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CONTENTS ***Pests & Diseases***

Invasive Plants

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2014/158 New additions to the EPPO A1 and A2 Lists

In September 2014, 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.

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

- *Acidovorax citrulli* (Bacteria)
- *Aromia bungii* (Coleoptera: Cerambycidae)
- *Neoleucinodes elegantalis* (Lepidoptera: Crambidae)

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

- *Parthenium hysterophorus* (Asteraceae)
- *Polygraphus proximus* (Coleoptera: Scolytidae)

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

Source: EPPO Secretariat (2014-09).

Additional key words: EPPO Lists **Computer codes:** AROMBU, NEOLEL, POLGPR, PSDMAC, PTNHY

2014/159 PQR - the EPPO database on quarantine pests: new update

PQR - the EPPO database on quarantine pests (geographical distributions, host plants, regulatory status, pathways, and pictures) was updated on 2014-09-08. If PQR has already been installed on your computer, when opening the database you will be automatically notified that a new update is available.

The following new items have been added since the previous update (2014-03-06)

- New world distributions: e.g. *Dendroctonus valens, Raffaelea lauricola,* Tomato chlorotic spot virus, *Xyleborus glabratus, Zaprionus indianus, Zaprionus tuberculatus.*
- New pest pictures: e.g. *Chrysanthemum stem necrosis virus, Heterodera elachista, 'Candidatus* Liberibacter solanacearum*', Ophraella communa, Parthenium hysterophorus.*
- All recent data from the EPPO Reporting Service (February 2014 to August 2014) and updated pest statuses sent by several NPPOs of EPPO member countries.

If you have not already installed PQR on your computer, you can download it (free) from the EPPO website: http://www.eppo.int/DATABASES/pqr/pqr.htm

Source: EPPO Secretariat (2014-09)

Additional key words: database, EPPO

2014/160 EPPO Global Database has just been launched (https://gd.eppo.int/)

After several years of development, a new EPPO database has just been launched. The EPPO Global Database has the objective to gather in a single web-based database, all pest-specific information that has been produced by EPPO. Although, some parts of the database are still under development, it currently contains:

- **Basic information for more than 60 000 species** of interest to agriculture, forestry and plant protection: plants (cultivated and wild) and pests (including pathogens). For each species: scientific names, common names in different languages, taxonomic position, and EPPO codes are given.
- **Detailed information for more than 1600 pest species** that are of regulatory interest (EPPO and EU listed pests, as well as pests regulated in other parts of the world). For each pest: geographical distribution (with a world map), host plants and categorization (quarantine status) are given. The majority of the functionalities of PQR (EPPO database on quarantine pests) have already been transferred to EPPO Global Database.
- **EPPO datasheets** (for the moment, only those published in 1997 in the book Quarantine Pests for Europe are included)
- **EPPO Standards**
- **More than 1800 pictures of pests** (including invasive alien plants).
- **All articles from the EPPO Reporting Service** (since 2000).

It is planned to include more information: dynamic EPPO datasheets, more articles from the EPPO Reporting Service and other EPPO documents (e.g. PRA reports).

EPPO Global Database: https://gd.eppo.int/

Notes:

- The EPPO Secretariat is looking for pictures of pests, diseases and invasive alien plants. If you wish to contribute to the database, a specific interface allows you to submit pictures in a simple and rapid manner (https://gd.eppo.int/photos/wanted).
- You are kindly encouraged to register (free) to the database, this will allow the EPPO Secretariat to better identify the users of the database and facilitate future communication.

Source: EPPO Secretariat (2014-09).

Additional key words: database, EPPO

2014/161 *Megacopta cribraria* is an emerging pest of soybean in the USA: addition to the EPPO Alert List

Considering the rapid spread of an exotic bug, *Megacopta cribraria*, in the USA, the EPPO Secretariat decided to add this invasive pest of soybean and other legumes to the EPPO Alert List.

Megacopta cribraria (Hemiptera: Plataspidae) – kudzu bug or bean plataspid

Why: *Megacopta cribraria* has recently been introduced into the USA. It was first found near Atlanta (Georgia) in autumn 2009 and it rapidly spread to several states in Southeastern USA, clearly demonstrating an invasive behaviour. Damage to soybean crops has been reported in parts of the invaded area in the USA. Finally, *M. cribraria* is a

nuisance pest, as this stink bug gathers in huge numbers in houses or other structures, seeking shelters in autumn.

Where: *M. cribraria* originates from Asia.
EPPO region: Absent.
Asia: China (Anhui, Aomen (Macau), Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanghai, Shanxi, Sichuan, Tianjin, Xianggang (Hong Kong), Xizhang, Yunnan, Zhejiang), India (Andhra Pradesh, Assam, Karnataka, Madhya Pradesh, Orissa), Indonesia (Java, Sumatra), Japan (Honshu, Kyushu, Ryukyu, Shikoku), Korea (Dem. People's Republic of), Korea (Republic of), Malaysia (West), Myanmar, Pakistan, Sri Lanka, Taiwan, Thailand.
North America: USA (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia).

In Japan, many records refer to *M. punctatissima* which has been considered by several authors as a distinct species. However, phylogenetic studies have indicated that *M. cribraria* and *M. punctatissima* are not distinct but represent local populations of the same species, although with considerable genetic and phenotypic diversity. In addition, these studies have strongly suggested that the invasive *M. cribraria* populations found in the USA derived from a '*M. punctatissima* population' from Kyushu (Japan). In addition, the endosymbionts detected in the *M. cribraria* populations from the USA are also found in the Japanese populations. All these results suggest a Japanese origin for the US populations.

On which plants: In the USA, *M. cribraria* primarily feeds on kudzu (*Pueraria montana* var*. lobata* – EPPO A2 List) which is an invasive plant, and on soybean (*Glycine max*). According to the literature, other leguminous plants can be attacked, such as *Cajanus cajan* (pigeon pea), *Lablab purpureus* (lablab), *Sesbania bispinosa* (= *S. aculeata*), *Vigna radiata* (mung bean). However, for some of these crops, it is not entirely clear whether the insect can complete its life cycle on them. *M. cribraria* harbours the obligate bacterial endosymbionts, '*Candidatus* Ishikawaella capsulata' and *Wolbachia,* in its midgut which allows it to feed on legumes. These endosymbionts synthetize essential amino acids and other nutrients that are not provided by the plant food source.

Damage: *M. cribraria* is a piercing-sucking insect, larva (nymphs) and adults feed on tender stems, petioles and leaves. Heavy populations can resut in some defoliation and development of sooty mold. On soybean, the combination of stem and foliar damage, and reduced photosynthesis from sooty mold leads to improperly developed pods, undersized seeds and eventually yield losses. In Southern USA, it is estimated that in 2012 the infested area was 366 000 acres (148 000 ha) of which 61 100 acres (24 700 ha) were treated against *M. cribraria*. Field data collected from trials in Georgia and South Carolina had indicated an average yield loss of 18% (ranging from 0 to 47%) in unprotected soybean crops. Although, *M. cribaria* feeds voraciously on kudzu, it is not known if this feeding activity will effectively reduce populations of this invasive plant in the USA. *M. cribraria* is clearly a nuisance to homeowners because as autumn approaches, they leave their feeding sites (often nearby kudzu patches) and congregate in huge numbers on houses (usually on the sunlit Southern and Eastern exposures). In addition, this bug emits an unpleasant smell when disturbed, produces a yellow substance when crushed that can stain cloth, wood and other surfaces. Finally, *M. cribraria* has been in some cases reported to cause painful skin irritation.

Biology: Studies carried out in the USA on have shown that *M. cribraria* eggs were most commonly found on the tender leaf sheath of the growing vine tips of kudzu (a few also

found on the underside of older leaves). Eggs are usually laid in groups of 2 parallel rows (on average, 15-18 eggs per egg-mass). Eggs are oval in shape (approximately 0.8 mm long and 0.4 mm wide), white at the beginning but rapidly turning off-white to salmon pink. The operculum is round and surrounded by short spine-like projections. *M. cribraria* undergoes 5 larval instars (nymphs). Adults are somewhat square in shape (approximately 4-6 mm long and 3.5 mm wide), olive-green with a brown mottle. *M. cribraria* overwinters as adults. In the USA, 2 generations per year were observed, but in China up to 3 generations can take place. In the USA, it has been observed that the first generation developed on kudzu and then migrated to soybean crops to complete the second generation. *M. crib*raria can tolerate cold (it overwintered in north Georgia where there were days when temperatures fell below zero between 2009 and 2010).

Dissemination: Adults are active and strong fliers, and they readily fly when disturbed. In addition, *M. cribraria* is a hitchiker, it has been observed flying and landing on people, as well as on and in their vehicules. Dead specimens have also been intercepted by South American countries in containers containing meat products from the USA.

Pathway: more information would be needed to understand how trade can move *M. cribraria*, but it seems that this insect easily moves as a hitchhiker on many different types of products which are not necessarily associated with plants.

Possible risks: Although countries of the EPPO region are not among the main world producers, soybean is of economic importance. Other leguminous crops, such as beans (*Phaseolus* spp.) are widely grown in the EPPO region but their host status for *M. cribra*ria still needs to be clarified. Unlike in the USA, kudzu which is a major host of the pest, is of very limited distribution in the EPPO region and this might be a limiting factor for the establishment and spread of the pest if it were introduced into the EPPO region. As the pest seems to be able to be transported as a hitchhiker, this may complicate its detection in trade. Control methods against *M. cribraria* are available. Efficacy data from trials conducted in Georgia and South Carolina have indicated that several insecticides could provide an effective control in soybean crops. The use of biocontrol agents is also envisaged [e.g. *Dirphys boswelli* (Hymenoptera: Aphelinidae), *Paratelenomus saccharalis* (Hymenoptera: Platygastridae), *Strongygaster triangulifera* (Diptera: Tachinidae)]. Considering the invasive behaviour of *M. cribraria*, the nuisance it can cause in private homes, and the potential damage it may cause to leguminous crops, it is desirable to avoid its introduction into the EPPO region.

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Additional key words: Alert List
Computer codes: COPSCR

2014/162 Interception of *Callidiellum villosulum* in Malta

In April 2013, a single male specimen of *Callidiellum villosulum* (Coleoptera: Cerambycidae) was noticed at Burmarrad in Malta. The insect was found on traded wooden commodities. Some of the wooden items were not debarked and had been imported, via Italy, from China. *C. villosulum* (brown fir longhorn beetle) is native to Southeastern China. Its known host plants mainly belong to the Taxodiaceae family, such as *Cunninghamia lanceolata, Cryptomeria japonica, Taiwania cryptomeriodes*, but also *Chamaecyparis formosensis* (Cupressaceae) and *Pinus taiwanensis* (Pinaceae). This is the first time that this insect is intercepted in Europe, but interceptions have been reported from Australia (on wood packaging material), Canada, Japan, and the USA (in real trunks of artificial Christmas trees from China). This interception clearly indicates that *C. villosulum* has the potential to be moved between continents via traded commodities, in particular wood and wood packaging material.

Note: it can be recalled that a related species also originating from Asia, *Callidiellum rufipenne* (Coleoptera: Cerambycidae - cedar longhorn beetle, formerly EPPO Alert List), has been introduced into the USA and Argentina, as well as into several European countries (see current distribution at https://gd.eppo.int/taxon/CLLLRU).

Source: Cocquempot C, Mifsud D (2013) First European interception of the brown fir longhorn beetle, *Callidiellum villosulum* (Fairmaire, 1900) (Coleoptera,

Cerambycidae). *Bulletin of the Entomological Society of Malta* **6**, 143-147.

Additional key words: interception **Computer codes:** CLLLVI, MT

2014/163 A new disease of coast live oaks (*Quercus agrifolia*) in California (US) is associated with *Geosmithia pallida* and *Pseudopityophthorus pubipennis*

Since 2012, declining coast live oak (*Quercus agrifolia*) trees have been observed throughout urban landscapes in the counties of Los Angeles, Orange, Riverside, Santa Barbara, Ventura, and Monterey in California (US). Affected trees showed multiple insect entry holes (0.95 mm diameter), branch dieback, and eventually died. Symptoms also included a wet discoloration around entry holes on the trunk and main branches, followed at first by the production of reddish sap and then of whitish foam (hence the common name of the disease: 'foamy bark canker disease'). Infested trees can produce a large amount of foamy liquid that can run up to 2 feet (60 cm) down the trunk. Beneath the outer bark phloem and xylem, necrotic tissues could be observed. Recent studies have indicated that this new disease is associated with a bark beetle, *Pseudopityophthorus pubipennis* (Coleoptera: Scolytidae - Western oak bark beetle) and a fungus, *Geosmithia pallida*. The bark beetle is not new to the USA, but the fungus is recorded for the first time in the USA. Little information is available on *G. pallida*, it is noted that this fungus has been shown to inhibit root growth of *Lepidium sativum* (Brassicaceae) by 25% during laboratory experiments conducted in the Czech Republic and that it appears to have affinities with a range of subcorticolous insects. Other studies have also found that a strain of *G. pallida* obtained from wilting *Ulmus* in Italy possessed a cerato-ulmin toxin, the protein involved in Dutch elm disease. More studies are needed to better understand the epidemiology, geographical distribution and potential impacts of this disease on oak trees.

Source:

Čížková D, Šrůtka P, Kolařík M, Kubátová A, Pažoutová S (2005) Assessing the pathogenic effect of *Fusarium, Geosmithia* and *Ophiostoma* fungi from broad-leaved trees. *Folia Microbiologica* **50**, 59–62.

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University of California. Division of Agriculture and Natural Resources. Pest Alert. *Geosmithia pallida* and Western oak bark beetle (*Pseudopityophthorus pubipennis*) causing foamy bark canker disease on coast live oak (*Quercus agrifolia*) in California. http://ucanr.edu/sites/socaloakpests/files/189274.pdf

Kolařík M, Kubátová A, Pažoutová S, Šrůtka P (2004) Morphological and molecular characterisation of *Geosmithia putterillii, G. pallida* comb. nov., and *G. flava* sp. nov., associated with subcorticolous insects. *Mycological Research* **108**, 1053-1069.

Lynch SC, Wang DH, Mayorquin JS, Rugman-Jones PF, Stouthamer R, Eskalen A (2014) First report of *Geosmithia pallida* causing foamy bark canker, a new disease on coast live oak (*Quercus agrifolia*), in association with *Pseudopityophthorus pubipennis* in California. *Plant Disease* **98**(9), p 1276.

Scala A, Comparini C, Tegli S, Scala F (2007) A non-*Ophiostoma* fungus expresses the gene encoding the hydrophobin cerato-ulmin. *Journal of Plant Pathology* **89**, 233–240.

Additional key words: new pest **Computer codes:** GEOHPA, PSDPPU, US

2014/164 First report of *Globodera pallida* in Bosnia and Herzegovina

A systematic survey for the presence of potato cyst nematodes (*Globodera rostochiensis* and *G. pallida* – both EPPO A2 List) was initiated in Bosnia and Herzegovina in 2011. Until 2012, only *Globodera rostochiensis* had been detected in Bosnia and Herzegovina. In autumn 2012, viable cysts were found in 2 soil samples originating from 1 field located in Rogatica (70 km east of Sarajevo). Morphological and molecular analysis confirmed the occurrence of *G. pallida* in these samples. More samples were collected from the other fields of the grower concerned, as well as from their surroundings, but no cysts were found in these additional samples. A more intensive sampling regime was implemented in the infested field (1.1 ha) and revealed a high infestation of 1 cyst per gram of soil in the infestation focus. The high infestation level and the use of farm-saved seed potatoes by the grower suggest that the introduction of *G. pallida* probably took place several years before via imports of infected seed potatoes. Phytosanitary measures were taken on the infested field (prohibition to grow potatoes for the next 6 years, continuing sampling).
The situation of *Globodera pallida* in Bosnia and Herzegovina can be described as follows: **Present, first found in 2012 in 1 potato field, under official control.**

Source: Nježić B, Gerić Stare B, Širca S, Grujić N (2014) First report of the pale potato cyst nematode *Globodera pallida* from Bosnia and Herzegovina. *Plant Disease* **98**(4), p 575.

Additional key words: new record **Computer codes:** HETDPA, BA

2014/165 First report of *Xanthomonas fragariae* in Mexico

In Mexico, the state of Michoacán is the most important strawberry-producing area. In January 2007, field-grown strawberry plants (*Fragaria ananassa* cv. 'Aromas') showing vein necrosis were observed in Zamora county. In these fields (3 ha), the average disease incidence was 80%. Infected plants showed water-soaked lesions limited by veins on the lower leaf surface, which enlarged to form angular spots. The most affected plants also showed severe necrosis in the main veins and reddish to necrotic lesions on the upper leaf surface. Gram-negative bacteria were consistently isolated from symptomatic leaves. Laboratory analysis (isolation on selective growing media, ELISA, PCR, pathogenicity tests) confirmed the presence of *Xanthomonas fragariae* (EPPO A2 List) in diseased plants. This is the first time that *X. fragariae* is reported from Mexico.
The situation of *Xanthomonas fragariae* in Mexico can be described as follows: **Present, first found in 2007 in a few strawberry fields (Michoacán state).**

Source: Fernández-Pavía S, Rodríguez-Alvarado G, Garay-Serrano, Cárdenas-Navarro R (2014) First report of *Xanthomonas fragariae* causing angular leaf spot on strawberry plants in México. *Plant Disease* **98**(5), 682-683.

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

2014/166 Studies on olive (*Olea europaea*) as a host of *Xylella fastidiosa* in California (US)

From October 2008 to September 2012, olive (*Olea europaea*) trees showing leaf scorch or branch dieback symptoms in California (US) were tested for the presence of *Xylella fastidiosa* (EPPO A1 List). Samples were collected from 198 symptomatic olive trees in commercial orchards and urban areas. The objectives of this study were to evaluate the prevalence of *X. fastidiosa* in olive trees, to characterize olive strains and determine the insect vectors present in Californian olive orchards.

It is recalled that individual strains of *X. fastidiosa* differ in their host range and may be classified into subspecies according to their molecular characteristics:
- *X. fastidiosa* subsp. *fastidiosa*: found on grapevine (Pierce's disease), and some other hosts including almond.
- *X. fastidiosa* subsp. *multiplex*: not found on grapevine but commonly found on almond showing leaf scorch, as well as in peach, plum, and landscape trees.
- *X. fastidiosa* subsp. *pauca*: causing citrus variegated chlorosis and coffee leaf scorch in South America.
- *X. fastidiosa* subsp. *sandyi*: causing oleander leaf scorch.

In California, the key native vectors of *X. fastidiosa* were *Graphocephala atropunctata* and *Draeculacephala minerva*. In the 1980s, *Homalodisca vitripennis* was introduced and is now playing a key role in the transmission of grapevine Pierce's disease.

Results showed that only 17% of symptomatic olive trees tested positive for *X. fastidiosa*. The prevalence of *X. fastidiosa* was greater in Southern California than in the San Joaquin Valley and Yolo county. Six bacterial strains were isolated and characterized as belonging to *X. fastidiosa* subsp. *multiplex*. Vector transmission assays demonstrated that *H. vitripennis* could transmit strains of both *X. fastidiosa* subsp. *multiplex* and *X. fastidiosa* subsp. *fastidiosa* to olive but with a low efficiency. Insect trapping data indicated that both *D. minerva* and *G. atropunctata* were present in olive orchards. The authors concluded that these studies showed a poor correlation between symptoms observed on olive trees and bacterial infection. It is felt that in California, *X. fastidiosa* cannot be considered to be the cause of olive leaf scorch or branch dieback, but that olive trees might contribute to the epidemiology of diseases elicited by *X. fastidiosa*. Under the Californian conditions, olive is considered to be an alternative and suboptimal host of *X. fastidiosa*.

Source: Krugner R, Sisteron MS, Chen JC, Stenger DC, Johnson MW (2014) Evaluation of olive as a host of *Xylella fastidiosa* and associated sharpshooters vectors. *Plant Disease* **98**(9), 1186-1193.

Additional key words: host plant, vector **Computer codes:** XYLEFA, US

2014/167 First reports of '*Candidatus* Liberibacter asiaticus' in Guadeloupe and Martinique

Following the outbreaks of huanglongbing (associated with '*Candidatus* Liberibacter asiaticus' – EPPO A1 List) in the USA and several Caribbean countries, a detection survey was carried out in both Martinique and Guadeloupe (FR) to verify the occurrence of the disease. Since 2012, 450 sites have been inspected every year. Leaf samples have been collected (20 leaves from 10 to 30 trees) and tested. As a result, '*Ca.* L. asiaticus' was first detected in Guadeloupe in March 2012 at Le Moule on the Eastern coast in a Tahiti lime

orchard (*Citrus latifolia*) and 6 months later, the pathogen was also found on the Western coast. In Martinique, '*Ca.* L. asiaticus' was first identified in May 2013 on *C. latifolia* at Bellefontaine in a private garden and at Le Lorrain in an orchard. Other citrus species, *C. reticulata* and *C. sinensis* (mandarin and sweet orange) were also found to be infected by '*Ca*. L. asiaticus' on both islands. However, few of the positive samples showed typical huanglongbing symptoms (most positive samples showed symptoms of nutrient deficiencies). On both islands, the insect vector is *Diaphorina citri* (Hemiptera: Liviidae – EPPO A1 List). In Guadeloupe, *D. citri* was first detected in 1998 but its populations have been controlled effectively with a parasidoid, *Tamarixia radiata* (Hymenoptera: Eulophidae). In Martinique, *D. citri* was first observed in 2012 (the EPPO Secretariat had previously no data on its occurrence). It is stressed that despite the former presence of *T. radiata* in Guadeloupe and its detection in Martinique a few weeks after the detection of *D. citri*, where it had a mean parasitism rate of 70%, huanglongbing has spread across both Guadeloupe and Martinique. The possible origin of these outbreaks remains unclear.
The situation of '*Candidatus* Liberibacter asiaticus' in Guadeloupe and can be described as follows: **Present, first found in 2012.**
The situation of '*Candidatus* Liberibacter asiaticus' in Martinique and can be described as follows: **Present, first found in 2013.**

Source: Cellier G, Moreau A, Cassam N, Hostachy B, Ryckewaert P, Aurela L, Picard R, Lombion K, Rioualec AL (2014) First report of '*Candidatus* Liberibacter asiaticus' associated with huanglongbing on *Citrus latifolia* in Martinique and Guadeloupe, French West Indies. *Plant Disease* **98**(5), 683-684.

Additional key words: new record **Computer codes:** DIAACI, LIBEAS, GD, MT

2014/168 *Tomato apical stunt viroid* detected on tomatoes in Italy

Tomato apical stunt viroid (*Pospiviroid*, TASVd – EPPO Alert List) has previously been detected in Italy, but only in asymptomatic plants of *Solanum jasminoides* (see EPPO RS 2011/116 and 2011/158) which were subsequently destroyed. During a survey conducted in October 2013 in glasshouse tomatoes, unusual symptoms were observed on 4 tomato plants (*Solanum lycopersicum* cv. 'Ingrid' grafted on 'Beaufort' rootstock) in a single greenhouse located at Diano Marina (Imperia province, Liguria region). Symptoms included shortened apical internodes associated with tiny, deformed and brittle chlorotic leaves, while ripe fruits were pale red and smaller. Laboratory analysis (PCR, sequencing) confirmed the presence of TASVd in symptomatic plants. The origin of this infection is still unclear, although it is suspected that it may have originated from ornamental solanaceous plants.
The situation of *Tomato apical stunt viroid* in Italy can be described as follows: **Transient, (occasionally found on asymptomatic ornamentals, detected once in 4 tomato plants).**

Source: Parella G, Numitone G (2014) First report of *Tomato apical stunt viroid* in tomato in Italy. *Plant Disease* **98**(8), p 1164.

Additional key words: detailed record **Computer codes:** TASVD0, IT

2014/169 Survey on *Potato spindle tuber viroid* and *Tomato apical stunt viroid* in ornamental plants in Croatia

From 2009 to 2012, a survey was conducted in Croatia to verify the presence of *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd – EPPO A2 List) and other pospiviroids in ornamental plants. Although infected ornamentals do not show obvious symptoms of viroid infection, they might constitute a source of infection for susceptible crops of economic importance. In total, 182 samples were collected from 95 different locations and included 5 ornamental species (*Solanum jasminoides, Lycianthus rantonnetii, Brugmansia* sp., *Petunia* sp., *Surfinia* sp.) and 2 solanaceous crops, tomato and potato (*Solanum lycopersion* and *S. tuberosum*). Ornamental plants were sampled in retail trade sites, commercial nurseries and consignments of imported seedlings. Potato and tomato samples were collected from domestic field and glasshouse production, respectively. As a result, 8 plants (*S. jasminoides* and *L. rantonnetii*) were found to be infected by PSTVd and 1 plant of *S. jasminoides* was found to be infected by *Tomato apical stunt viroid* (TASVd – EPPO Alert List). In all cases, eradication measures were taken. No pospiviroid infection was detected in potato or tomato. The presence of PSTVd in Croatia in asymptomatic ornamentals had already been reported (see EPPO RS 2012/036), but this is the first time that TASVd is recorded in Croatia.

Source: Milanović J, Kajić V, Milhaljević S (2014) Occurrence and molecular variability of *Potato spindle tuber viroid* and *Tomato apical stunt viroid* in ornamental plants in Croatia. *European Journal of Plant Pathology* **139**(4), 785-788.

Additional key words: detailed record, new record **Computer codes:** PSTVD0, TASVD0, HR

2014/170 First report of *Fusarium oxysporum* f. sp. *cubense* tropical race 4 in Jordan

Fusarium wilt or Panama disease caused by *Fusarium oxysporum* f. sp. *cubense* is a severe fungal disease of banana, and a regulated pest in most banana-producing countries. Planting material, water, soil particles, tools, footwear and machinery can efficiently disseminate the fungus. Different races of *F. oxysporum* f. sp. *cubense* have been designated based on their pathogenicity to different reference varieties under field conditions. In particular, race 1 caused severe economic losses during the mid-20th century to the cultivation and trade of the banana cultivar 'Gros Michel' in Central America and the Caribbean, until it was replaced by resistant Cavendish cultivars. In 1992 a new variant of *F. oxysporum* f. sp. *cubense* called the tropical race 4 (TR4) was identified in Southeast Asia infecting a wide range of banana cultivars, including Cavendish clones. Tropical race 4 has overcome the resistance to *F. oxysporum* f. sp. *cubense* in Cavendish clones and can attack other banana cultivars such as plantains, cooking bananas and a diverse range of dessert bananas which are major sources of food in tropical countries. This race has since spread throughout Southeast Asia and Australia [Australia (Northern Territory), China (Fujian, Guangdong, Guangxi, Hainan, Yunnan), Indonesia, Malaysia, Philippines, Taiwan] with unconfirmed records in Pakistan and Oman. In November 2013, its presence was reported for the first time in Africa, in Mozambique. Finally, tropical race 4 has recently been confirmed in Jordan, although Fusarium wilt symptoms were first noticed in 2006. In Jordan, Cavendish bananas are cultivated on 1 000-1 500 ha in the Jordan Valley. Laboratory analysis of collected samples (isolation on growing media, Vegetative Compatibility Groups, molecular and pathogenicity tests) confirmed the presence of tropical race 4. It is noted that currently 80% of the Jordan Valley production area is affected by Fusarium wilt, with a disease incidence ranging from 20 to 80% in the different

farms. It is noted that this record in Jordan which is the northernmost outbreak, represents a major expansion of the damaging tropical race 4.

More information about *F. oxysporum* f. sp. *cubense* tropical race 4 and its management can be found in a recent FAO technical manual:
http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/caribbeantr4/13ManualFusarium.pdf

Source: García-Bastidas N, Ordóñez F, Konkol J, Al-Qasim M, Naser Z, Abdelwali M, Salem N, Waalwijk C, Ploetz RC, Kema GHJ (2014) First report of *Fusarium oxysporum* f. sp. *cubense* tropical race 4 associated with Panama disease of banana outside Southeast Asia. *Plant Disease* **98**(5), p 694.

Pérez-Vicente L, Dita MA, Martínez de la Parte E (2014) Technical Manual – Prevention and diagnostic of Fusarium wilt (Panama disease) of banana caused by *Fusarium oxysporum* sp. *cubense* tropical race 4 (TR4) prepared for the Regional FAO Workshop on the 'Diagnosis of Fusarium wilt (Panama disease) caused by *Fusarium oxysporum* f. sp. *cubense* tropical race 4: Mitigating the threat and preventing its spread in the Caribbean. FAO, Rome, 74 pp.

Additional key words: new record **Computer codes:** FUSACB, JO

2014/171 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**

Apple chlorotic leaf spot virus, Cherry green ring mottle virus, and *Cherry necrotic rusty mottle virus* (formerly EPPO A2 List) are reported for the first time from Montenegro. These viruses were detected during surveys conducted in September/October in 2011 and 2012 in peach orchards (Zindović *et al*., 2014). **Present, no details.**

Aleurocanthus spiniferus (Hemiptera: Aleyrodidae – EPPO A2 List) was first found in Réunion (FR) in April 2013 in the area of Bois de nèfles, near Saint-Denis (FDGDON Réunion, 2014). **Present, no details.**

Drosophila suzukii (Diptera: Drosophilidae – EPPO A2 List) was first found in Réunion (FR) in November 2013 near Grand Tampon. The presence of the pest is also suspected in strawberry crops in the areas of Montvert les hauts, Bois court and Sainte Marie (FDGDON Réunion, 2014). **Present, no details.**

During surveys conducted in September 2013 in vineyards of the Khaketi region, Georgia, the presence of '*Candidatus* Phytoplasma solani' (associated with Bois noir) was detected in plants showing symptoms of grapevine yellows. This is the first time that Bois noir is reported from Georgia. Further studies will be conducted to verify the presence of its insect vector, i.e. *Hyalesthes obsoletus* (Quaglino *et al*., 2014). **Present, no details.**

Tomato yellow leaf curl virus (*Begomovirus*, TYLCV – EPPO A2) has been detected in the Republic of Korea infecting glasshouse *Eustoma grandiflorum*. The disease was observed in

December 2012 on eustoma plants grown in Gumi, where earlier TYLCV outbreaks had been detected on tomatoes (Kil *et al.*, 2014). **Present, no details.**

- **Detailed records**

Plasmopara obducens (formerly EPPO Alert List) occurs in Alabama (US). In spring 2012, downy mildew was first observed in potted plants of *Impatiens walleriana* in several commercial greenhouses in Mobile county (Conner *et al*., 2014).

Aphelenchoides besseyi (EPPO A2 List) is reported for the first time from the province of Jilin, China. During a survey on rice diseases conducted in 2013, it was found causing white tip disease near the cities of Changchun and Gongzhuling (Ou *et al*., 2014).

- **New host plants**

In 2012, an unusual syndrome was observed in Lleida, Northern Spain in peach (*Prunus persica*) orchards. Affected trees showed early reddening, leaf curling, decline, abnormal fruits, and in some cases chlorosis and mortality. The presence of '*Candidatus* Phytoplasma pyri' (associated with Pear decline – EPPO A2 List) was detected in affected trees. It is noted that in North America, '*Ca*. P. pyri' has been associated with a similar disease 'Peach yellow leaf roll', transmitted by *Cacopsylla pyricola* from pear to peach trees. This is the first time that '*Ca*. P. pyri' is detected in peach trees in Spain and the first time that '*Ca*. P. pyri' is associated in Europe with an economically important disease of peach resembling the North American disease 'Peach yellow leaf roll'. However, it is noted that the '*Ca*. P. pyri' strain found Lleida is genetically closer to some European or Middle Eastern strains than to the North American 'Peach yellow leaf roll' strain (Sabaté *et al*., 2014).

In September 2013, *Plasmopara halstedii* (EU Annexes) has been detected on numerous plants of *Rudbeckia fulgida* cv. 'Goldsturm' grown in 2 commercial nurseries in Maryland (US). Affected plants showed dark necrotic lesions on the upper leaf side and sporulating masses of white mycelium on the underside of the leaves (or on both leaf surfaces in severe infections). Plants were stunned with a reduced number of flowers. *P. halstedii* had previously been recorded on *R. fulgida* cv. 'Goldstrum' in Florida in 2004 and Virginia in 2006 (Rivera *et al.*, 2014).

Monilinia fructicola (EPPO A2 List) has been detected in fruits of *Cornus mas* (Cornaceae) showing symptoms of brown rot in one location in the USA (Beckerman and Creswell, 2014).

In the USA, *Raffaelea lauricola* (EPPO Alert List) was detected for the first time on *Laurus nobilis* (Lauraceae). The pathogen was found in September 2013, in a 6 m tall tree in Gainesville (Florida) which was displaying wilted leaves, discoloured sapwood and beetle entrance holes. This tree was growing in the vicinity of an avocado tree which had succumbed to the disease months earlier. In addition, studies showed that the insect vector, *Xyleborus glabratus*, can infest and breed in stems of *L. nobilis*. It is underlined that this information may be of importance in the event of an introduction of *X. glabratus* and its fungal associate to Mediterranean areas were *L. nobilis* is naturally present or cultivated (Hughes *et al*., 2014).

In Tenerife (Islas Canarias, Spain), the presence of *Tomato chlorosis virus* (*Crinivirus*, ToCV – EPPO A2 List) was detected in tobacco (*Nicotiana tabacum*) plants showing symptoms of mild leaf curling, mosaic and interveinal yellows. Although, tobacco has been reported to

be an experimental host of ToCV, this is the first time that it is reported as a natural host (Fiallo-Olivé, 2014).

- **Diagnostics**

PCR-based assays (using specific primers) have been developed in the USA for the detection of *Phymatotrichopsis omnivora* (EPPO A1 List) in root samples of cotton (*Gossypium hirsutum*) and alfalfa (*Medicago sativa*). These methods are considered to be sufficiently sensitive, cost effective, and rapid to be used in the routine diagnosis of the fungus (Dobhal *et al*., 2014).

In the USA, new PCR assays, TaqMan real-time PCR (Jeyaprakash *et al*., 2014) and multilocus PCR (Dreaden *et al*., 2014) have been developed for the detection of *Raffaelea lauricola* (EPPO Alert List). These new assays are now routinely used to diagnose laurel wilt disease in Florida.

- **Taxonomy**

In order to avoid any confusion with an African species of lepidoptera [originally described as *Cacoecia occidentalis* but then transferred into the genus *Choristoneura* and now called *Choristoneura occidentalis* (Walsingham)], the Western spruce budworm (*C. occidentalis* Freeman – EPPO A1 List) occurring in North America has been renamed *Choristoneura freemani* (Razowski, 2008).

Source:

Beckerman JL, Creswell T (2014) First report of brown rot (*Monilinia fructicola*) on the dogwood, cornelian cherry (*Cornus mas*). *Plant Disease* **98**(8), 1275-1276.

Conner KN, Olive J, Hagan AK, Zhang L, Bloodworth ME (2014) First report of impatiens downy mildew caused by *Plasmopara obducens* in Alabama. *Plant Disease* **98**(7), p 1006.

Dobhal AM, Garrido PA, Orquera GK, Espindola AS, Young CA, Ochoa-Corona FM, Marek SM, Garzon CD (2014) Highly sensitive end-point PCR and SYBR Green qPCR detection of *Phymatotrichopsis omnivora*, causal fungus of cotton root rot. *Plant Disease* **98**(9), 1205-1212.

Dreaden TJ, Davis JM, Harmon CL, Ploetz RC, Palmateer AJ, Soltis PS, Smith JA (2014) Development of multilocus PCR assays for *Raffaelea lauricola*, causal agent of laurel wilt disease. *Plant Disease* **98**(3), 379-383.

FDGDON Réunion. Fiche d'identification de *Drosophila suzukii* Matsumura. http://www.fdgdon974.fr/IMG/pdf/FICHE_identif_D_suzukii_V2.pdf

FDGDON Réunion. Fiche d'identification d'*Aleurocanthus spiniferus* Quaintance. http://www.fdgdon974.fr/IMG/pdf/Fiche_alerte_Aleurocanthus.pdf

Fiallo-Olivé E, Espino AI, Botella-Guillén M, Gómez-González E, Reyes-Carlos JA, Navas-Castillo J (2014) Tobacco: a new natural host of *Tomato chlorosis virus* in Spain. *Plant Disease* **98**(8), p 1162.

Hughes MA, Black A, Smith JA (2014) First report of laurel wilt caused by *Raffaelea lauricola* on bay laurel (*Laurus nobilis*) in the United States. *Plant Disease* **98**(8), p 1159.

Jeyaprakash A, Davison DA, Schubert T (2014) Molecular detection of the laurel wilt fungus, *Raffaelea lauricola. Plant Disease* **98**(4), 559-564.

Kil EJ, Byun HS, Kim S, Hwang H, Kim MK, Kim CS, Choi HS, Lee KY, Lee S (2014) First report of *Tomato yellow leaf curl virus* infecting eustoma (*Eustoma grandiflorum*) in Korea. *Plant Disease* **98**(8), p 1163.

Ou SQ, Gao J, Peng DL, Qi CY, Zhang JH, Meng Y, Lu BH (2014) First report of *Aphelenchoides besseyi* causing white tip disease of rice in Jilin province, China. *Plant Disease* **98**(8), p 1165.

Quaglino F, Maghradze D, Chkhaidze N, Casati P, Failla O, Bianco PA (2014) First report of '*Candidatus* Phytoplasma solani' and '*Ca*. P. convolvuli' associated with grapevine bois noir and bindweed yellows, respectively, in Georgia. *Plant Disease* **98**(8), p 1151.

Rivera Y, Rane K, Crouch JA (2014) First report of downy mildew caused by *Plasmopara halstedii* on black-eyed Susan (*Rudbeckia fulgida* cv. 'Goldstrum') in Maryland. *Plant Disease* **98**(7), 1005-1006.

Razowski J (2008) Tortricidae (Lepidoptera) from South Africa. 6: *Choristoneura* Hübner and *Procrica* Diakonoff. *Polish Journal of Entomology* **77**, 245-254.

Sabaté J, Lavina A, Batlle A (2014) First report of '*Candidatus* Phytoplasma pyri' causing Peach yellow leaf roll (PYLR) in Spain. *Plant Disease* **98**(7), 989-990.

Zindović J, Dall'Ara M, Rubies Antonell C, Ratti C (2014) First report of *Apple chlorotic leaf spot virus, Cherry green ring mottle virus,* and *Cherry necrotic rusty mottle virus* on peach in Montenegro. *Plant Disease* **98**(7), p 1014.

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

Computer codes: ACLSV0, ALECSN, APLOBE, ARCHOC, CRNRM0, DROSSU, MONIFC, PHMPOM, PHYPPY, PHYPSO, PLASHA, RAFFLA, RAFFLA, TOCV00, TYLCV0, XYLBGR, CN, ES, GE, KR, ME, RE, US

2014/172 New additions to the EPPO A2 List, List of Invasive Alien Plants and Observation List of Invasive Alien Plants

In September 2014, the EPPO Council approved the addition of *Parthenium hysterophorus* (Asteraceae) to the EPPO A2 List of pests recommended for regulation as quarantine pests (pest locally present in the EPPO region). A PRA record and a PRA report are available for this species on the EPPO website, and a datasheet and an article will be published in the December issue of the EPPO Bulletin.

Four plant species initially registered on the EPPO Alert List have been assessed against the EPPO prioritization process for invasive alien plants (PM 5/6) and moved to other EPPO lists:

- *Ambrosia confertiflora* (Asteraceae) is now on the List of Invasive Alien Plants;
- *Andropogon virginicus* (Poaceae) is now on the Observation List of Invasive Alien Plants;
- *Arctotheca calendula* (Asteraceae) is now on the List of Invasive Alien Plants;
- *Gunnera tinctoria* (Gunneraceae) is now on the List of Invasive Alien Plants;

A prioritization report is available for each of these species on the EPPO website.

Source: EPPO secretariat (2014-09)

Additional key words: EPPO Lists **Computer codes:** ANOVI, AROCA, FRSCO, GUATI, PTNHY

2014/173 The European Union adopts a new regulation on invasive alien species

The Council of the European Union adopted on the 29th of September 2014 a regulation on the prevention and management of the introduction and spread of invasive alien species.
The regulation lays down rules to prevent, minimise and mitigate the adverse impacts on biodiversity and the related ecosystem services, as well as other adverse impact on human health or the economy of the introduction and spread, both intentional and unintentional, of invasive alien species.
To this end, the European Commission will adopt an open list of invasive alien species of Union concern, which will be regularly updated and reviewed at least every six years. Species on this list may not be intentionally brought into the territory of the European Union, nor may they be kept, bred, transported to, from or within the Union, placed on the market, grown or released into the environment.
The new regulation addresses invasive alien species of regional concern and of member state concern. It allows member states to identify, from their national list of invasive alien species, species (native or non-native to the Union) that require enhanced regional cooperation. Such regional cooperation will be facilitated by the Commission.
The regulation establishes a surveillance system for early detection and measures for rapid eradication. Furthermore, member states must provide for penalties if the regulation is not correctly applied. The regulation also provides for a system of authorisations and permits to allow certain activities related to invasive alien species (e.g. research). The Regulation will enter into force from the 1st of January 2015.

Source: Council of the European Union, Press release, 29 September 2014, Council adopts rules on invasive alien species. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/envir/144948.pdf

EUR-Lex Website, proposal for a regulation of the European Parliament and of the

Council on the prevention and management of the introduction and spread of invasive alien species, /* COM/2013/0620 final - 2013/0307 (COD) */ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013PC0620

Additional key words: invasive alien plants, regulation

2014/174 First reports of *Paspalum dilatatum, Solanum elaeagnifolium* and *Gazania rigens* in Libya

Three alien plants have been observed for the first time in Libya:

- *Paspalum dilatatum* (Poaceae), originating from South America, this plant is often found on ornamental turf and has been observed as established (= naturalized) in Al-Bayda in Libya. In the Mediterranean Basin, it is also reported as established in Islas Canarias (ES), Egypt, Madeira (PT) and Morocco.
- *Solanum elaeagnifolium* (Solanaceae, EPPO A2 List) is native from the Americas and has been found as naturalized in Benghazi on a roadside and within a hotel garden near the beach in Libya. The species is also reported as established in Egypt, Morocco and Tunisia.
- *Gazania rigens* (Asteraceae) originates from South Africa and has also been found as transient in Benghazi at the same hotel garden (see above) in Libya. It is also known to occur, as transient (= casual) in Morocco, Madeira (PT) and Tunisia.

Source: Véla E (2013) Notes et compléments sur quelques taxons traités dans les volumes 1 à 4. Note sur quelques xénophytes nouveaux pour la Libye. Addenda. Notes. Xénophytes. P. 372.

Additional key words: invasive alien plants, new record **Computer codes:** GAZRI, PASDI, SOLEL, LY

2014/175 First reports of alien plants in Algeria

Alien plants which were not known to occur in Algeria are listed in the table below, with their situation in Algeria, and other nearby countries where the species are known to occur.

Species	Location of established populations in Algeria	Establishment in other countries
Acer cf. *pseudoplatanus* (Sapindaceae)	In the Chréa, near Blida in Algeria	Islas Canarias (ES) and Madeira (PT)
Agave sisalana (Asparagaceae)	In Greco-roman ruins in Tipaza	Islas Canarias (ES), Libya and Morocco
Ailanthus altissima (Simaroubaceae, EPPO List of Invasive Alien Plants)	Naturalized and became invasive in oueds: e.g. in O. Ksari, O. Boghni, Tizi-Ouzou, O. Djer, Aïn Defla.	Madeira (PT), Islas Canarias (ES), Morocco and Libya
Aptenia cordifolia (Mesembryanthemoideae)	In the cities of Béjaïa and Sidi Bel-Abbès	Madeira (PT), Islas Canarias (ES), Morocco and Libya
Cardiospermum grandiflorum (Sapindaceae, EPPO List of IAP)	In Cap Bouak in Béjaïa	Islas Canarias (ES) and Madeira (PT)
Ceratochloa cathartica (Poaceae)	Used as an ornamental turf in Alger where it escaped. Also in L'Arba and Boufarik	Islas Canarias (ES), Egypt, Madeira (PT), Morocco and Tunisia
Chamaesyce maculata	Disturbed sandy shores in El	Islas Canarias (ES), Morocco and

Species	Location of established populations in Algeria	Establishment in other countries
(Euphorbiaceae)	Tarf, sidewalks in Béjaïa	Tunisia
Chamaesyce prostrata (Euphorbiaceae)	Sidewalks in Béjaïa	Islas Canarias (ES), Egypt and Madeira (PT)
Chamaesyce serpens (Euphorbiaceae)	El Kala	Islas Canarias (ES), Egypt, Morocco and Tunisia
Commelina cf. *chamissonis or C. communis* (Commelinaceae)	Sidewalks in Alger and Béjaïa, and recorded as a weed in irrigated crops	
Crepis bursifolia (Asteraceae)	In sidewalks and wastelands in numerous cities (e.g. Alger, Bab Ezzouar, Oran)	Islas Canarias (ES), Morocco and Tunisia
Elaeagnus angustilofia (Elaeagnaceae)	Cutivated as an ornamental in cities, such as Alger.	Morocco, Tunisia
Ibicella lutea (Martyniaceae)	Beaches in Draouch and El Tarf, agricultural prairies in El Hadjar, Annaba	Tunisia
Lantana camara (Verbanaceae)	Wastelands around gardens in Tizi-Ouzou	Islas Canarias (ES), Egypt, Libya, Madeira (PT), Morocco and Tunisia
Nothoscordum borbonicum (Amaryllidaceae)	Anthropized sites in Alger, M'Sila	Islas Canarias (ES), Egypt, Libya, Madeira (PT), Morocco and Tunisia
Oxalis purpurea (Oxalidaceae)	Annaba	Islas Canarias (ES), Madeira (PT), Morocco and Tunisia
Paspalum dilatatum (Poaceae)	Anthropized sites in Alger, Annaba, Béjaïa	Islas Canarias (ES), Egypt, Libya, Madeira (PT) and Morocco
Setaria parviflora (Poaceae)	Anthropized sites in Annaba	Islas Canarias (ES)
Solanum bonariense (Solanaceae)	Anthropized sites in Annaba, El Kala, El Tarf	Islas Canarias (ES) and Tunisia
Solanum elaeagnifolium (Solanaceae, EPPO A2 List)	Anthropized sites in Jijel, in Hammam Dalaa	Egypt, Lybia, Morocco and Tunisia

Other species were found as transient:

Species	Location of transient populations in Algeria	Establishment in other countries
Eleusine indica (Poaceae)	Alger, Annaba, El Tarf	Egypt
Galinsoga parviflora (Asteraceae)	Anthropized areas in Annaba, Béjaïa	Islas Canarias (ES), Egypt and Madeira (PT)
Pennisetum villosum (Poaceae)	Cultivated, found in anthropized places in Alger, Annaba, Jijel	Islas Canarias (ES) and Morocco
Phacelia tanacetifolia (Boraginaceae)	Wasteland in M'Sila	
Polygala myrtifolia (Polygalaceae)	Tipaza	
Yucca gloriosa (Asparagaceae)	Tipaza	

Source: Véla E, Rebbas K, Meddour R, de Bélair G (2013) Notes et compléments sur quelques taxons traités dans les volumes 1 à 4. Note sur quelques xénophytes nouveaux pour l'Algérie (et la Tunisie). Addenda. Notes. Xénophytes. 372-376.

Additional key words: invasive alien plants, new records

Computer codes: ACRPP, AGVSI, AILAL, APJCO, BROCA, COMCO, CRIGR, CVPBU, ELEIN, ELGAN, EPHMA, EPHPT, EPHSN, GASPA, IBILU, LANCA, NOTFR, OXAPU, PASDI, PESVI, PHCTA, POGMI, SETGE, SOLBO, SOLEL, UCCGL, DZ, EG, ES, LY, MA, PT, TN

2014/176 Update of the Black List and Watch List of invasive alien plants in Switzerland

In September 2014, the Swiss Black and Watch Lists of invasive alien plants have been revised and considerably increased. These lists, although not being part of regulations, represent useful tools for decision-making and prevention. As new species constantly arrive on the Swiss territory, these lists are revised once a year by a panel of experts. Each species is assessed with the current state of knowledge on the basis of criteria (considering vegetative and sexual reproduction, environmental impact and spread potential).
The species included in the revised Black and Watch Lists of invasive alien plants are listed below with an indication as to whether they have been newly added, along with an estimate of their current distribution in Switzerland. A datasheet is available for each species.

Black List of invasive alien plants

Species	Addition in 2014	Distribution in CH
Abutilon theophrasti (Malvaceae)	X	Limited
Ailanthus altissima (Simaroubaceae, EPPO List of Invasive Alien Plants)		Very widespread
Ambrosia artemisiifolia (Asteraceae, EPPO List of IAP)		Very widespread
Amorpha fruticosa (Fabaceae, EPPO List of IAP)	X	Limited
Artemisia verlotiorum (Asteraceae)		Very widespread
Asclepias syriaca (Apocynaceae)	X (was on the Watch List)	Limited
Buddleja davidii (Scrophulariaceae, EPPO List of IAP)		Very widespread
Bunias orientalis (Brassicaceae)	X	Widespread
Cabomba caroliniana (Cabombaceae, EPPO List of IAP)	X	Absent
Crassula helmsii (Crassulaceae, EPPO A2 List)	X (was on the Watch List)	Absent
Cyperus esculentus (Cyperaceae, EPPO List of IAP)	X (was on the Watch List)	Limited
Echinocystis lobata (Cucurbitaceae)	X	Absent
Elodea canadensis (Hydrocharitaceae)		Widespread
Elodea nuttallii (Hydrocharitaceae, EPPO List of IAP)		Widespread
Erigeron annuus (Asteraceae)	X (was on the Watch List)	Very widespread
Fallopia japonica (Polygonaceae, EPPO List of IAP)		Very widespread
Fallopia sachalinensis (Polygonaceae, EPPO List of IAP)		Limited
Fallopia x bohemica (Polygonaceae, EPPO List of IAP)		Widespread
Heracleum mantegazzianum (Apiaceae)		Very widespread
Hydrocotyle ranunculoides (Apiaceae, EPPO A2 List)	X	Absent
Impatiens glandulifera (Balsaminaceae, EPPO List of IAP)		Widespread
Lonicera henryi (Caprifoliaceae)	X (was on the Watch List)	Limited
Lonicera japonica (Caprifoliaceae)		Limited

Species	Addition in 2014	Distribution in CH
Ludwigia grandiflora (Onagraceae, EPPO A2 List)		Absent
Ludwigia peploides (Onagraceae, EPPO A2 List)	X	Absent
Lupinus polyphyllus (Fabaceae)	X (was on the Watch List)	Limited
Myriophyllum aquaticum (Haloragaceae, EPPO List of IAP)	X	Absent
Persicaria wallichii (Polygonaceae) (=*Polygonum polystachyum*)		Limited
Prunus laurocerasus (Rosaceae)		Widespread
Prunus serotina (Rosaceae)		Widespread
Pueraria lobata (Fabaceae, EPPO A2 List)		Limited
Rhus typhina (Anacardiaceae)		Widespread
Robinia pseudoacacia (Fabaceae)		Very widespread
Rubus armeniacus (Rosaceae)		Limited
Senecio inaequidens (Asteraceae, EPPO List of IAP)		Widespread
Sicyos angulatus (Cucurbitaceae, EPPO List of IAP)	X	Absent
Solanum carolinense (Solanaceae)	X	Absent
Solidago canadensis (Asteraceae, EPPO List of IAP)		Very widespread
Solidago gigantea (Asteraceae, EPPO List of IAP)		Very widespread
Toxicodendron radicans (Anacardiaceae)	X	Absent
Trachycarpus fortunei (Arecaceae)	X (was on the Watch List)	Limited

Watch List of invasive alien plants

Species	Addition in 2014	Distribution in CH
Acacia dealbata (Fabaceae)	X	Limited
Cornus sericea (Cornaceae, EPPO List of IAP)		Limited
Galega officinalis (Fabaceae)	X	Limited
Helianthus tuberosus (Asteraceae, EPPO List of IAP)		Widespread
Impatiens balfouri (Balsaminaceae)		Widespread
Kochia scoparia (Amaranthaceae)		Limited
Lysichiton americanus (Araceae)		Absent
Opuntia humifusa (Cactaceae)	X	Limited
Parthenocissus inserta (Vitaceae)		Limited
Paulownia tomentosa (Paulowniaceae)		Limited
Phytolacca americana (Phytolaccaceae)		Limited
Sagittaria latifolia (Alismataceae)	X	Limited
Sedum spurium (Crassulaceae)		Limited
Sedum stoloniferum (Crassulaceae)	X	Limited
Solidago graminifolia (Asteraceae)	X	Limited
Symphoricarpos albus (Caprifoliaceae)	X	Limited
Symphyotrichum novi-belgii aggr. (Asteraceae)	X	Limited

Source: Info Flora Website (2014) Listes et fiches d'information. http://www.infoflora.ch/fr/flore/neophytes/listes-et-fiches.html

Swiss Federal Council. Ordinance on the Handling of Organisms in the Environment (Release Ordinance, RO) of 10 September 2008 (Status as at 1st June 2012). 814.911. http://www.admin.ch/ch/e/rs/814_911/index.html#id-ni5-7

Additional key words: invasive alien plants

Computer codes: ABUTH, ACADA, ASCSY, AILAL, AMBEL, AMHFR, ARTVE, ASTNB, BUDDA, BUNOR, CABCA, CRWSR, CSBHE, CYPES, ECNLO, ELDNU, ELDCA, ERIAN, ETIGR, GAGOF, HELTU, HERMZ, HYDRA, IPABF, IPAGL, KCHSC, LONHY, LONJA, LSYAM, LUDUR, LUDPE, LUPPO, LYPBR, OPUHU, PAZTO, POLCU, PRNLR, PRNSO, PRTIN, REYBO, REYSA, RHUTY, ROBPS, RUBAE, SAGLT, SEDSF, SEDSU, SENIQ, SIYAN, SOLCA, SOOCA, SOOGI, SYPAL, TOXRA, TRRFO, CH

2014/177 13th International EMAPi Conference, Hawai'i (US), 2015-09-20/24

The 13th International Conference on Ecology and Management of Alien Plant Invasions (EMAPi) will be held in Hawai'i (US) on the 20-24th of September 2015.
General themes of EMAPi 2015 include: connecting science to management and restoration, biosecurity and risk assessment (including early detection and rapid response), ecological studies – reproduction and spread, global change and plant invasions, biocontrol of invasive alien plants, mechanical and chemical control of invasive alien plants, genetics and evolution of invasive alien plants, invader traits and resident communities, biogeography and macroecology of plant invasions, inventories, floras and databases, engaging the public with the invasive alien plant issue.
Registration and a call for abstracts are open. Abstracts can be submitted until the 30th of April 2015.

Source: EMAPi 2015 Website http://www.emapi2015.hawaii-conference.com/

Additional key words: invasive alien plants, conference

Computer codes: US

2014/178 Opportunity for a one year secondment into EPPO to work on invasive alien plants

There is an opportunity for a suitably qualified candidate to undertake a one year funded secondment into the EPPO Secretariat in Paris to work on invasive alien plants. The main activites covered, essential skills and qualifications required, terms and conditions, as well as the application procedure are described on the EPPO website:

https://www.eppo.int/News&Events/secondment_IAP.htm

Applications should be sent to EPPO before the **15th of November 2014**.

Source: EPPO Secretariat (2014-10).

Additional key words: invasive alien plants