum</i>	Vegetables	Jamaica	United Kingdom	1
	<i>Amaranthus</i>	Vegetables (leaves)	Ghana	United Kingdom	1
	<i>Apium graveolens</i>	Vegetables	Morocco	Spain	2
	<i>Apium graveolens var. dulce</i>	Vegetables	China	United Kingdom	1
	<i>Artemisia</i>	Vegetables (leaves)	Laos	United Kingdom	4
	<i>Artemisia vulgaris</i>	Fruits	Laos	United Kingdom	1
	<i>Coriandrum</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Coriandrum sativum</i>	Vegetables (leaves)	Cambodia	Czech Republic	1
	<i>Coriandrum sativum</i>	Vegetables (leaves)	Laos	United Kingdom	5
	<i>Dendranthema</i>	Cut flowers	Colombia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	India	United Kingdom	2
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Morocco	Spain	3
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Morocco	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Spain (Canary Isl.)	United Kingdom	4
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Tunisia	Italy	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Vietnam	Switzerland	1
	<i>Pisum sativum</i>	Vegetables	Kenya	Ireland	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Liriomyza huidobrensis</i>	<i>Apium graveolens</i>	Vegetables	Laos*	Netherlands	1
	<i>Eryngium</i>	Cut flowers	Ecuador	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Ecuador	Netherlands	5
	<i>Solidago</i>	Cut flowers	Zimbabwe	Netherlands	1
<i>Liriomyza sativae</i>	<i>Trigonella foenum-graecum</i>	Vegetables (leaves)	India	Germany	1
<i>Liriomyza trifolii</i>	<i>Apium graveolens</i>	Vegetables	Morocco	Spain	1
	<i>Dianthus barbatus</i>	Cut flowers	Israel	Netherlands	1
	<i>Gypsophila</i>	Cut flowers	Israel	Belgium	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Morocco	Spain	2
	<i>Solidago</i>	Cut flowers	Zimbabwe	United Kingdom	1
Mollusca	<i>Spinacia oleracea</i>	Cut flowers	Morocco	Spain	1
<i>Oryzaephilus</i>	<i>Cyperus esculentus</i>	Vegetables (leaves)	Burkina Faso	Spain	1
<i>Phyllosticta citricarpa</i>	<i>Citrus macroptera</i>	Fruits	Bangladesh	United Kingdom	1
	<i>Citrus maxima</i>	Fruits	Cameroon*	Switzerland	1
<i>Phytophthora ramorum</i>	<i>Rhododendron</i>	Plants for planting	Germany	Estonia	2
	<i>Rhododendron</i>	Plants for planting	Germany	Slovenia	1
	<i>Rhododendron</i>	Plants for planting	Netherlands	Estonia	1
	<i>Rhododendron</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Rhododendron</i>	Plants for planting	United Kingdom	United Kingdom	1
	<i>Vaccinium vitis-idaea</i>	Plants for planting	Germany	Slovenia	1
<i>Planococcus</i>	<i>Gardenia</i>	Cut flowers	Micronesia	Italy	1
	<i>Gardenia</i>	Plants for planting	Micronesia	Italy	1
<i>Plodia interpunctella</i>	<i>Prunus dulcis</i>	Stored products	Australia	Spain	1
<i>Plum pox virus</i>	<i>Prunus americana</i>	Plants for planting	Serbia	Germany	1
	<i>Prunus armeniaca</i>	Plants for planting	Serbia	Poland	1
<i>Potato spindle tuber viroid</i>	<i>Solanum lycopersicum</i>	Vegetables	China	Italy	1
Psyllidae	<i>Chamaedorea</i>	Plants for planting	Spain (Canary Isl.)	Spain	2
	<i>Howea</i>	Plants for planting	Spain (Canary Isl.)	Spain	3
	<i>Rhapis excelsa</i>	Plants for planting	Spain (Canary Isl.)	Spain	1
<i>Radopholus similis</i>	<i>Anthurium</i>	Plants for planting	Costa Rica	Netherlands	1
	<i>Calathea</i>	Plants for planting	Costa Rica	Netherlands	1
	<i>Dieffenbachia</i>	Plants for planting	Costa Rica	Netherlands	1
	<i>Heliconia</i>	Plants for planting	Costa Rica	Netherlands	1
	<i>Philodendron</i>	Plants for planting	Costa Rica	Netherlands	1
<i>Ralstonia solanacearum</i>	<i>Solanum tuberosum</i>	Ware potatoes	Egypt	Greece	1
Rhizophagidae	<i>Cyperus esculentus</i>	Vegetables (leaves)	Burkina Faso	Spain	1
<i>Ripersiella hibisci</i>	<i>Ficus</i>	Plants for planting	China	Netherlands	1
	<i>Serissa</i>	Plants for planting	China	Netherlands	1
<i>Scirtothrips dorsalis</i>	<i>Capsicum</i>	Vegetables	Togo	Belgium	1
	<i>Capsicum annum</i>	Vegetables	Burkina Faso	France	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>S. dorsalis</i> (cont.)	<i>Solanum melongena</i>	Vegetables	Kenya	United Kingdom	1
Scoliidae	<i>Afzelia bipindensis</i>	Wood and bark	Congo	Spain	1
Scolytidae	<i>Juglans regia</i>	Wood and bark	USA	Spain	1
<i>Spodoptera</i>	<i>Brassica</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Capsicum</i>	Vegetables	Jamaica	United Kingdom	1
	<i>Rumex acetosa</i>	Vegetables (leaves)	Morocco	Spain	1
	<i>Tagetes erecta</i>	Cut flowers	Thailand	Switzerland	1
<i>Spodoptera dolichos</i>	<i>Dichorisandra thyrsiflora</i>	Plants for planting	USA	Netherlands	1
<i>Spodoptera eridania</i>	<i>Solanum macrocarpon</i>	Vegetables	Suriname*	Netherlands	1
<i>Spodoptera frugiperda</i>	<i>Capsicum</i>	Vegetables	Suriname	Netherlands	3
	<i>Capsicum frutescens</i>	Vegetables	Suriname	Netherlands	1
<i>Spodoptera littoralis</i>	<i>Rosa</i>	Cut flowers	Tanzania	Netherlands	1
	<i>Rosa</i>	Cut flowers	Uganda	Netherlands	2
	<i>Rosa</i>	Cut flowers	Zimbabwe	Netherlands	2
<i>Spodoptera litura</i>	<i>Allium schoenoprasum</i>	Vegetables	India	Ireland	1
	<i>Brassica</i>	Vegetables (leaves)	Bangladesh	United Kingdom	1
	<i>Capsicum annuum</i>	Vegetables	Bangladesh	Sweden	1
	<i>Dendrobium</i>	Cut flowers	Thailand	Netherlands	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Laos	United Kingdom	1
<i>Sternochetus mangiferae</i>	<i>Mangifera indica</i>	Fruits	Sri Lanka	Italy	1
	<i>Mangifera indica</i>	Fruits	Uganda	Italy	2
<i>Thaumatotibia leucotreta</i>	<i>Capsicum</i>	Vegetables	Ghana	United Kingdom	10
	<i>Capsicum</i>	Vegetables	Kenya	United Kingdom	6
	<i>Capsicum</i>	Vegetables	Nigeria	United Kingdom	1
	<i>Capsicum</i>	Vegetables	Rwanda	Netherlands	2
	<i>Capsicum</i>	Vegetables	Uganda	Belgium	1
	<i>Capsicum</i>	Vegetables	Uganda	Netherlands	4
	<i>Capsicum</i>	Vegetables	Uganda	United Kingdom	22
	<i>Capsicum</i>	Vegetables	Zimbabwe	Netherlands	1
	<i>Capsicum</i>	Vegetables	Zimbabwe	United Kingdom	6
	<i>Capsicum annuum</i>	Vegetables	Rwanda	Netherlands	1
	<i>Capsicum annuum</i>	Vegetables	Uganda	Netherlands	2
	<i>Capsicum annuum</i>	Vegetables	Uganda	Sweden	3
	<i>Capsicum frutescens</i>	Vegetables	Cameroon	Belgium	2
	<i>Capsicum frutescens</i>	Vegetables	Uganda	Netherlands	2
	<i>Citrus paradisi</i>	Fruits	South Africa	Spain	1
<i>Thaumatotibia leucotreta</i> , Tephritidae (non-European)	<i>Capsicum</i>	Vegetables	Burundi	Belgium	1
	<i>Capsicum chinense</i>	Vegetables	Burundi	Belgium	1
Thripidae	<i>Abelmoschus</i>	Vegetables	India	United Kingdom	1
	<i>Abelmoschus esculentus</i>	Vegetables	India	United Kingdom	14
	<i>Abelmoschus esculentus</i>	Vegetables	Pakistan	United Kingdom	1
	<i>Amaranthus</i>	Vegetables (leaves)	Bangladesh	United Kingdom	12
	<i>Amaranthus tricolor</i>	Vegetables (leaves)	Bangladesh	United Kingdom	2
	<i>Amaranthus viridis</i>	Vegetables (leaves)	Bangladesh	United Kingdom	2
	<i>Capsicum annuum</i>	Vegetables	Pakistan	Spain	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Thripidae (cont.)	<i>Lagenaria siceraria</i>	Vegetables	Pakistan	Spain	1
	<i>Luffa</i>	Vegetables	Ghana	United Kingdom	5
	<i>Luffa</i>	Vegetables	India	United Kingdom	2
	<i>Luffa acutangula</i>	Vegetables	Ghana	United Kingdom	22
	<i>Luffa aegyptiaca</i>	Vegetables	India	United Kingdom	1
	<i>Momordica</i>	Vegetables	Dominican Rep.	United Kingdom	3
	<i>Momordica</i>	Vegetables	Ghana	United Kingdom	6
	<i>Momordica</i>	Vegetables	Laos	United Kingdom	1
	<i>Momordica</i>	Vegetables	Malaysia	United Kingdom	1
	<i>Momordica</i>	Vegetables	Sri Lanka	United Kingdom	1
	<i>Momordica</i>	Vegetables	Thailand	United Kingdom	1
	<i>Moringa oleifera</i>	Vegetables	Ghana	United Kingdom	1
	<i>Moringa oleifera</i>	Vegetables	India	United Kingdom	1
	<i>Musa</i>	Fruits	Bangladesh	United Kingdom	1
	<i>Orchidaceae</i>	Cut flowers	Thailand	United Kingdom	1
	<i>Solanum aethiopicum</i>	Vegetables	Ghana	United Kingdom	1
	<i>Solanum melongena</i>	Vegetables	Bangladesh	United Kingdom	1
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	United Kingdom	1
	<i>Solanum melongena</i>	Vegetables	Ghana	United Kingdom	32
	Thrips	<i>Dianthus</i>	Cut flowers	Colombia	Spain
Thrips palmi	<i>Dendrobium</i>	Cut flowers	Malaysia	Italy	3
	<i>Dendrobium</i>	Cut flowers	Thailand	Netherlands	1
	<i>Dendrobium hybrids</i>	Cut flowers	(Thailand)	Germany	3
	<i>Momordica</i>	Vegetables	Bangladesh	Belgium	1
	<i>Momordica</i>	Vegetables	Ghana*	United Kingdom	1
	<i>Momordica charantia</i>	Vegetables	Ghana*	France	1
	<i>Momordica charantia</i>	Vegetables	Laos*	Netherlands	1
	<i>Solanum aethiopicum</i>	Vegetables	Togo	Belgium	1
	<i>Solanum melongena</i>	Vegetables	Ghana*	France	1
	<i>Solanum melongena</i>	Vegetables	Suriname	Netherlands	1
	<i>Solanum melongena</i>	Vegetables	Thailand	Austria	1
<i>Solanum melongena</i>	Vegetables	Thailand	Switzerland	1	
Thrips tabaci	<i>Eryngium</i>	Cut flowers	Kenya	Netherlands	1
Thysanoptera	<i>Alstroemeria</i>	Cut flowers	Colombia	Spain	2
	<i>Alstroemeria</i>	Cut flowers	Kenya	Spain	1
	<i>Artemisia</i>	Cuttings	Israel	Spain	1
	<i>Dianthus caryophyllus</i>	Cut flowers	Colombia	Spain	2
	<i>Gaura</i>	Cuttings	Israel	Spain	1
	<i>Impatiens</i>	Cuttings	Israel	Spain	1
	<i>Lagenaria</i>	Vegetables	Pakistan	Spain	2
	<i>Lagenaria siceraria</i>	Vegetables	Pakistan	Spain	2
	<i>Lavandula angustifolia</i>	Cuttings	Israel	Spain	1
	<i>Lithospermum</i>	Cuttings	Israel	Spain	1
	<i>Lobelia</i>	Cuttings	Israel	Spain	1
	<i>Momordica charantia</i>	Vegetables	Laos	France	1
	<i>Momordica charantia</i>	Vegetables	Laos	Switzerland	1
	<i>Penstemon</i>	Cuttings	Israel	Spain	1
	<i>Rosa</i>	Cut flowers	Colombia	Spain	3
	<i>Rosa</i>	Cut flowers	Kenya	Spain	1
	<i>Rosmarinus</i>	Cuttings	Israel	Spain	1
	<i>Salvia</i>	Cuttings	Israel	Spain	1
	<i>Santolina</i>	Cuttings	Israel	Spain	1
	<i>Satureja</i>	Cuttings	Israel	Spain	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Thysanoptera (cont.)	<i>Solanum melongena</i>	Vegetables	Laos	France	1
	<i>Solanum melongena</i>	Vegetables	Sri Lanka	Switzerland	1
	<i>Thymus</i>	Cuttings	Israel	Spain	1
<i>Tomato chlorotic dwarf viroid</i>	<i>Capsicum annuum</i>	Seeds	China*	Italy	1
Tortricidae	<i>Capsicum</i>	Vegetables	Ghana	United Kingdom	1
<i>Trialeurodes vaporariorum</i>	<i>Dendranthema</i>	Cut flowers	Kenya	France	1
<i>Trioza erytreae</i>	<i>Murraya koenigii</i>	Vegetables (leaves)	South Africa	Switzerland	1
	<i>Murraya koenigii</i>	Vegetables (leaves)	Uganda	Switzerland	2
	<i>Murraya koenigii</i>	Vegetables (leaves)	Uganda	United Kingdom	2
<i>Tuta absoluta</i>	<i>Solanum lycopersicum</i>	Vegetables	Morocco	Spain	1
<i>Xanthomonas axonopodis</i> pv. <i>citri</i>	Citrus	Fruits	Bangladesh	United Kingdom	2
	<i>Citrus hystrix</i>	Fruits	Malaysia	Switzerland	1
	<i>Citrus latifolia</i>	Fruits	Bangladesh	United Kingdom	1
	<i>Citrus paradisi</i>	Fruits	China	United Kingdom	1
<i>Xiphinema</i>	<i>Loropetalum</i>	Plants for planting	China	Netherlands	1
<i>Xiphinema incognitum</i>	<i>Carmona</i>	Plants for planting	China	Netherlands	1
<i>Xylella fastidiosa</i>	<i>Coffea arabica</i>	Plants for planting	(Netherlands)	Italy	1
	<i>Coffea arabica</i>	Plants for planting	Costa Rica	Italy	2

• Fruit flies

Pest	Consignment	Country of origin	Destination	nb
<i>Anastrepha</i>	<i>Mangifera indica</i>	Peru	Netherlands	1
<i>Bactrocera</i>	<i>Chrysophyllum cainito</i>	Vietnam	United Kingdom	1
<i>Bactrocera dorsalis</i>	<i>Capsicum</i>	Laos	Germany	1
<i>Bactrocera latifrons</i>	<i>Capsicum</i>	Thailand	Sweden	1
	<i>Capsicum annuum</i>	Bangladesh*	Sweden	1
	<i>Capsicum annuum</i>	Laos	Sweden	3
	<i>Capsicum frutescens</i>	Laos	Sweden	1
	<i>Trichosanthes dioica</i>	Bangladesh*	Sweden	1
<i>Bactrocera zonata</i>	<i>Mangifera indica</i>	(Vietnam)	Germany	1
<i>Ceratitis capitata</i>	<i>Capsicum</i>	Uganda	Switzerland	1
Tephritidae (non-European)	<i>Annona muricata</i>	Vietnam	Belgium	1
	<i>Averrhoa carambola</i>	Malaysia	Netherlands	3
	<i>Capsicum</i>	Bangladesh	Italy	1
	<i>Capsicum</i>	Bangladesh	United Kingdom	3
	<i>Capsicum</i>	Gambia	United Kingdom	1
	<i>Capsicum</i>	India	Germany	1
	<i>Capsicum</i>	Kenya	Germany	1
	<i>Capsicum</i>	Laos	Germany	1
	<i>Capsicum</i>	Laos	United Kingdom	5

Pest	Consignment	Country of origin	Destination	nb
Tephritidae (non-European)	<i>Capsicum</i>	Nigeria	United Kingdom	1
	<i>Capsicum</i>	Rwanda	Netherlands	1
	<i>Capsicum chinense</i>	Burundi	Belgium	2
	<i>Capsicum frutescens</i>	Bangladesh	Italy	3
	<i>Capsicum frutescens</i>	Ghana	United Kingdom	1
	<i>Capsicum frutescens</i>	Laos	Netherlands	1
	<i>Citrus</i>	China	Netherlands	1
	<i>Diospyros kaki</i>	Brazil	Netherlands	1
	<i>Lagenaria</i>	Ghana	United Kingdom	12
	<i>Lagenaria siceraria</i>	Ghana	United Kingdom	6
	<i>Luffa acutangula</i>	Ghana	United Kingdom	2
	<i>Mangifera indica</i>	Burkina Faso	France	3
	<i>Mangifera indica</i>	Burkina Faso	Germany	1
	<i>Mangifera indica</i>	Burkina Faso	Netherlands	2
	<i>Mangifera indica</i>	Cameroon	France	2
	<i>Mangifera indica</i>	Cameroon	Italy	1
	<i>Mangifera indica</i>	Dominican Rep.	France	1
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	2
	<i>Mangifera indica</i>	Kenya	Netherlands	1
	<i>Mangifera indica</i>	Mali	France	1
	<i>Mangifera indica</i>	Mexico	United Kingdom	1
	<i>Mangifera indica</i>	Peru	Belgium	1
	<i>Mangifera indica</i>	Peru	Netherlands	2
	<i>Mangifera indica</i>	Philippines	Switzerland	1
	<i>Momordica</i>	Ghana	United Kingdom	8
	<i>Momordica</i>	Kenya	United Kingdom	1
	<i>Momordica</i>	Laos	United Kingdom	1
	<i>Momordica</i>	Sri Lanka	United Kingdom	1
	<i>Momordica</i>	Thailand	United Kingdom	1
	<i>Momordica</i>	Uganda	United Kingdom	2
	<i>Psidium guajava</i>	Brazil	France	1
	<i>Psidium guajava</i>	India	France	1
	<i>Syzygium</i>	Jamaica	United Kingdom	3
	<i>Syzygium samarangense</i>	Laos	France	1
<i>Trichosanthes</i>	Bangladesh	United Kingdom	2	
<i>Trichosanthes</i>	India	United Kingdom	1	
<i>Trichosanthes cucumerina</i>	Bangladesh	Ireland	1	
<i>Trichosanthes cucumerina</i>	Bangladesh	United Kingdom	1	
<i>Trichosanthes cucumerina</i>	Bangladesh	United Kingdom	2	
<i>var. anguina</i>				
<i>Trichosanthes dioica</i>	Bangladesh	United Kingdom	2	

• Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Anoplophora chinensis</i>	Unspecified	Wood packing material	China	Netherlands	1
<i>Anoplophora glabripennis</i>	Unspecified	Wood packing material (pallet)	China	Austria	3
	Unspecified	Wood packing material	China	Estonia	1
	Unspecified	Wood packing material	China	Finland	1
	Unspecified	Wood packing material (pallet)	China	Switzerland	1
<i>Apriona germari</i>	Unspecified	Wood packing material (pallet)	China	Belgium	1
	Unspecified	Wood packing material	China	Netherlands	4

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Arhopalus</i>	Unspecified	Dunnage	Ukraine	United Kingdom	1
<i>Batocera</i>	Unspecified	Wood packing material (pallet)	China	Austria	1
	Unspecified	Wood packing material	China	United Kingdom	1
Bostrichidae	Unspecified	Wood packing material	China	Germany	1
<i>Bursaphelenchus mucronatus</i>	Unspecified	Wood packing material	China	Bulgaria	1
	Unspecified	Wood packing material (pallet)	Russia	Netherlands	2
<i>Bursaphelenchus xylophilus</i>	Unspecified	Wood packing material	USA	Finland	1
	Unspecified	Wood packing material	Vietnam*	France	1
Cerambycidae	Unspecified	Dunnage	Côte d'Ivoire	Spain	1
	Unspecified	Wood packing material	China	Belgium	1
	Unspecified	Wood packing material (pallet)	China	Belgium	1
	Unspecified	Wood packing material	China	Germany	1
	Unspecified	Wood packing material	China	Netherlands	1
	Unspecified	Wood packing material (pallet)	China	Spain	1
	Unspecified	Wood packing material	China	United Kingdom	1
Coleoptera	Unspecified	Wood packing material (pallet)	China	Austria	1
Curculionidae	Unspecified	Wood packing material	China	Netherlands	1
<i>Dinoderus</i>	Unspecified	Wood packing material	Kenya	Germany	1
<i>Heterobostrhythus</i>	Unspecified	Wood packing material (pallet)	Indonesia	Germany	1
Insecta	Unspecified	Wood packing material	China	France	1
	Unspecified	Wood packing material (pallet)	China	Switzerland	1
	Unspecified	Wood packing material (crate)	India	Switzerland	1
	Unspecified	Wood packing material (crate)	Indonesia	Switzerland	1
	Unspecified	Wood packing material (pallet)	Switzerland	Switzerland	1
<i>Lyctus</i>	Quercus	Wooden object (table)	China	United Kingdom	1
	Unspecified	Wood packing material	India	Germany	1
	Unspecified	Wood packing material (pallet)	India	Germany	1
	Unspecified	Wood packing material (pallet)	Pakistan	Germany	2
<i>Minthea</i>	Unspecified	Wood packing material (pallet)	Malaysia	Germany	1
<i>Monochamus alternatus</i>	Unspecified	Dunnage	Russia	United Kingdom	1
<i>Monochamus</i> (suspected)	Unspecified	Wood packing material (crate)	China	Germany	1
Nematoda	Unspecified	Wood packing material	USA	France	1
Scolytidae	Unspecified	Wood packing material (pallet)	China	Austria	1
Silvanidae	Unspecified	Wood packing material (pallet)	Indonesia	Germany	1
<i>Sinoxylon</i>	Unspecified	Wood packing material	India	Germany	7
	Unspecified	Wood packing material (crate)	India	Germany	17
	Unspecified	Wood packing material (pallet)	India	Germany	15
	Unspecified	Wood packing material	India	Poland	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Sinoxylon</i> (cont.)	Unspecified	Wood packing material	Indonesia	Germany	3
	Unspecified	Wood packing material (pallet)	Indonesia	Germany	1
	Unspecified	Wood packing material (pallet)	Malaysia	Germany	1
	Unspecified	Wood packing material (crate)	Pakistan	Germany	1
	Unspecified	Wood packing material (crate)	Sri Lanka	Germany	1
	Unspecified	Wood packing material (pallet)	Sri Lanka	Germany	1
	Unspecified	Wood packing material (pallet)	Turkey	Germany	1
	Unspecified	Wood packing material (crate)	United Arab Emirates	Germany	1
	Unspecified	Wood packing material	Vietnam	Germany	1
	Unspecified	Wood packing material (pallet)	Vietnam	Germany	1
<i>Sinoxylon anale</i>	Unspecified	Wood packing material	India	Germany	1
<i>Tarsostenus univittatus</i>	Unspecified	Wood packing material (pallet)	Indonesia	Germany	1
<i>Xylothrips flavipes</i>	Unspecified	Wood packing material (pallet)	China	Germany	1

• **Bonsais**

Pest	Consignment	Country of origin	Destination	nb
<i>Gymnosporangium asiaticum</i>	<i>Juniperus chinensis</i>	Japan	Czech Republic	3
Trichodoridae	<i>Chamaecyparis obtusa</i>	Japan	Belgium	1
	<i>Juniperus chinensis</i>	Japan	Belgium	1

Source: EPPO Secretariat, 2015-04.

2015/081 Plant invaders in European and Mediterranean inland waters

Freshwater habitats are major biodiversity hotspots which are prone to high levels of disturbance, and impacts from both biotic and abiotic factors. Invasive aquatic plants have been shown to have significant negative impacts on biodiversity in inland waters within the EPPO region. In the present study, the author reviews the current status of 21 invasive aquatic plant species included in EPPOs invasive alien plant lists. Major pathways for these 21 species include introduction through the horticulture trade, intentional release into the environment and escape into the environment as a contaminant of specific commodities. The impacts that aquatic plants have on the fragile environments they invade is highlighted with the case of *Eichhornia crassipes* (EPPO A2 List). The impacts of this species include changing of the physio-chemical characteristics of the invaded waterbody which have detrimental impacts at higher trophic levels and socio-economic impacts.

Source: Brundu G (2015) Plant invaders in European and Mediterranean inland waters: profiles, distribution, and threats. *Hydrobiologia* 746, 61-79.

Additional key words: invasive alien plants, habitats

Computer codes: EICCR

2015/082 First release of a fungal classical biological control agent against an invasive alien weed in Europe

In the summer of 2014, the rust fungus *Puccinia komarovii* var. *glanduliferae* was released in the United Kingdom against *Impatiens glandulifera* (EPPO list of invasive alien plants) in a set of experimental field trials. *I. glandulifera* is native to the western Himalayas (India and Pakistan) and it was in the Kullu Valey, India where the rust was first discovered infecting the stem and leaves of plants in high altitude populations. *P. komarovii* var. *glanduliferae* is an autoecious host specific fungus that has been evaluated as a biocontrol agent since 2010. The rust underwent safety testing where over 70 closely related, or economically important plant species were tested for susceptibility following internationally recognized scientific protocols. The biology of the rust was evaluated, including life cycle evaluation and dew and temperature requirements for spore germination. These studies confirmed that the rust has five spore stages with temperature and dew period requirements (aecia and urediniospore germination) for which the UK climate is conducive.

Source: Tanner RA, Pollard KM, Varia S, Evans HC, Ellison CA (2015) First release of a fungal classical biocontrol agent against an invasive alien weed in Europe: biology of the rust, *Puccinia komarovii* var. *glanduliferae*. *Plant Pathology* DOI: 10.1111/ppa.12352.

Tanner RA, Ellison CA, Seier MK, Kovács GM, Kassai-Jäger E, Berecky Z, Varia S, Djeddour D, Singh MH, Csiszár A, Csontos P, Kiss L, Evans HC (2015) *Puccinia komarovii* var. *glanduliferae* var. nov.: a fungal agent for the biological control of Himalayan balsam (*Impatiens glandulifera*). *European Journal of Plant Pathology* 141, 247-266.

Additional key words: biological control

Computer codes: IPAGL, PUCCKG, GB

2015/083 Distance-dependent effects of the invasive *Lupinus polyphyllus* on native plants

Lupinus polyphyllus (Fabaceae) (EPPO observation list of invasive alien plants) is native to North America and a widespread alien species within the EPPO region. The authors of the present study set up field experiments in Sweden to evaluate the effects of *L. polyphyllus* on pollination and reproductive success of two native herbaceous plants, *Lotus corniculatus* and *Lychnis viscaria*. The experiments were conducted in 2011, and *L. polyphyllus* was transplanted along transects with potted individuals of each native plant placed at different distances from the invasive population in a replicated design. Pollinator visits were monitored at defined periods in the summer months for periods of ten minutes per census. Reproductive success was measured by collecting fruits. The authors observed that total pollinator visitation rates for *L. corniculatus* were negatively related to distance from the invasive population and for this species reproductive success was higher close to *L. polyphyllus*. For *L. viscaria* pollinator visitation and reproductive success was unaffected by distance.

Source: Jackobsson A, Padron B, Ågren J (2015) Distance-dependent effects of invasive *Lupinus polyphyllus* on pollination and reproductive success of two native herbs. *Basic and Applied Ecology* 16, 120-127.

Additional key words: biology

Computer codes: LUPPO, LOTCO, LYHVI, SE

2015/084 The performance of native and invasive *Myriophyllum* species under different abiotic conditions

Aquatic plant species are dependent on a number of abiotic factors that can influence their growth, and persistence in given habitats. Temperature, light and dissolved inorganic carbons are three factors that have been shown to significantly influence the fitness of aquatic plant species. In this study, growth parameters of two *Myriophyllum* species, *Myriophyllum spicatum* (native to the EPPO region and invasive in North America) and *Myriophyllum heterophyllum* (an invasive alien in the EPPO region) were evaluated under varying abiotic conditions in a three factorial experimental design (light x temperature x CO₂). The two species differed significantly in their relative growth rates (RGR) and their growth response to different growth conditions. Both had a maximum RGR at 21°C, though it was significantly higher in *M. spicatum*. The RGR of *M. heterophyllum* was significantly increased with CO₂. Light was shown to significantly increase RGR for both species. Both species were able to utilize HCO₃⁻ (bicarbonate) which was higher in plants acclimated to low levels of CO₂. However, *M. spicatum* showed an overall greater efficacy for HCO₃⁻ utilisation.

Source: Hussner A, Jahns P (2015) European native *Myriophyllum spicatum* showed a higher HCO₃⁻ use capacity than alien invasive *Myriophyllum heterophyllum*. *Hydrobiologia* 746, 171-182.

Additional key words: invasive alien plants

Computer codes: GNAPE, VEEEN, AE

2015/085 Status and management of *Parthenium hysterophorus* in Nepal

Parthenium hysterophorus (EPPO A2 List) is a highly invasive plant species which has negative impacts on biodiversity and agriculture production across the globe. The species was first recorded in Nepal in 1967, but has shown significant population expansion over the last 20 years. *P. hysterophorus* is dominant along roadsides, grasslands, abandoned agricultural land and natural areas - including the World Natural Heritage site, the Chitwan National Park. In Nepal, the impacts include altering the soil nutrient composition and outcompeting native plant species. Human health impacts have been observed in Nepal, similar to other regions where the species is invasive. Skin dermatitis has been recorded in Nepalese livestock owners and farmers that come into regular contact with the invasive plant. The authors detail current control methods that are adopted within the invasive range and highlight the biocontrol agents *Zygogramma bicolorata* (Coleoptera: Chrysomelidae) and *Puccinia abrupta* var. *partheniicola* (fungal rust) which have arrived in Nepal without human assistance and have resulted in some impact on the invasive population.

Source: Shrestha BB, Shabbir A & Adkins SW (2015) *Parthenium hysterophorus* in Nepal: a review of its weed status and possibilities for management. *Weed Research* 5, 132-144.

Additional key words: detailed record, management

Computer codes: PTNHY, PUCCAQ, ZYGGBI, NP

2015/086 Direct and indirect effects of the alien tree *Ailanthus altissima*

Ailanthus altissima (Simaroubaceae) (EPPO list of invasive alien plants) is a deciduous tree species native to China and North Vietnam and a widespread alien in the EPPO region. In this present study the authors evaluated the direct and indirect effects of *A. altissima* invasion on riparian plant communities and ecosystem multifunctionality. The study was conducted in the Mediterranean area of Southeastern Spain. Ten 10 x 10 m control plots were established where *A. altissima* was absent along with ten 10 x 10 m infested plots. Within each plot the percentage cover and species richness of vegetation was assessed in 40 quadrats (0.5 x 0.5 m). Understory plant biomass was evaluated in 5 quadrats in each plot. Soil samples were collected in each plot and tested in the laboratory for soil enzyme activity and soil nutrients. Structured equation modeling was used to separate direct and indirect effects of *A. altissima* on ecosystem multifunctionality. The presence of *A. altissima* was associated with lower plant species richness, lower phylogenetic diversity and lower ecosystem multifunctionality.

Source: Constàn-Nava S, Soliveres S, Torices R, Serra L, Bonet A (2015) Direct and indirect effects of invasion by the alien tree *Ailanthus altissima* on riparian plant communities and ecosystem multifunctionality. *Biological Invasions* 17, 1095-1108.

Additional key words: invasive alien plants

Computer codes: AILAL, ES

2015/087 A catalogue of biological control agents against weeds

The 5th edition of Biological Control of Weeds: a world catalogue of agents and their target weeds is available for download as a pdf document. The catalogue documents all biological control agents released globally against weed species up until the end of 2012. It details an additional 319 new releases (since the fourth Edition) accumulating in 2,042 entries from 130 countries with 551 biocontrol agents against 224 weed species.

Source: iBiocontrol. <http://www.ibiocontrol.org/catalog/>

Winston RL, Schwarzländer M, Hinz HL, Day MD, Cock MJW & Julien MH Eds. (2014) Biological control of weeds: a world catalogue of agents and their target weeds, 5th edition. USDA Forest Service, Forest health Technology Enterprise Team, Morgantown, West Virginia FHTET-2014-04. 838 pp.

Additional key words: biological control, database

2015/088 Distribution and morphological variation of invasive *Elodea nuttallii* and *E. canadensis* in Croatia

Elodea nuttallii and *E. canadensis* (Hydrocharitaceae) are two macrophyte plant species native to North America and invasive alien plants within the EPPO region (Table 1). In Croatia, *E. nuttallii* is a relatively recent addition to the alien flora, being first identified in 2006 whereas *E. canadensis* has been established since 1894. The species have separate geographical distributions in Croatia where *E. nuttallii* is found in the Kopački rit floodplain (river Drava) and *E. canadensis* occurs in the Lonjsko polje floodplain which is part of the Sava River Basin. Since the first identification of *E. nuttallii* in 2006, spread has occurred eastwards along the drainage channel networks potentially linked to flooding events that act to link stagnant waters and channels. Species identification within the genus *Elodea* is aided by taxonomic characteristics in the male flowers, however, this is not possible for these two species in Europe as only female plants were introduced - hence spread is vegetative. The authors show that identification of the two species is aided by morphological differences in both leaf length and width although there is some overlap between the species in Croatia. In general, *E. nuttallii* had longer leaves whereas leaf width was greater in *E. canadensis*

Table 1. The occurrence of *Elodea nuttallii* and *Elodea canadensis* in the EPPO region*.

Species	EPPO countries where present
<i>Elodea nuttallii</i>	AT, BE, CH, CZ, DE, DK, FI, FR, GB, HU, HR, IE, IT, NL, NO, PL, RO, SK, SE
<i>Elodea canadensis</i>	BE, BG, CH, DE, DK, ES, FI, FR, GB, GE, HR, HU, IE, IT, LT, NL, NO, PL, PT, RU

* The distribution of species has been checked in the Q-bank database, as well as the DAISIE, NOBANIS and PQR databases.

Source: Kočić A, Horvatić J & Jelaska SD (2014) Distribution and morphological variation of invasive macrophytes *Elodea nuttallii* (Planch.) H. St. John and *Elodea canadensis* Michx in Croatia. *Acta Botanica Croatica* 73(2), 437-446.

Additional key words: detailed record

Computer codes: ELDNU, ELDCE, HR