ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO Reporting Service

NO. 09 PARIS, 2012-09-01

CONTENTS _____ ***Pests & Diseases***

_____ ***Invasive Plants***

21 Bld Richard Lenoir
75011 Paris

Tel: 33 1 45 20 77 94
Fax: 33 1 70 76 65 47

E-mail: hq@eppo.int
Web: www.eppo.int

2012/182 New additions to the EPPO A1 and A2 Lists

In September 2012, the EPPO Council approved the addition of the following pests to the EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests. As some A1 pests are now found with a limited distribution in the EPPO region, they were transferred to the A2 List.

Addition to the A1 List (pests absent from the EPPO region):

- '*Candidatus* Liberibacter solanacearum' (Solanaceae haplotypes) and its vector *Bactericera cockerelli*
- *Keiferia lycopersicella*
- *Leucinodes orbonalis*

Additions to the A2 List (pests locally present in the EPPO region):

- *Pepino mosaic virus*
- *Pseudomonas syringae* pv. *actinidiae*

Transfers from the A1 List to the A2 List:

- *Maconellicoccus hirsutus*
- *Trioza erytreae*

For each individual pest, datasheets are being prepared and will be available in due course on the EPPO website.

Source: EPPO Secretariat (2012-09).

Additional key words: EPPO Lists **Computer codes:** GNORLY, LEUIOR, LIBEPS, PARZCO, PEPMV0, PHENHI, PSDMAK, TRIZER

2012/183 First report of citrus huanglongbing in Argentina

In June 2012, the occurrence of citrus huanglongbing (associated with '*Candidatus* Liberibacter asiaticus' – EPPO A1 List) was detected for the first time in Argentina, in the northeastern part of Misiones province near the border with Brazil. Following this initial detection, surveys were carried out. As of September 2012, 758 sites (total area of 16 760 ha) planted with citrus and other plants which might host the disease or its vector were inspected. Out of a total of 130 collected samples, 9 were tested positive. All infected plants were destroyed. A contingency plan is being carried out and intensive surveys are continuing in Argentina.
The situation of '*Candidatus* Liberibacter asiaticus' in Argentina can be described as follows: **Present, first found in June 2012 on a small number of plants in Misiones province, under eradication.**

Source: ProMed posting (no. 20120917.1296650) of 2012-09-17. Huanglongbing, Citrus – Argentina: first report, (Misiones). http://www.promedmail.org

SENASA website. HLB: avances en las acciones de monitorea y control en Misiones. http://www.senasa.gov.ar/contenido.php?to=n&in=11&ino=11&io=21289

Additional key words: new record **Computer codes:** LIBEAS, AR

2012/184 First report of *Tomato infectious chlorosis virus* in Mexico

Since 2007, unusual symptoms (yellow and brittle leaves) have been observed in commercial tomato (*Solanum lycopersicum*) fields in the municipality of Ensenada, Baja California, Mexico. These symptoms and the presence of whiteflies (*Bemisia tabaci* and *Trialeurodes vaporariorum*) suggested the occurrence of crinivirus infections. Leaf samples were collected from 143 symptomatic tomato plants (2007 and 2008 growing seasons) and tested (RT-PCR, sequence analysis). Results confirmed the presence of *Tomato infectious chlorosis virus* (*Crinivirus*, TICV – EPPO A2 List) in diseased tomato plants. This is the first time that TICV is reported from Mexico. In this study, the presence of *Tomato chlorosis virus* (ToCV – EPPO A2 List) was not detected, although this virus has previously been reported in Mexico in tomato crops and weeds (*Solanum nigrescens* and *Datura stramonium*).
The situation of *Tomato infectious chlorosis virus* in Mexico can be described as follows: **Present, first found in 2007/2008 in commercial tomato crops in Baja California.**

Source: Méndez-Lozano J, Magallanes-Tapia MA, Romero-Romero JL, Camacho-Beltrán E, Orduño Vega WL, Leyva-López NE, Santos-Cervantes ME, Félix-Gastélum R (2012) *Tomato infectious chlorosis virus* associated with tomato diseases in Baja California, Mexico. *Plant Disease* **96**(8), p 1229.

Additional key words: new record **Computer codes:** TICV00, MX

2012/185 Studies on the tuber transmission of '*Candidatus* Liberibacter solanacearum'

Studies have been conducted in New Zealand to evaluate the possible role of potato tubers in the transmission of '*Candidatus* Liberibacter solanacearum' (EPPO A1 List – bacterium associated with zebra chip disease). Potato tubers infected with '*Ca.* L. solanacearum' were planted in the absence of the psyllid vector (*Bactericera cockerelli* - EPPO A1 List) and the progeny obtained was tested by nested-PCR. In this experiment, 62 infected and 38 healthy potato tubers were planted (under a net to prevent psyllid infestation) and the development of symptoms was monitored between planting of the mother tubers and the resulting crop. In the resulting crop, the transmission '*Ca.* L. solanacearum' was evaluated with the development of foliar and tuber symptoms, and positive results in nested-PCR tests. A large proportion of mother tubers (58) sprouted. During the growing season, only 2 plants (out of the 58 obtained) showed symptoms of zebra chip; they died prematurely and the presence of the pathogen could be detected in leaf samples. The remaining 56 potato plants did not show any foliage symptoms. However, when tested the pathogen could be found in foliar samples from 39 of these potato plants. At the end of the growing season, harvested progeny tubers were screened for the presence of zebra chip symptoms and tested. Mild symptoms were observed in tubers which had been produced by 1 plant only. Nested-PCR tests of tuber samples (1 representative tuber collected from each harvested plant) confirmed that '*Ca.* L. solanacearum' was present in the daughter tubers showing mild symptoms, as well as in tubers originating from 4 asymptomatic plants. These results showed that '*Ca.* L. solanacearum' can be transmitted from the mother tubers both to the foliage of growing plants and to progeny tubers.

Source: Pitman AR, Drayton GM, Kraberger SJ, Genet RA, Scott IAW (2011) Tuber transmission of *'Candidatus* Liberibacter solanacearum' and its association with zebra chip on potato in New Zealand. *European Journal of Plant Pathology* **129**(3), 389-398.

Additional key words: epidemiology **Computer codes:** LIBEPS, NZ

2012/186 Genetic studies on '*Candidatus* Liberibacter solanacearum'

Studies have been conducted to determine whether there is any geographic pattern in the known genetic variability of '*Candidatus* Liberibacter solanacearum'. This bacterium is associated with potato zebra chip disease (EPPO A1 List) transmitted by *Bactericera cockerelli* (EPPO A1 List) in the Americas and New Zealand, as well as with diseases of carrot and celery (Apiaceae) in Europe transmitted by other psyllids (*Bactericera trigonica, Trioza apicalis*). Comparisons were carried out on a large number of sequences obtained from different geographical sources (Guatemala, Honduras, Mexico, New Zealand, USA, and Finland), as well as from different hosts: Solanaceae (*Capsicum annuum, Lycium berlandieri, Solanum betaceum, S. lycopersicum, S. tuberosum*), Apiaceae (*Daucus carota*) and the psyllid vector (*Bactericera cockerelli*). These comparisons revealed 3 different patterns which could be interpreted as 3 different haplotypes (haplotypes were described by SNPs (single-nucleotide polymorphisms) on the 16S rRNA, 16S/23S intergenic spacer region, 50S rplJ and rplL ribosomal protein genes). Haplotype 'a' was found primarily from Honduras, Guatemala, through Western Mexico to Arizona and California and in New Zealand. Haplotype 'b' was found from Eastern Mexico and northwards through Texas to South Central Washington. Haplotypes 'a' and 'b' corresponded to sequences obtained from solanaceous host plants and *B. cockerelli*. Their distributions presented some overlap in Texas, Kansas and Nebraska. Haplotype 'c' corresponded to sequences obtained from carrot crops in Finland. The authors concluded that these apparently stable haplotypes suggest a long divergence and separation of bacterial populations. They also noted that more studies are needed to verify whether these sequence differences correspond to biological differences in the plant or insect hosts.

Source: Nelson WR, Fisher TW, Munyaneza (2011) Haplotypes of *'Candidatus* Liberibacter solanacearum' suggest long-standing separation. *European Journal of Plant Pathology* **130**(1), 5-12.

Additional key words: genetics **Computer codes:** LIBEPS

2012/187 Surveys on phytoplasmas associated with potatoes in Romania and Southern Russia

Surveys were carried out in 2008/2009 to identify phytoplasmas associated with potato crops in Romania and Southern Russia using molecular techniques. Symptomatic potato plants (*Solanum tuberosum*) were collected from several fields in both countries and tested by PCR for the presence of phytoplasmas. Samples of weeds (e.g. *Convolvulus arvensis*) and adjacent crops (including *Beta vulgaris, Capsicum annuum, Solanum lycopersicum, S. melongena, Zea mays*) were also included. In both countries, stolbur was the only phytoplasma detected in potatoes. It is noted that a large number of potato tubers (27%) collected from phytoplasma-infected fields had a spongy appearance which resulted in commercially unacceptable potato chips upon processing. Genotyping (*tuf*

genes) of obtained stolbur isolates revealed that they all had the same RFLP profile corresponding to the 'tuf-type b', a genotype known to be associated with the weed *C. arvensis*. These results suggest that this weed probably constitutes a major source of inoculum for potato crops in Romania and Southern Russia. According to the authors, the results of these surveys (more detail is presented below) indicate that stolbur is a major pathogen associated with phytoplasma diseases of potato in Romania and Southern Russia.

Romania
In Romania, a total of 187 plant samples were tested in 2008 (32 potato, 151 weed, and 3 maize plants). These samples had been collected from 2 potato fields (and their vicinities) in Fundulea (Southern Romania) and Csikszereda (Northern Romania). Stolbur was detected in 16.7% of the potato samples (all from Southern Romania) and in 1 sample of the weed *Convolvulus arvensis*.
In 2009, a total of 210 plant samples were tested (121 potato, 84 weed, 3 maize, 2 tomato plants). These samples had been collected from 2 potato fields located in Radovanu (Southern Romania). Stolbur was detected in 28.1% of the potato samples and in 22.6% of the weed samples (*Convolvulus arvensis* and *Cuscuta* sp.). In addition, stolbur was detected in 2 tomato plant samples.

Southern Russia
In Southern Russia, a total of 77 plant samples were tested in 2008 (33 potato, 29 weed, 7 eggplant, 5 pepper, 1 onion plants). These samples had been collected from 3 potato fields (and their vicinities) located in Gulkevichi (Krasnodar region), Azov and Mayad (Rostov region). Stolbur was detected in 22.1% of the potato samples and in all studied locations.
In 2009, a total of 100 plant samples were tested (54 potato, 35 weed, 2 carrot, 1 maize, 1 sugarbeet, 1 tomato plants). These samples had been collected from 4 fields located in Gulkevichi (Krasnodar region), Azov, Mayad and Niva (Rostov region). Stolbur was detected in 44.2% of the potato samples and in all studied locations. In addition, stolbur was detected in the tomato and beet samples, as well as in several pepper, eggplant and weed (*C. arvensis, Cuscuta* sp., *Euphorbia falcata*) samples.

Source: Ember I, Acs Z, Munyaneza JE, Crosslin JM, Kolber M (2011) Survey and molecular detection of phytoplasmas associated with potato in Romania and Southern Russia. *European Journal of Plant Pathology* **130**(3), 367-377.

Additional key words: detailed record **Computer codes:** PHYP10, RO, RU

2012/188 The 'giant race' of *Ditylenchus dipsaci* is considered to be a distinct species: *Ditylenchus gigas* n. sp.

The 'giant race' of *Ditylenchus dipsaci* (EPPO A2 List) was first recorded in 1986 on broad beans (*Vicia faba*) in Algeria. In this population, adult nematodes were considerably larger than those commonly observed for *D. dipsaci*. This 'giant race' was then observed in other countries around the Mediterranean Basin. Symptoms caused the 'giant race' on *V. faba* crops are generally more severe than those caused by other races of *D. dipsaci*, and more infested seeds are produced. Several authors have suggested that *D. dipsaci* was a complex species (comprising at least 7 species) and in particular, that the 'giant race' should be considered as a distinct taxon. On the basis of morphological, biochemical and molecular data obtained from several populations of *D. dipsaci* collected on *V. faba* from Southern Italy, Southern Spain and Lebanon, Vovlas *et al.* (2011) are now considering that the 'giant race' is a new and distinct nematode species and proposed to name it: *Ditylenchus gigas*.

Source: Vovlas N, Troccoli A, Palomares-Rius JE, Luca F, de Liébanas G, Landa BB, Subbotin SA, Castillo P (2011) *Ditylenchus gigas* n. sp. parasitizing broad bean: a new stem nematode singled out from the *Ditylenchus dipsaci* species complex using a polyphasic approach with molecular phylogeny. *Plant Pathology* **60**(4), 762-775.

Additional key words: new pest **Computer codes:** DITYDI, DIDYGI

2012/189 Raspberry leaf blotch virus, a new virus of raspberry

During the last decades, a disorder called leaf blotch has emerged in some raspberry (*Rubus idaeus*) and tayberry (*Rubus* hybrids) plantations in England and Scotland (United Kingdom). The disease is affecting in particular the raspberry cultivar 'Glen Ample' when grown in protective tunnels. Diseased plants display symptoms of leaf chlorosis, distortion and patchy necrosis combined with a thinning leading to death of lateral branches and subsequent loss of fruit yield. Another clear symptom was a sectoring of the leaf where smooth, apparently hairless patches appeared on the leaf underside. This disease had previously been attributed to the eriophyid raspberry leaf and bud mite (*Phyllocoptes gracilis*), but recent studies have showed that a new virus, tentatively called Raspberry leaf blotch virus (RLBV), was associated with this disease. Preliminary studies strongly suggest that RLBV is transmitted by *P. gracilis*. The genome structure and viral protein sequences indicate that RLBV is a new member of the very recently described *Emaravirus** genus of plant viruses. Following the identification of the virus, larger scale surveys were undertaken in Scotland, England and Serbia, and the virus was detected in plants exhibiting symptoms of raspberry leaf blotch disease collected from these three countries. Finally, during surveys conducted in Eastern Finland in June 2011, it was observed that raspberry cv. 'Glen Ample' grown under plastic tunnels and open fields displayed symptoms of raspberry leaf blotch disease. Leaf samples were collected and laboratory studies confirmed the presence of RLBV in diseased plants.

* Other members of this new *Emaravirus* genus include European mountain ash ringspot-associated virus (type species), and probably Fig mosaic virus and Rose rosette virus. All these viruses are transmitted by mites.

Source: Bi Y, Artola K, Kurokura T, Hytönen T, Valkonen JPT (2012) First report of Raspberry leaf blotch virus in raspberries in Finland. *Plant Disease* **96**(8), p 231.

INTERNET
The James Hutton Institute. Poster by McGavin W, Mitchell C, Cock P, MacFarlane S (undated) Raspberry leaf blotch virus, a new virus isolated from raspberry (*Rubus idaeus*). http://www.hutton.ac.uk/webfm_send/365

Jones AT, Gordon SC, Jennings DL (1984) A leaf-blotch disorder of tayberry associated with the leaf and bud mite (*Phyllocoptes gracilis*) and some effects of three aphid-borne viruses. *The Journal of Horticultural Science & Biotechnology* **59**(4), 523-528 (abst.).

McGavin WJ, Mitchell C, Cock PJA, Wright KM, MacFarlane SA (2011) Raspberry leaf blotch virus, a putative new member of the genus Emaravirus, encodes a novel genomic RNA. *Journal of General Virology* **93**, 430-437.

Additional key words: new pest **Computer codes:** RBLV00, FI, GB, RS

2012/190 *Roesleria subterranea*: an emerging disease on grapevine?

The soil-borne fungus *Roesleria subterranea* (=*Roesleria hypogaea*) can cause root rot in grapevine and other woody plants. It can also grow as a saprophyte on dead wood or plant debris in the soil. *R. subterranea* has been isolated more frequently from *Vitis* spp., but also on fruit trees (*Cydonia, Malus, Pyrus, Prunus*) and other woody plants (*Rosa, Salix, Paliurus, Populus, Tilia*).
It has long been considered as a weak parasite and minor pathogen of grapevine, but in recent years it has been reported to cause severe damage in German vineyards. Infections begin at the root surface and the fungus invades the cortex and vascular cylinder. Hyphae of *R. subterranea* aggregate in particular in the xylem and block the vessels, thus leading to root decay. The fungus also produces distinctive fruiting bodies on the roots. Symptoms do not appear on the aerial parts of the plant until root decay is well advanced and the plant considerably damaged. Affected grapevine plants show reduced growth and stunted shoots. Symptoms on leaves may start with a mild chlorosis on the edges. As the disease progresses, the discoloration intensifies and leaf edges become necrotic. Infected plants may die within 2 to 3 years. In Germany, it has been observed that damage varied substantially between vineyards. In several inspected vineyards, dieback could be observed in almost half of the plants and up to 80% yield reduction could be reached in some of them. Old vineyards as well as replanted sites were affected. No efficient control measures are currently available against *R. subterranea*. Diagnostics procedures (combining field observations, morphological characteristics and PCR tests) are being developed. Although data is generally lacking on this fungus, the following tentative distribution list could be prepared, but it is likely that *R. subterranea* is more widely distributed:
EPPO region: Austria, France, Germany, Hungary, Italy (Trentino), Luxemburg, Romania, Switzerland, United Kingdom (Scotland).
North America: Canada (British Columbia, sporadically observed in Okanagan vineyards), USA (recorded in Michigan in 2008, also reported to occur on the East Coast without further details).
Oceania: New Zealand.

In a recent paper, Neuhauser *et al.* (2011) have made an evaluation of the risks posed by *R. subterranea* using parts of the EPPO PRA decision-support scheme. They concluded that this fungus should be considered as a serious threat for grapevine and fruit trees for the following reasons:
- its pathogenicity has repeatedly been proven
- disease symptoms develop slowly and infection is usually noticed when plants are irreversibly damaged
- transmission pathways are largely unclear and diverse (machines, plant material, soil, water)
- infection can lead to potentially severe economic impact
- efficient control measures are currently not available and infected plants usually do not recover
- it is widely distributed and abundant in regions with moderate soil temperatures and high humidity
- it tolerates wide ranges of pH and temperature, and it has the ability to survive as a saprophyte until environmental conditions favour the expression of disease symptoms.

Source: INTERNET
Agroscope. Siegfried W, Bolay A (undated) Pourridié, coître et mélanose infectieuse. Fiche 604. http://www.agroscope.admin.ch/data/publikationen/wa_vit_93_des_1641_f.pdf
British Columbia (CA) Ministry of Agriculture. Grape root rot and decline.

http://www.agf.gov.bc.ca/cropprot/grapeipm/rootrot.htm
Prodorutti D, De Luca F, Pellegrini A, Pertot I (2007) I marciumi radicali della vite. Agraria.org. Rivista no 46.
http://www.rivistadiagraria.org/riviste/vedi.php?news_id=157&rubrica=2007

Kirchmair M, Neuhauser S, Buzina W, Huber L (2004) The taxonomic position of *Roesleria subterranea*. *Mycological Research* **112**, 1210-1219.

Miles TD, Schilder AMC (2009) First report of grape root rot caused by *Roesleria subterranea* in Michigan. *Plant Disease* **93**(7), p 765.

Neuhauser S, Huber L, Kirchmair M (2011) Is *Roesleria subterranea* a primary pathogen or a minor parasite of grapevines? Risk assessment and a diagnostic decision scheme. *European Journal of Plant Pathology* **130**(4), 503-510.

Neuhauser S. Huber L, Kirchmair M (2009) A DNA based method to detect the grapevine root-rotting fungus *Roesleria subterranea* in soil and root samples. *Phytopathogia Mediterranea* **48**, 59-72.

Oprea M, Podosu A (2008) Grape dieback in Romania induced by pathogenic lignicolous fungi. Lucrări Ştiinţifice - Universitatea de Ştiinţe Agronomice şi Medicină Veterinară Bucureşti. Seria B, Horticultură no. 52, 128-133.

Additional key words: distribution, PRA **Computer codes:** ROERSU

2010/191 *Seiridium cardinale* (cypress canker) probably originates from California (US)

Cypress canker is a destructive disease of Cupressaceae which was first observed in 1928 in California (US) on Monterey cypress (*Cupressus macrocarpa*). Since this initial report, the disease has been found in most continents, probably transported via trade of ornamental Cupressaceae. During the last 50 years, epidemics have been particularly severe around the Mediterranean Basin on *Cupressus sempervirens*. There has been considerable debate about the causal agents involved in cypress canker and their taxonomy, and it has been suggested that three distinct species of *Seiridium*, *S. cardinale*, *S. cupressi*, and *S. unicorne*, were associated with the disease. However, the overall distribution and virulence of *S. cupressi* and *S. unicorne* are clearly lower when compared with those of *S. cardinale*. Therefore, the latter is considered as the major cause of cypress canker. A tentative distribution list of *S. cardinale* is as follows:
EPPO region: Algeria, Croatia, Cyprus, France, Germany, Greece (including Crete), Ireland, Israel, Italy, Montenegro, Morocco, Portugal, Serbia, Spain, Tunisia, Turkey, United Kingdom (England, Northern Ireland).
Africa: Algeria, Morocco, South Africa, Tunisia.
Asia: Israel, Syria.
North America: Canada (British Colombia), USA (Alaska, California, Oregon).
South America: Argentina, Costa Rica.
Oceania: Australia (Western Australia), New Zealand (North and South Islands).

For many years, it has been supposed that *S. cardinale* had been introduced from Northern America into other parts of the world, and in particular into the Mediterranean region. A recent study from Della Rocca *et al.* (2011) supports this hypothesis. A genetic analysis of fungal populations from California, several Mediterranean countries, Chile and New Zealand was carried out, using ß-tubulin sequences and 7 polymorphic simple-sequence

repeats (SSRs). In total, it included 96 isolates of *S. cardinale*, as well as ß-tubulin sequences (from GenBank) of 8 isolates of *S. cardinale,* 3 of *S. unicorne* and 7 of *S. cupressi*. Results of the sequence analysis identified 2 distinct ß-tubulin alleles which were both present in California, but only one of them was found in Mediterranean countries. The analysis of SSRs showed that the genotypic diversity was consistently higher in Californian populations of *S. cardinale*. These results strongly suggest that California is the most likely source of epidemics in the Mediterranean region, and possibly the area of origin of *S. cardinale*. This study also confirmed the existence of 3 distinct species of *Seiridium*. Finally, the authors underline that the fact that the establishment of a single genotype has probably caused the entire Mediterranean infestation also highlights the need to prevent any further introductions of *S. cardinale* and, in particular, of other genotypes.

Source: Barnes I, Roux J, Wingfield MJ, Coetzee MPA, Wingfield BD (2001) Characterization of *Seiridium* spp. associated with cypress canker based on ß-tubulin and histone sequences. *Plant Disease* **85**(3), 317-321.

Boesewinkel HJ (1983) New records of the three fungi causing cypress canker in New Zealand, *Seiridium cupressi* (Guba) comb.nov. and *S. cardinale* on *Cupressocyparis* and *S. unicorne* on *Cryptomeria* and *Cupressus*. *Transactions of the British Mycological Society* **80**(3), 544-457.

Della Rocca G, Eyre CA, Danti R, Garbelotto M (2011) Sequence and simple-sequence repeat analyses of the fungal pathogen *Seiridium cardinale* indicate California is the most likely source of the cypress canker epidemic for the Mediterranean region. *Phytopathology* **101**(12), 1408-1417.

Graniti A (1986) *Seiridium cardinale* and other cypress cankers. *Bulletin OEPP/EPPO Bulletin* **16**, 479-486.

Additional key words: distribution, etiology **Computer codes:** SEIRCA, SEIRUN, RHYSCU

2012/192 Studies on flying distances of *Monochamus galloprovincialis*

In 2009 and 2010, studies were conducted in Spain (near Teruel, in Aragon) to improve understanding of the behaviour of *Monochamus galloprovincialis* (Coleoptera: Cerambycidae - vector of *Bursaphelenchus xylophilus*) and its flying capacity. Preliminary results obtained in 2009 showed that the maximum flying distance of *M. galloprovincialis* was approximately of 1800 m. In 2010, improvements were made in the trial design (individual marking of insects, use of different types of traps). In total 1198 insects were released and 81 were recaptured (6.7%). The maximum distance at which *M. galloprovincialis* could be recaptured was of 7100 m. Out of the 81 recaptured insects, 18 (22%) had reached distances of more than 1800 m, and 11 (14%) of more than 3000 m.

Source: Hernández R, Ortiz A, Pérez V, Gil JM, Sánchez G (2011) *Monochamus galloprovincialis* (Olivier, 1975) (Coleoptera: Cerambycidae), comportamiento y distancias de vuelo. *Boletin de Sanidad Vegetal. Plagas* **37**(1), 79-96.

Additional key words: biology **Computer codes:** MONCGA

2012/193 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. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

- **New records**

The presence of *Citrus tristeza virus* (*Closterovirus*, CTV – EPPO A2 List) is reported for the first time in Afghanistan. CTV was detected in the citrus orchard of the National Collection Experimental Farm in Jalalabad (Nangarhar province). Four accessions were found infected by CTV (*Citrus japonica* cv. 'Margarita', *C. sinensis* cv. 'Mahali', *C. reticulata* cv. 'Fruter', *C. jambhiri* cv. 'Mahali') (Rehman *et al.*, 2012). **Present, few records.**

A phytoplasma associated with symptoms of witches' broom on *Ulmus parvifolia* has been detected in symptomatic samples collected from Taiwan and Shandong province in China. Molecular analysis revealed that this phytoplasma was closely related to '*Candidatus* Phytoplasma asteris' (Gao *et al.*, 2011).

- **Detailed records**

In mid-July 2010, symptoms of *Iris yellow spot virus* (*Tospovirus*, IYSV – formerly EPPO Alert List) were observed for the first time in Pennsylvania (US). The disease was found in onion plants (*Allium cepa* cv. 'Candy') in a small farm in New Holland, Lancaster county. Laboratory analysis confirmed the identity of the virus (Hoepting and Fuchs, 2012).

Since the 1970s, *Tilletia controversa* (formerly EPPO A2 List) has almost disappeared from Hungarian wheat crops but surveys are regularly being carried out to verify that wheat shipments are free from it. From 2007 to 2010, numerous wheat samples were analysed and found free from the fungus. But in 2011, 1 sample originating from Pölöske (Zala county) was found infected by teliospores of *T. controversa*. Investigations are planned to delimit the extent of the infestation and to understand why it reappeared in Hungary (Halász, 2012).

In November 2011, the presence of *Tomato yellow leaf curl virus* (*Begomovirus*, TYLCV - EPPO A2 List) was detected in bean fields (*Phaseolus vulgaris*) in Huaibei, Northern Anhui Province, China (Ji *et al.*, 2012).

- **New host plants**

Natural infections of *Citrus leprosis virus* C (CiLV-C - EPPO A1 List) have been detected in *Commelina benghalensis* (Commelinaeae) which is a common weed in citrus orchards in Brazil. However, the possible role of this weed in the disease epidemiology remains to be studied (Nunes *et al.*, 2012a). In addition, transmission experiments with the mite vector, *Brevipalpus phoenicis*, have showed that the following species were also susceptible to CiLV: *Hibiscus rosa-sinensis, Malvaviscus arboreus, Grevilea robusta,* and *Bixa orellana*. These plants are commonly planted as hedgerows and windbreaks in Brazilian citrus orchards (Nunes *et al.*, 2012b).

Inoculation studies have showed that 3 North American native plants, *Rhododendron macrophyllum, Rhododendron occidentale* and *Umbellularia californica*, were susceptible to *Phytophthora kernoviae* (EPPO Alert List). It is noted that these plants might be at risk if the pathogen was introduced into North America, and that they could also serve as pathways for the disease introduction (Fichtner *et al.*, 2012).

Inoculation studies have showed that 66 Australian native plants were susceptible to *Phytophthora ramorum* (EPPO Alert List). Among these plants, *Isopogon formosus, Eucalyptus denticulata* and *Eucalyptus regans* were identified as potentially highly susceptible hosts. *Hardenbergia violaceae, Eucalyptus cneorifolia, Nothofagus cunninghamii, Eucalyptus viminalis* and *Eucalyptus sideroxylon* were found to be potentially moderately susceptible hosts (Ireland *et al.*, 2012).

Inoculation experiments have been conducted in the USA to study the susceptibility to *Phytophthora ramorum* (EPPO Alert List) of several weed species that can be found in containers of nursery plants. Results showed that *Pteris cretica* (Pteridaceae), *Chamerion angustifolium* and *Epilobium ciliatum* (both Onagraceae) showed brown lesions on the foliage and some degree of root infection. Of these species, only *Epilobium ciliatum* is considered to be a common weed of container nurseries. However, these results suggest that weeds should be considered when nurseries are inspected for symptoms of *P. ramorum* (Shishkoff, 2012).

In June 2009, unusual symptoms were observed on pea crops (*Pisum sativum* cv. 'Rajnai törpe') in North-East Hungary. Affected plants showed stem vascular necrosis, interveinal necrosis of upper leaves, wilting of flowers and necrotic spots on the pods. Laboratory studies revealed the presence of *Tomato spotted wilt virus* (*Tospovirus*, TSWV – EPPO A2 List) (Salamon *et al.*, 2012).

- **New species/new pests**

Since 2007, a new disease of onion (*Allium cepa*) called yellow bud has been causing damage in Georgia (US). Emerging leaves display intense chlorosis and older leaves exhibit extensive leaf blight. Yield reductions can be severe due to stand loss and reduced bulb size. The causal agent was identified as *Pseudomonas syringae* but the pathovar could not be determined. It is noted that the disease has spread across the 'Vidalia onion growing region' of Georgia since it was first observed (Gitaitis *et al.*, 2012).

Two new parasitoid species of *Agrilus planipennis* (Coleoptera: Buprestidae – EPPO A1 List) have been described:
- *Spathius galinae* (Hymenoptera: Braconidae). It was originally misidentified a *S. depressithorax*. This species is a gregarious ectoparasitoid of *A. planipennis* larvae. Specimens have been collected from the Russian Far East and the Republic of Korea (Belokobylskij *et al.*, 2012).
- *Sclerodermus pupariae* (Hymenoptera: Bethylidae). This gregarious ectoparasitoid of *A. planipennis* larvae and pupae has been described from China (type material was collected in a gallery of *A. planipennis* on *Fraxinus velutina*, in Tianjin municipality) (Yang *et al.*, 2012).

Sphaeropsis pyriputrescens is a new fungal species which was described in 2004 as the causal agent of a post-harvest disease of apples and pears in Washington State, USA. The fungus was originally described on pears (*Pyrus communis* cv. 'Anjou'), but it was later found that Sphaeropsis rot caused more damage on stored apples (e.g. *Malus domestica*

cvs 'Red Delicious', 'Golden Delicious', 'Fuji', and 'Granny Smith'). The main symptoms of Sphaeropsis rot are stem-end rot and calyx-end rot originating from infections at the stem and calyx of fruit, respectively. Decayed tissues are firm or spongy, and turn brown. As the disease advances, the fungus may form black pycnidia in the decayed areas. *S. pyriputrescens* can also cause twig dieback and cankers on apple and crabapple (*Malus sylvestris*) trees. Infection of fruit occurs in the orchard but symptoms develop after a period of time during storage. In addition to Washington State, *S. pyriputrescens* was detected in British Colombia (Canada) on stored pears in 2009 (Sholberg *et al.*, 2009).

Source:

Belokobylskij S, Yurchenko GL, Strazanac J, Zaldivar-Riveron A, Mastro V (2012) A new emerald ash borer (Coleoptera: Buprestidae) parasitoid species of *Spathius* Nees (Hymenoptera; Braconidae: Doryctinae) from the Russian Far East and South Korea. *Annals of the Entomological Society of America* **105**(2), 165-178.

Fichtner EJ, Rizzo DM, Kirk SA, Webber JF (2012) Infectivity and sporulation potential of *Phytophthora kernoviae* to select North American native plants. *Plant Pathology* **61**(2), 224-233.

Gao R, Wang J, Shao YH, Li XD, Yang BH, Chang WC, Zhao WJ, Zhu SF (2011) Molecular identification of a phytoplasma associated with Elm witches'-broom in China. *Forest Pathology* **41**(5), 355-360.

Gitaitis R, Mullis S, Lewis K, Langston D, Watson AK, Sanders H, Torrance R, Jones, JB, Nischwitz C (2012) First report of a new disease of onion in Georgia caused by a nonfluorescent *Pseudomonas* species. *Plant Disease* **96**(2), p 285-286.

Halász A (2012) [Survey of *Tilletia* species in Hungary – recurrence of *Tilletia controversa*]. *Növényvédelem* 48(5), 193-202 (in Hungarian).

Hoepting CA, Fuchs MF (2012) First report of *Iris yellow spot virus* infecting onion in Pennsylvania. *Plant Disease* **96**(8), p 1229.

Ireland KB, Hüberli D, Dell B, Smith IW, Rizzo DM, Hardy GESTJ (2012) Potential susceptibility of Australian native plant species to branch dieback and bole canker diseases caused by *Phytophthora ramorum*. *Plant Pathology* **61**(2), 234-246.

Ji YH, Cai ZD, Zhou XW, Liu YM, Xiong RY, Zhao TM, Yu WG, Tao XR, Zhou YJ (2012) First report of *Tomato yellow leaf curl virus* infecting common bean in China. *Plant Disease* **96**(8), 1229-1230.

Nunes AM, Bergamini MP, Coerini LF, Bastianel M, Novelli VM, Kitajima EW (2012a) *Citrus leprosis virus* C naturally infecting *Commelina benghalensis*, a prevalent monocot weed of citrus orchard in Brazil. *Plant Disease* **96**(5), p 770.

Nunes AM, de Oliveira CAL, de Oliveira ML, Kitajima EW, Hilf ME, Gottwald TR, Freitas-Astúa J (2012b) Transmission of *Citrus leprosis virus* C by *Brevipalpus phoenicis* (Geijskes) to alternative host plants found in citrus orchards. *Plant Disease* **96**(7), 968-972.

Rehman S, Ahmad J, Lanzoni C, Rubies Autonell C, Ratti C (2012) First report of *Citrus tristeza virus* in National Germplasm of Citrus in Afghanistan. *Plant Disease* **96**(2), p 296.

Salamon P, Nemes K, Salánki K, Palkovics L (2012) First report of natural infection of pea (*Pisum sativum*) by *Tomato spotted wilt virus* in Hungary. *Plant Disease* **96**(2), p 295.

Shishkoff N (2012) Susceptibility of some common container weeds to *Phytophthora ramorum*. *Plant Disease* **96**(7), 1026-1032.

Sholberg PL, Stokes SC, O'Gorman DT (2009) First report of a new postharvest disease of pear fruit caused by *Sphaeropsis pyriputrescens* in Canada. *Plant Disease* **93**(8), p 843.

Xiao CL, Kim YK, Boal RJ (2011) Control of *Sphaeropsis* rot in stored apple fruit caused by *Sphaeropsis pyriputrescens* with postharvest fungicides. *Plant Disease* **95**(9), 1075-1079.

Xiao CL, Rogers JD (2004) A postharvest fruit rot in d'Anjou pears caused by *Sphaeropsis pyriputrescens* sp. nov. *Plant Disease* **88**(2), 114-118.

Yang ZQ, Wang XY, Yao YX, Gould JR, Cao LM (2012) A new species of *Sclerodermus* (Hymenoptera: Bethylidae) parasitizing *Agrilus planipennis* (Coleoptera: Buprestidae) from China, with a key to Chinese species in the genus. *Annals of the Entomological Society of America* **105**(5), 619-627.

Additional key words: new record, detailed record, host plant, new pest

Computer codes: AGRLPL, CILV00, CTV000, IYSV00, PHYTKE, PHYTRA, PSDMSO, SCLMPU, SPHOPY, TILLCO, TSWV00, AF, BR, CA, CN, HU, US

2012/194 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2012 received since the previous report (EPPO RS 2012/105*). Notifications have been sent directly to EPPO by Azerbaijan and 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 (*).

* **NOTE**: the earlier report (RS 2012/105) contained a French interception of a consignment of *Allium* and *Amaranthus* which was reported to be infested with *Meloidogyne chitwoodi* from the Democratic Republic of Congo. The nematode species was in fact *Meloidogyne incognita*.

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Agromyzidae	*Apium graveolens*	Vegetables	Malaysia	Switzerland	1
Bemisia tabaci	*Hygrophila*	Plants for planting	Singapore	United Kingdom	2
	Hygrophila	Plants for planting	Sri Lanka	United Kingdom	1
	Hygrophila	Plants for planting	Thailand	United Kingdom	1
	Lavandula	Plants for planting	Tunisia	France	1
	Ammania senegalensis	Plants for planting	Singapore	United Kingdom	1
	Apium graveolens var. *dulce*	Vegetables	Malaysia	United Kingdom	1
	Apium graveolens var. *dulce*	Vegetables	Malaysia	United Kingdom	1
	Caladium	Plants for planting	Singapore	United Kingdom	1
	Cardamine	Plants for planting	Singapore	United Kingdom	2
	Corchorus	Vegetables	Jordan	United Kingdom	2
	Dipladenia	Plants for planting	Tunisia	France	2
	Eupatorium purpureum	Cuttings	Guatemala	Netherlands	1
	Euphorbia	Cuttings	Guatemala	United Kingdom	1
	Euphorbia pulcherrima	Cuttings	Guatemala	Netherlands	1
	Eustoma	Cut flowers	Israel	France	1
	Gerbera jamesonii	Cuttings	China	Netherlands	1
	Gymnocoronis	Plants for planting	Singapore	United Kingdom	1
	Hygrophila rosanervis, Limnophila aromatica	Plants for planting	Thailand	United Kingdom	1
	Hypericum androsaemum	Cut flowers	Ethiopia	Belgium	1
	Lantana	Plants for planting	Tunisia	France	1
	Lippia	Cuttings	Israel	Netherlands	1
	Lippia	Cuttings	Israel	United Kingdom	1
	Lisianthus	Cut flowers	Peru	United Kingdom	1
	Ludwigia	Plants for planting	Singapore	United Kingdom	1
	Mandevilla	Plants for planting	Germany	Finland	1
	Mandevilla	Cuttings	Israel	Netherlands	1
	Mandevilla	Cuttings	Netherlands	Finland	1
	Manihot esculenta	Vegetables	Congo	France	1
	Manihot esculenta	Vegetables	Congo, Dem. Rep.	France	1
	Manihot esculenta	Vegetables	Togo	France	1
	Nomaphila stricta	Aquarium plants	Thailand	France	1
	Ocimum	Vegetables (leaves)	Israel	United Kingdom	2
	Ocimum	Vegetables (leaves)	Malaysia	Belgium	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
***B. tabaci* (cont.)**	*Ocimum*	Vegetables (leaves)	USA	Belgium	2
	Ocimum basilicum	Vegetables (leaves)	Israel	Latvia	2
	Ocimum basilicum	Vegetables (leaves)	Israel	Switzerland	2
	Ocimum basilicum	Vegetables (leaves)	Israel	United Kingdom	6
	Ocimum basilicum	Vegetables (leaves)	Malaysia	United Kingdom	3
	Ocimum basilicum	Vegetables (leaves)	Morocco	Belgium	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	USA	France	2
	Salvia officinalis	Vegetables (leaves)	Israel	Ireland	1
	Solidago	Cut flowers	Israel	United Kingdom	2
	Unspecified	Aquarium plants	Spain (Canary Isl.)	Slovenia	1
Bursaphelenchus sexdentati	_	Soil and growing medium	Portugal	Netherlands	1
Chrysanthemum stunt viroid	*Solanum jasminoides*	Plants for planting	Netherlands	Belgium	1
Citrus exocortis viroid	*Solanum jasminoides*	Plants for planting	Germany	Belgium	1
	Solanum jasminoides	Plants for planting	Italy		1
Clavibacter michiganensis* subsp. *michiganensis	*Solanum lycopersicon*	Seeds	Senegal*	France	1
Coleoptera, Lepidoptera	*Cyperus esculentus*	Stored products	Burkina Faso	Spain	2
Curculionidae	*Oryza sativa*	Stored products	India	Spain	1
	Prunus dulcis	Stored products	Ecuador	Spain	1
Diaphania indica	*Momordica*	Vegetables	Sri Lanka	Italy	1
Diptera	*Mangifera*	Fruits	Pakistan	United Kingdom	1
	Manilkara zapota	Fruits	India	United Kingdom	2
	Momordica	Vegetables	Sri Lanka	United Kingdom	1
	Momordica charantia	Vegetables	Kenya	United Kingdom	1
	Panicum	Stored products	China	Spain	1
Diptera, Coleoptera	*Dicksonia*	Plants for planting	Australia	Ireland	1
Elsinoe australis	*Citrus reticulata*	Fruits	Uruguay	Spain	1
Ephestia	*Cyperus*	Stored products	Nigeria	Spain	1
Formica	Ornamentals	Stored products	Cuba	Spain	1
Frankliniella hemerocallis	*Hemerocallis*	Plants for planting	USA	Germany	1
Frankliniella occidentalis	*Rosa* and other ornamentals *(Agapanthus, Alstroemeria, Gypsophila, Lilium)*	Cut flowers	Ecuador	Azerbaijan	1
Globodera pallida	*Solanum tuberosum*	Ware potatoes	Italy	Finland	1
	Solanum tuberosum	Ware potatoes	Spain	Finland	1
Globodera rostochiensis	*Solanum tuberosum*	Seed potatoes	Germany	Finland	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Guignardia citricarpa	*Citrus latifolia*	Fruits	Bangladesh	United Kingdom	1
	Citrus limon	Fruits	Bangladesh	United Kingdom	1
	Citrus limon	Fruits	South Africa	Netherlands	2
	Citrus limon, Citrus sinensis	Fruits	South Africa	Netherlands	1
	Citrus reticulata	Fruits	Argentina	Netherlands	1
	Citrus sinensis	Fruits	Brazil	Netherlands	1
	Citrus sinensis	Fruits	South Africa	Netherlands	6
	Citrus sinensis	Fruits	South Africa	United Kingdom	1
Helicoverpa armigera	*Pisum sativum*	Vegetables	Kenya	Ireland	2
Hirschmanniella	*Vallisneria*	Plants for planting	Malaysia	Germany	1
Insecta	*Momordica balsamina*	Vegetables	Sri Lanka	Germany	1
Lepidoptera	*Solanum*	Vegetables	Sri Lanka	Italy	1
	Solanum indicum	Vegetables	Sri Lanka	Italy	1
Lepidoptera, Tephritidae	*Momordica*	Vegetables	Pakistan	Italy	1
	Psidium	Fruits	Bangladesh	Italy	1
Leucinodes orbonalis	*Solanum melongena*	Vegetables	Cameroon	Belgium	2
	Solanum melongena	Vegetables	India	Sweden	3
	Solanum melongena	Vegetables	Laos	Belgium	2
	Solanum melongena	Vegetables	Malaysia	Belgium	2
	Solanum melongena	Vegetables	Uganda	Belgium	2
***Leucinodes orbonalis,* Tephritidae**	*Solanum melongena*	Vegetables	Malaysia	Belgium	1
Liriomyza	*Apium graveolens* var. *dulce*	Vegetables	Cambodia	United Kingdom	1
	Dendranthema	Cut flowers	Colombia	United Kingdom	1
	Gypsophila	Cut flowers	Ethiopia	United Kingdom	2
	Gypsophila	Cut flowers	Israel	United Kingdom	1
	Ocimum	Vegetables (leaves)	Israel	United Kingdom	1
	Ocimum	Vegetables (leaves)	Malaysia	Germany	1
	Ocimum basilicum	Vegetables (leaves)	Israel	Ireland	1
	Ocimum basilicum	Vegetables (leaves)	Israel	France	2
	Ocimum basilicum	Vegetables (leaves)	Laos	United Kingdom	1
	Solidago	Cut flowers	Israel	United Kingdom	3
Liriomyza bryoniae	*Eustoma grandiflorum*	Cut flowers	Japan	Netherlands	1
Liriomyza huidobrensis	*Aster*	Cut flowers	Ecuador	Netherlands	1
	Eryngium	Cut flowers	Zimbabwe*	Netherlands	1
	Gypsophila	Cut flowers	Ecuador	Netherlands	5
	Gypsophila	Cut flowers	Kenya	Netherlands	1
Liriomyza trifolii	*Gypsophila*	Cut flowers	Israel	Belgium	3
	Gypsophila	Cut flowers	Israel	Netherlands	1
Listronotus bonariensis	*Poaceae*	Seeds	New Zealand	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Meloidogyne	*Anubias*	Plants for planting	Singapore	United Kingdom	1
	Coriandrum	Vegetables (leaves)	Malaysia	United Kingdom	1
Meloidogyne enterolobii (M. mayaguensis)	*Zelkova serrata*	Plants for planting	China	Netherlands	1
Nematoda	*Bougainvillea*	Plants for planting	Thailand	Italy	2
	Vallisneria	Plants for planting	Malaysia	Germany	1
Pepino mosaic virus	*Solanum lycopersicon*	Vegetables	Belgium	Latvia	1
	Solanum lycopersicon	Vegetables	Poland	Latvia	1
	Solanum lycopersicon	Seeds	Vietnam*	France	1
Phytophthora ramorum	*Rhododendron catawbiense*	Plants for planting	Netherlands	Finland	1
Radopholus similis	*Alocasia, Anthurium, Colocasia, Heliconia, Philodendron*	Plants for planting	USA	Netherlands	1
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Turkey	Bulgaria	1
Scirtothrips dorsalis	*Momordica charantia*	Vegetables	Kenya*	Sweden	1
Spodoptera	*Rosa*	Cut flowers	India	Netherlands	1
Spodoptera littoralis	*Rosa*	Cut flowers	Kenya	Netherlands	1
	Rosa	Cut flowers	Uganda	Netherlands	3
Spodoptera litura	*Rosa*	Cut flowers	India	Netherlands	1
Stromatium unicolor	*Prunus armeniaca*	Plants for planting	Spain	Malta	1
Thripidae	*Jasminum*	Cut flowers	Thailand	Switzerland	1
	Mangifera	Fruits	Pakistan	United Kingdom	1
	Mangifera	Fruits	Sri Lanka	United Kingdom	1
	Momordica	Vegetables	Bangladesh	United Kingdom	9
	Momordica	Vegetables	Dominican Rep.	United Kingdom	2
	Momordica	Vegetables	India	United Kingdom	8
	Momordica	Vegetables	Sri Lanka	United Kingdom	6
	Momordica	Vegetables	Sri Lanka	United Kingdom	1
	Momordica charantia	Vegetables	India	United Kingdom	1
	Momordica charantia	Vegetables	Sri Lanka	United Kingdom	2
	Momordica cochinchinensis	Vegetables	Bangladesh	United Kingdom	2
	Momordica, Solanum melongena	Vegetables	Dominican Rep.	United Kingdom	2
	Orchidaceae	Cut flowers	Thailand	United Kingdom	3
	Rosa	Cut flowers	Thailand	Switzerland	1
	Solanum melongena	Vegetables	Bangladesh	United Kingdom	1
	Solanum melongena	Vegetables	Dominican Rep.	United Kingdom	2
	Solanum melongena	Vegetables	Ghana	United Kingdom	3
	Solanum melongena	Vegetables	Malaysia	United Kingdom	1
Thrips	*Momordica*	Vegetables	India	United Kingdom	1
	Momordica	Vegetables	Thailand	Switzerland	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Thrips palmi	*Momordica*	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica	Vegetables	India	United Kingdom	2
	Momordica	Vegetables	Pakistan	United Kingdom	3
	Momordica charantia	Vegetables	Bangladesh	Sweden	1
	Momordica charantia	Vegetables	Dominican Rep.	Belgium	1
	Solanum melongena	Vegetables	Dominican Rep.	Belgium	1
	Solanum melongena	Vegetables	Dominican Rep.	Netherlands	1
	Solanum melongena	Vegetables	Dominican Rep.	United Kingdom	2
	Solanum melongena	Vegetables	India	United Kingdom	1
Thysanoptera	*Momordica charantia*	Vegetables	India	Switzerland	1
	Solanum melongena	Vegetables	Dominican Rep.	France	2
	Solanum melongena	Vegetables	India	Switzerland	1
Tomato apical stunt viroid	*Solanum jasminoides*	Plants for planting	Italy	Belgium	1
Tuta absoluta	*Solanum lycopersicon*	Vegetables	Spain (Canary Isl.)	United Kingdom	1
Unaspis citri	*Vitis vinifera*	Fruits	Uzbekistan*	Belgium	1
Xanthomonas axonopodis* pv. *citri	*Citrus aurantifolia*	Fruits	Bangladesh	United Kingdom	1
	Citrus latifolia	Fruits	Bangladesh	United Kingdom	2
	Citrus latifolia	Fruits	Pakistan	United Kingdom	2
Xiphinema	*Araucaria*	Plants for planting	China	Netherlands	1
	Ficus	Plants for planting	China	Netherlands	1
	Pachira aquatica	Cuttings	China	Netherlands	1

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
Anastrepha obliqua	*Mangifera indica*	Dominican Rep.	Netherlands	2
Bactrocera	*Mangifera*	India	United Kingdom	2
	Mangifera indica	Burkina Faso	France	7
	Mangifera indica	Cameroon	France	3
	Mangifera indica	Côte d'Ivoire	France	8
	Mangifera indica	India	Germany	1
	Mangifera indica	Mali	France	4
	Psidium guajava	Thailand	France	3
	Psidium guajava	Thailand	Netherlands	3
Bactrocera dorsalis	*Annona squamosa*	Thailand	France	2
	Mangifera indica	India	France	8
	Mangifera indica	Pakistan	France	1
	Mangifera indica	Thailand	France	1
	Psidium guajava	Thailand	France	1
	Syzygium samarangense	Thailand	France	1
Bactrocera invadens	*Mangifera indica*	Burkina Faso	Netherlands	1
	Mangifera indica	Côte d'Ivoire	Netherlands	1
	Mangifera indica	Mali	Belgium	1
Bactrocera latifrons	*Capsicum*	Cambodia	France	1
	Capsicum frutescens	Cambodia	France	2

Pest	Consignment	Country of origin	Destination	nb
Ceratitis capitata	*Annona muricata*	Peru	France	1
Ceratitis cosyra	*Mangifera indica*	Burkina Faso	France	2
	Mangifera indica	Côte d'Ivoire	France	8
	Mangifera indica	Mali	France	4
Dacus ciliatus	*Mangifera*	Kenya	United Kingdom	1
Tephritidae (non-European)	*Annona muricata*	Cameroon	France	1
	Annona squamosa	Thailand	France	1
	Capsicum	Cambodia	France	1
	Capsicum annuum	Bangladesh	United Kingdom	1
	Capsicum frutescens	Cambodia	France	6
	Citrus sinensis	South Africa	Netherlands	1
	Lagenaria siceraria	Ghana	United Kingdom	1
	Mangifera	Dominican Rep.	United Kingdom	2
	Mangifera	India	United Kingdom	11
	Mangifera	Jamaica	United Kingdom	12
	Mangifera	Kenya	United Kingdom	1
	Mangifera	Pakistan	United Kingdom	60
	Mangifera	Philippines	United Kingdom	1
	Mangifera	Sri Lanka	United Kingdom	1
	Mangifera	St Lucia	United Kingdom	1
	Mangifera	Thailand	United Kingdom	3
	Mangifera	Uganda	United Kingdom	2
	Mangifera indica	Bangladesh	United Kingdom	1
	Mangifera indica	Burkina Faso	Belgium	1
	Mangifera indica	Cameroon	Belgium	3
	Mangifera indica	Costa Rica	United Kingdom	1
	Mangifera indica	Côte d'Ivoire	Belgium	2
	Mangifera indica	Côte d'Ivoire	France	7
	Mangifera indica	Côte d'Ivoire	Netherlands	2
	Mangifera indica	Côte d'Ivoire	Spain	1
	Mangifera indica	Dominican Rep.	United Kingdom	3
	Mangifera indica	Gambia	Belgium	1
	Mangifera indica	Ghana	Belgium	1
	Mangifera indica	Ghana	France	1
	Mangifera indica	India	United Kingdom	7
	Mangifera indica	Jamaica	United Kingdom	4
	Mangifera indica	Kenya	United Kingdom	1
	Mangifera indica	Mali	Belgium	2
	Mangifera indica	Mali	France	4
	Mangifera indica	Pakistan	Germany	1
	Mangifera indica	Pakistan	Netherlands	1
	Mangifera indica	Pakistan	United Kingdom	8
	Mangifera indica	Senegal	Belgium	1
	Mangifera indica	Sri Lanka	Italy	1
	Mangifera indica	Sri Lanka	Switzerland	1
	Mangifera indica	Thailand	France	1
	Manilkara zapota	India	United Kingdom	5
	Momordica	Bangladesh	Italy	2
	Momordica	Bangladesh	United Kingdom	1
	Momordica	India	United Kingdom	6
	Momordica	Kenya	United Kingdom	5
	Momordica	Pakistan	United Kingdom	1
	Momordica	Sri Lanka	United Kingdom	2

Pest	Consignment	Country of origin	Destination	nb
	Momordica charantia	India	France	1
Tephritidae (non-European)	*Momordica charantia*	Kenya	United Kingdom	3
	Momordica charantia	Sri Lanka	United Kingdom	2
	Psidium	Bangladesh	Italy	1
	Psidium	India	United Kingdom	1
	Psidium	Thailand	United Kingdom	2
	Psidium guajava	India	Switzerland	3
	Psidium guajava	India	United Kingdom	2
	Psidium guajava	Sri Lanka	France	1
	Psidium guajava	Sri Lanka	Switzerland	1
	Psidium guajava	Sri Lanka	United Kingdom	1
	Psidium guajava	Thailand	France	1
	Psidium guajava	Thailand	United Kingdom	5
	Pyrus	Lebanon	United Kingdom	1
	Syzygium	Jamaica	United Kingdom	1
	Syzygium	Sri Lanka	United Kingdom	1
	Syzygium	Thailand	United Kingdom	5
	Syzygium samarangense	Thailand	Netherlands	1
	Syzygium samarangense	Thailand	Switzerland	3
	Trichosanthes	Bangladesh	United Kingdom	1
	Trichosanthes	Sri Lanka	United Kingdom	2
	Trichosanthes cucumerina	Bangladesh	United Kingdom	1
	Trichosanthes cucumerina	Sri Lanka	United Kingdom	2
	Unspecified	Bangladesh	United Kingdom	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anoplophora glabripennis	Unspecified	Wood packing material	China	Germany	1
	Unspecified	Wood packing material	China	Switzerland	2
	Unspecified	Wood packing material (crate)	China	Netherlands	1
	Unspecified	Wood packing material (pallet)	China	Switzerland	1
Anoplophora glabripennis, Apriona germarii, Batocera	Unspecified	Wood packing material (pallet)	China	Germany	1
Apriona germarii	Unspecified	Wood packing material (crate)	China	Germany	1
	Unspecified	Wood packing material (pallet)	China	Germany	1
Bostrichidae	Unspecified	Wood packing material	China	Germany	1
	Unspecified	Wood packing material (crate)	India	Germany	1
	Unspecified	Wood packing material (crate)	India	Ireland	2
	Unspecified	Wood packing material (crate)	Thailand	Germany	1
	Unspecified	Wood packing material (pallet)	India	Germany	1
	Unspecified	Wood packing material (pallet)	Indonesia	Netherlands	1
	Unspecified	Wood packing material (pallet)	Taiwan	Germany	1
	Unspecified	Wood packing material (pallet)	Vietnam	Germany	1
Bursaphelenchus xylophilus	Unspecified	Wood packing material	Canada	France	1
Cerambycidae	Unspecified	Wood packing material	China	Germany	1
	Unspecified	Wood packing material (crate)	China	Belgium	1
	Unspecified	Wood packing material (pallet)	China	Germany	1

- **Bonsais**

Pest	Consignment	Country of origin	Destination	nb
Anoplophora chinensis	*Acer*	(Netherlands)	Germany	1
Criconematidae	*Pinus pentaphylla*	Japan	France	1
Pratylenchus	*Carpinus*	Japan	France	1
Tylenchidae	*Chamaecyparis obtusa*	Japan	Italy	1
Tylenchorhynchus	*Stewartia monadelpha*	Japan	France	1

Source: EPPO Secretariat, 2012-09.

2012/195 CABI has launched the Plantwise knowledge bank

In July 2012, CABI launched the 'Plantwise knowledge bank'. This database contains information on pests and diseases: factsheets, distribution maps, plant health news and diagnostic aids. Information is collected by CABI from various sources: scientific literature, various partners such as EPPO, and the plant clinics established by CABI in different countries. Plantwise is more particularly addressed to developing countries and its ultimate goal is to 'improve food security and the lives of the rural poor by reducing crop losses'.
Plantwise knowledge base: http://www.plantwise.org/KnowledgeBank/home.aspx

Source: EPPO Secretariat (2012-09).

Additional key words: database

2012/196 *Egeria densa* found in the Pyrenees (ES)

In 2012, *Egeria densa* (Hydrocharitaceae, EPPO List of Invasive Alien Plants) was recorded in Solsonès in the province of Lleida (Catalunya), Spain. This is the first time that *E. densa* is found in the Pyrenees. However, this is the second record for Catalunya, as *E. densa* was found in the 1990s in Breda, in the county of La Selva. In Spain, the species has also been recorded in Andalucía, Communidad Valenciana (found in Gandía in the 1990s), Galicia, País Vasco, and Madrid, while in France the species is recorded in the departments of Aquitaine, Haute-Garonne and Tarn-et-Garonne. In the Pyrenees, the species has been found at an altitude of 1310 m covering 12 m² of an artificial lake. The discovery in the same area of a naturalized population of the newt (salamander) *Ommatotriton ophryticus* suggests that *E. densa* could have been introduced with these amphibians.

Source: Aymerich P (2012) Una població de l'hidròfit invasor *Egeria densa* Planch. (Hydrocharitaceae) a l'àmbit pirinenc. *Orsis* **26**, 51-55.

Additional key words: invasive alien plants, detailed record

Computer codes: ELDDE, ES, FR

2012/197 First report of *Lygodium microphyllum* in Reunion Island

Lygodium microphyllum (Lygodiaceae) is a climbing fern with underground rhizomes originating from tropical and subtropical Africa, Asia, Polynesia and Australia. In the Mascarene Islands, the species was so far only recorded in Mauritius Island where it forms dense populations. The species is also considered invasive in Florida (US).
This fern was found for the first time in La Plaine des Palmistes in Reunion Island at an altitude of 880 m in a marshy prairie of *Juncus effusus* (Juncaceae), which represents a heritage site. One single plant was covering 1 m² and was found by a local botanist and expert on ferns.
L. microphyllum reproduces both vegetatively through rhizomes, and sexually through spores, which are spread by the wind and to a lesser extent by water over long distances. The species can have a high impact on the environment by covering all strata of a habitat. The rhizome forms dense and thick mats that can block decomposition and regeneration of the soil. The species may also have impact on sylviculture, pastoralism and cultivations in forests such as vanilla. The species is listed as an invasive alien plant for which introduction and spread should be prohibited in Reunion Island according to the prefectural decree n°2011-01479. As humid and subhumid heritage habitats are at risk from *L. microphyllum* in Reunion Island, an eradication programme will be undertaken consisting in digging out the plant and its rhizomes and burning them, followed by chemical control. Such eradication will be conducted by the National Park.

Source: Tamon JM, Fontaine C, Picot F (2012) Une nouvelle fougère exotique, potentiellement très envahissante et impactante, *Lygodium microphyllum* (Cav.) R. Br. a été découverte sur l'île de La Réunion. 4 pp.

Préfet de la Région Réunion, Arrêté Préfectoral n°2011 – 001479 Fixant les conditions phytosanitaires requises pour l'introduction sur le territoire de l'île de la Réunion de végétaux, produits végétaux et autres objets
http://daaf974.agriculture.gouv.fr/IMG/pdf/AP2011-001479conditions_import_vegetaux_cle84661f.pdf

Additional key words: invasive alien plants, first record, eradication

Computer codes: LYFMI, FR

2012/198 Recognition and management guides for invasive alien plants in Belgium

Recognition and management guides (in French) for invasive alien plants in Belgium have been published by the Liege University and Gembloux AgroBio Tech.
The recognition guide provides elements for the identification of the following terrestrial and aquatic invasive alien plants: *Aster* spp. (Asteraceae), *Azolla filiculoides* (Salviniaceae), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Egeria densa* (Hydrocharitaceae, EPPO List of IAP), *Elodea canadensis* (Hydrocharitaceae), *Elodea nuttalli* (Hydrocharitaceae, EPPO List of IAP), *Fallopia japonica*, *Fallopia sachalinensis*, *F. x bohemica* (Polygonaceae, EPPO List of IAP), *Heracleum mantegazzianum* (Apiaceae, EPPO List of IAP), *Hydrocotyle ranunculoides* (Apiaceae, EPPO A2 List), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP) and *I. parviflora* (Balsaminaceae), *Lagarosiphon major* (Hydrocharitaceae, EPPO List of IAP), *Lemna minuta* and *L. turionifera* (Araceae), *Lysichiton americanus* (Araceae, EPPO List of IAP), *Ludwigia grandiflora* and *L. peploides* (Onagraceae, EPPO A2 List), *Myriophyllum aquaticum* (Haloragaceae, EPPO List of IAP), *Persicaria wallichii* (Polygonaceae), *Solidago* spp. (Asteraceae), *Spiraea alba*, *S. douglasii* and *S. x billardii* (Rosaceae).

Guidance on the management of invasive alien plants is also provided in a series of documents. One guide deals with the mechanical and chemical control of *Heracleum mantegazzianum*, *Impatiens glandulifera* and *Fallopia* spp. along water courses. Prevention, eradication and containment recommendations are provided in another guide for *Crassula helmsii, Hydrocotyle ranunculoides, Ludwigia* spp. and *Myriophyllum aquaticum*. Summary management spreadsheets are also available for *Acer rufinerve* (Sapindaceae), *Cotoneaster horizontalis* (Rosaceae), *Heracleum mantegazzianum*, *Impatiens glandulifera, Fallopia* spp., and *Spirae* spp.

Source: Université de Liège, Gembloux Agro-Bio Tech, Unité Biodiversité et Paysages, Gestion des invasives.
http://www.gembloux.ulg.ac.be/biodiversite-et-paysage/telechargements/

Additional key words: invasive alien plants, management

Computer codes: 1ASTG, 1SOOG, ACCRU, AZOFI, CSBHE, CTTHO, ELDCA, ELDDE, ELDNU, HERMZ, HYDRA, IPAGL, IPAPA, LEMMT, LEMTU, LGAMA, LUDPE, LUDUR, LSYAM, MYPBR, POLCU, POLPS, REYBO, REYSA, SPVAB, SPVBI, SPVDO,

2012/199 The new European Alien Species Information Network (EASIN)

The European Alien Species Information Network (EASIN) was created at the initiative of the Joint Research Centre of the European Commission, and its aim is to provide easy access to data on Alien Species in Europe automatically collected from existing on-line databases, and to assist policy makers and scientists in their efforts to tackle alien species invasions.
The EASIN web tools and services allow searches by species at the European scale. Animals, bacteria, chromists, fungi, plants, protozoa and viruses are covered, belonging to marine, terrestrial and freshwater environments. The search can also be undertaken by filtering by the level of impact (low, medium or high), as well as by the pathways (contaminant, corridor, escape, release, stowaway or other). Distribution maps are available, based on the data available in GBIF (Global Biodiversity Information Facility), GISIN (Global Invasive Species Information Network) and REABIC (Regional Euro-Asian Biological Invasions Centre). The distribution can be displayed at the country level, at 10x10 km grid or at river basin district levels.

Source: European Commission, Joint Research Centre, European Alien Species Information Network.
http://easin.jrc.ec.europa.eu/

Additional key words: invasive alien species

2012/200 World Conservation Congress 2012: adoption of a motion on invasive alien species

During the World Conservation Congress 2012, the IUCN members' assembly adopted a motion on invasive alien species entitled "Implementing the provisions on invasive alien species of the Strategic Plan for Biodiversity 2011–2020", which was supported by 100% of governments and 99% of NGOs voting.

This motion urges countries to identify invasive species for priority control, enforce stringent regulatory measures to prevent introduction of invasives, encourage voluntary measures and promote eradication campaigns.

Source: IUCN Motion 021: Implementing the provisions on invasive alien species of the Strategic Plan for Biodiversity 2011–2020.
http://portals.iucn.org/docs/2012congress/motions/en/M-021-2012-EN.pdf

Additional key words: invasive alien plants

2012/201 The 7th European Conference on Biological Invasions resolution: Time to act!

At the 7th European Conference on Biological Invasions in Pontevedra (Spain), 12-14 September 2012, a resolution entitled "Time to act! Biological invasions need a strong European legal framework urgently!" was adopted by the 300 participating scientists and environmental managers.
This resolution urges the European Commission to:

- establish as soon as possible a comprehensive and mandatory legal framework to control the introduction, establishment and spread of invasive alien species, and to address those already introduced.
- ensure that by 2020, invasive alien species and their pathways in Europe are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction, establishment and spread of new invasive alien species, in accordance with the EU Biodiversity Strategy to 2020 and the CBD's Aichi Biodiversity Target 9.

Source: NEOBIOTA, Time to act! Biological invasions need a strong European legal framework urgently!
http://www.oekosys.tu-berlin.de/fileadmin/fg35/Forschung/Downloads/Neobiota/Resolution_2012.pdf

Additional key words: Invasive alien plants, resolution

2012/202 Launch of a Bern Convention and IUCN Invasive Species Specialist Group questionnaire on invasive alien species in protected areas in Europe

The Bern Convention and IUCN Species Survival Commission, Invasive Species Specialist Group project launched an internet survey aimed at developing 'Guidelines on Protected Areas and Invasive Species in Europe'. This survey is focused on the threat of invasive species in Protected Areas and its completion only takes 15 minutes. Additional information on the project can be found at:
http://www.coe.int/t/dg4/cultureheritage/nature/EcoNetworks/Documents/2011/ppt/Monaco%20Protected%20Areas%20and%20IAS%20STBG%20def.pdf

Source: Bern Convention, ISSG survey on Invasive alien species and protected areas in Europe.
https://www.surveymonkey.com/s/LG66TKT

Additional key words: Invasive alien plants