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2013/026 First report of '*Candidatus* Liberibacter asiaticus' in Paraguay

In Paraguay, the presence of *Diaphorina citri* (Hemiptera: Psyllidae - EPPO A1 List), the psyllid vector of '*Candidatus* Liberibacter asiaticus' (associated with citrus huanglongbing, EPPO A1 List) was found in 2008 on M*urraya paniculata,* and in 2009 on mandarin (*Citrus reticulata*) crops. Recent surveys have shown that *D. citri* occurred in the following departments: Alto Paraná, Caazapá, Central, Cordillera, Itapúa, Paraguarí and Presidente Hayes. In January 2013, the presence of '*Ca*. Liberibacter asiaticus' was reported for the first time from Paraguay. The laboratory of SENAVE (Servicio Nacional de Calidad y Sanidad Vegetal y de Semillas) has confirmed the detection of the bacterium in 14 samples (out of 28) showing symptoms of huanglongbing. These samples were collected from the following departments: Amambay, Alto Paraná, Canindeyú, Cordillera, Itapua, and correspond to 6 outbreak sites. According to the huanglongbing contingency plan, phytosanitary measures were immediately implemented to contain the disease and included: destruction of infected plants, intensive surveys, restrictions on the movement of plants of *Citrus* spp. and *Murraya paniculata*, control of *D. citri*, and informing all stakeholders.
The situation of '*Candidatus* Liberibacter asiaticus' in Paraguay can be described as follows: **Present, first found in 2013 (6 outbreak sites), under official control.**

Source: INTERNET (via EPICA)
SENAVE (2013-01)
- Emergencia Fitosanitaria Huanglongbing (HLB).
http://www.senave.gov.py/index.php/component/content/article?layout=edit&id=111
- Resolución No. 80. Servicio Nacional de Calidad y Sanidad Vegetal y de Semillas (SENAVE). http://www.senave.gov.py/docs/resoluciones/senave/Res80-13.pdf

Additional key words: new record, detailed record **Computer codes:** DIAACI, LIBEAS, PY

2013/027 First report of *Guignardia citricarpa* in Ghana

In Ghana, symptoms of citrus black spot were detected approximately 10 years ago in a few orchards near Kade (Eastern region) but the causal agent, disease distribution and impact were not known. Surveys were carried out in 2009 in the major citrus-producing areas of Ghana (50 and 52 orchards in the Eastern and Ashanti regions, respectively), and in several markets (5 in Accra, 2 in Kade). These surveys showed that the fruit spot disease associated with the most severe losses was caused by *Guignardia citricarpa* (EPPO A1 List). They also showed that within 10 years the disease has spread widely across the Eastern and Ashanti regions, and that crop losses due to the disease alone or in combination with fruit flies could reach 80%. In diseased fruit, *G. citricarpa* and the endophyte *G. mangifera* often co-existed, thus complicating diagnosis when based solely on isolations. It is concluded that disease control programmes should be urgently implemented to prevent the spread of *G. citricarpa*, in particular to regions where new citrus orchards are being planted (i.e. Western and Brong Ahafo regions). This is the first record of G. *citricarpa* in Ghana, as well as in West Africa.
The situation of *Guignardia citricarpa* in Ghana can be described as follows: **Present, first confirmed in 2009, widespread in the Eastern and Ashanti regions.**

Source: Brentu FC, Oduro KA, Offei SK, Odamtten GT, Vicent A, Peres NA, Timmer LW (2012) Crop loss, aetiology, and epidemiology of citrus black spot in Ghana. *European Journal of Plant Pathology* **133**(3), 657-670.

Additional key words: new record **Computer codes:** GUIGCI, GH

2013/028 First report of *Chrysanthemum stem necrosis virus* in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the first finding of *Chrysanthemum stem necrosis virus* (*Tospovirus*, CSNV – EPPO A2 List) in 1 location in the Western part of the country. In September 2012, a grower of chrysanthemum plants (*Dendranthema* spp.) sent symptomatic samples to the National Reference Laboratory (ILVO) on his own initiative. The laboratory analysis (RT-PCR, sequencing) confirmed the presence of CSNV on 2012-10-26. During the official inspection that was subsequently carried out in the growers' glasshouses, it appeared that several chrysanthemum cultivars were affected by CSNV. These cultivars had been grown from cuttings (rooted and unrooted) bought in July 2012 from a Belgian breeding company which had imported them from Brazil. Tracing-back investigations showed that 5 other Belgian growers had also received chrysanthemum cuttings from the same lots, but no symptoms were observed in these companies and all collected samples tested negative for the presence of CSNV. The NPPO recalled that earlier in 2012, an official survey for the presence of CSNV had been carried out from 2012-01-01 to 2012-03-31 in all Belgian breeding companies of *Dendranthema* spp. During this survey, 93 samples had been collected but all tested negative for CSNV. The origin of the infection remains unclear, but since this is the first notification of CSNV in Belgium, it is assumed that the imported cuttings were the source of infection. All infected chrysanthemum plants have been destroyed, and all companies concerned will be monitored in 2013.
The pest status of *Chrysanthemum stem necrosis virus* in Belgium is officially declared as: **Transient, actionable, under eradication, detected in one location in protected cultivation.**

Source: NPPO of Belgium (2013-01).

Additional key words: new record **Computer codes:** CSNV00, BE

2013/029 First report of *Drosophila suzukii* in Hungary

The NPPO of Hungary recently informed the EPPO Secretariat of the first finding of *Drosophila suzukii* (Diptera: Drosophilidae – EPPO A2 List) on its territory. On 2012-09-17, 1 male and 2 females were found by researchers carrying out a faunistic survey for invasive pests and in particular for *D. suzukii* along 5 Hungarian motorways. The pest was found in 1 trap filled with apple cider vinegar, out of approximately 50 traps which had been deployed near Budapest and around Lake Balaton. This trap was located at a service area ('Táska') along the M7 (E71) motorway, near Balatonfenyves (Somogy county, Southern side of Lake Balaton). A month later (2012-10-18), 2 other *D. suzukii* males were caught at the same place, and again no captures were made in the other traps. The pest was identified morphologically, using a stereomicroscope by a dipterologist of the Plant Protection Institute of the Centre for Agricultural Research, Hungarian Academy of Sciences (formerly Hungarian Natural History Museum). The possible origin of the pest is unknown. Considering the location of the trapping site and the fact that no fruit trees or fruit crops occurred in the surroundings, it is supposed that *D. suzukii* could have been introduced with infested fruit thrown away at the motorway service area. No official measures have been taken, considering that the pest was found only in a single trap along the motorway without any host plants in the vicinity. As specimens of *D. suzukii* were found again one month after the first captures, it is likely that the insect has been able to reproduce on this site, possibly on fruit disposed of in waste containers. However, it is not known whether the pest can overwinter under the Hungarian climatic conditions. Research

will be conducted in 2013 to verify this. The NPPO will launch a country-wide survey on *D. suzukii*, focussing on orchards and fruit crops located in the vicinity of the first finding site, as well as on disposal sites that are receiving green waste from motorways.
The pest status of *Drosophila suzukii* in Hungary is officially declared as: **Transient, actionable.**

Source: NPPO of Hungary (2013-02).

Additional key words: new record **Computer codes:** DROSSU, HU

2013/030 First report of *Anisandrus maiche* in Ukraine

Anisandrus maiche (Coleoptera: Scolytidae) is an ambrosia beetle of Asian origin. It is reported to occur in China (Helongjiang), the Democratic People's Republic of Korea and the Russian Far East (Primorsky kray, Kuril Islands). It is a polyphagous species and in its area of origin, it has been recorded on the following tree species: *Acer barbinerve, Acer mandshuricum, Alnus crispa, Alnus hirsuta, Alnus japonica, Betula dahurica, Corylus sieboldiana* var*. mandshurica, Euonymus, Fraxinus mandshurica, Juglans mandshurica, Magnolia, Phellodendron amurense, Syringa, Ulmus.*

In 2007, it was found for the first time in Ukraine in the Donetsk oblast. *A. maiche* was caught in window-flight traps containing ethanol. Further studies conducted in 2009/2010, detected the insect in mixed forests in the oblasts of Kharkiv and Summy. In the oblast of Summy, it was caught in window-flight traps placed in mixed forest dominated by *Quercus robur*. In this area, it was then observed in plantations of *Quercus borealis* (approximately 15 years old). In the oblast of Kharkiv, *A. maiche* was found on *Populus tremula* and *Quercus robur*. On all sites, only females were found. No particular damage has been observed in Ukraine. This is also the first report of this species in Europe.

Interestingly, this ambrosia beetle has also been recently introduced into the USA. The first specimens were trapped in 2005 in Pennsylvania (Moon Park, Allegheny county). In 2006 and 2007, it was trapped in other locations in Pennsylvania, as well as in Ohio and West Virginia. Although this species is certainly established in these US states, it has not yet been collected from any host trees but only caught in traps.

The impact of *A. maiche* in urban and forest trees is not known, and for the moment no particular damage has been reported from invaded areas. However, it seems desirable to pay attention to the possible spread of this species within the EPPO region.

Source: Rabaglia RJ, Vandenberg NJ, Acciavatti RE (2009) First records of *Anisandrus maiche* Stark (Coleoptera: Curculionidae: Scolytinae) from North America. *Zootaxa* 2137, 23-28.

Terekhova VV, Skrylnik YY (2012) Biological peculiarities of the alien for Europe *Anisandrus maiche* Stark (Coleoptera: Curculionidae: Scolytinae) bark beetle in Ukraine. *Russian Journal of Biological Invasions* **3**(2), 139-144 (abst.).

INTERNET
Bark and Ambrosia Beetles.
http://www.barkbeetles.info/us_canada_chklist_target_species.php?lookUp=3886

Purdue Extension. Department of Entomology. America's Least Wanted Wood-

Borers. Asian ambrosia beetle, *Anisandrus maiche* (Linnaeus). http://extension.entm.purdue.edu/publications/WB-5.pdf

Xyleborini ambrosia beetles. An identification tool to the World Genera by J Hulcr (North Carolina State University) & SM Smith (Michigan State University) (2010). http://idtools.org/id/wbb/xyleborini/index.htm

Additional key words: new record **Computer codes:** ANIDMA, UA, US

2013/031 Incursion of *Octodonta nipae* in Cyprus

The NPPO of Cyprus informed the EPPO Secretariat of the first record of *Octodonta nipae* (Coleoptera: Chrysomelidae) on its territory. In December 2009, the pest was detected on 10 palm trees (*Syagrus romanzoffiana*) at the warehouses and garden centre of an importer in Limassol district. The identity of the pest was confirmed by the Natural History Museum in London. All infested palms showed serious decline symptoms. Following a detailed examination, all young leaves showed signs of attack, but the beetles were only found in fronds of the central shoot. All infested palm trees were destroyed and insecticide treatments were applied on all remaining plants of *Syagrus* spp. in the garden centre. As the insect was no longer found, it is considered to have been eradicated.
O. nipae feeds on Palmaceae and its main hosts include: *Archontophoenix alexandrae, Areca catechu* (betel nut), *Calamus manan* (rattan), *Chrysalidocarpus (Dypsis) lutescens, Cocos nucifera* (coconut), *Elaeis guineensis* (oil palm), *Hyophorbe lagenicaulis, Livistona chinensis, Metroxylon sagu* (sago palm), *Nypa fruticans* (nipa palm), *Phoenix canariensis, Roystonea regia, Syagrus romanzoffiana, Washingtonia filifera, Washingtonia robusta.*
O. nipae was described from Peninsular Malaysia on *Metroxylon* and *Nypa fruticans* and also occurs in Indonesia. In China it is considered as a newly introduced pest in Hainan (found in 2001 and then eradicated) and Fujian (found in 2007).

Source:

Hou YM, Weng ZQ (2009) Population growth and development of the nipa palm hispid beetle *Octodonta nipae* (Maulik) (Coleoptera: Hispidae) at constant temperatures. Abstract of a poster presented that the International Congress on Biological Invasions (Fuzhou, CN, 2009-11-01/06), p 196.

Hou YM, Weng ZQ (2010) Temperature-dependent development and life table parameters of *Octodonta nipae* (Coleoptera: Chrysomelidae). *Environmental Entomology* **39**(5), 1676-1684.

NPPO of Cyprus (2010-01).

Staines CL (2011) Catalogue of the hispines of the world (Coleoptera: Chrysomelidae: Cassidinae). http://entomology.si.edu/Collections_Coleoptera-Hispines.html

Sun JH, Yu PY, Zhang YZ, Wang XJ (2003) A new invasive coconut pest in Hainan Province. *Entomological Knowledge* **40**(3), 286-287 (abst.).

Vassiliou VA, Kazantzis E, Melifronidou-Pantelidou A (2011) First report of the nipa palm hispid *Octodonta nipae* on queen palms in Cyprus. *Phytoparasitica* **39**(1), 51-54.

Additional key words: incursion **Computer codes:** OCTDNI, CY

2013/032 Study on the dispersal of *Bactrocera tryoni*

Understanding the dispersal behaviour of pests is important in the development of scientifically justified trade restrictions and when delimiting regulated areas. The available scientific data on the dispersal potential of *Bactrocera tryoni* (Diptera: Tephritidae – EPPO A1 List) has been recently reviewed by Dominiak (2012) and used in different predictive models. Most studies reviewed concluded that the lifetime dispersal distance of *B. tryoni* rarely exceeded 1 km, although it was recognized in that longer dispersal distances for a small number of individuals may occasionally occur. As a result of this study, the following 5 distances were proposed to delimit 'quarantine areas' in Australian conditions:

- a radius of 1.2 km when the dispersal of *B. tryoni* remains within 200 m of an outbreak epicentre (i.e. all fruit flies are caught within this 200 m radius zone).
- a radius of 2.4 km – for a dispersal within 400 m of the outbreak epicentre.
- a radius of 6 km – for a dispersal within 1 km of the outbreak epicentre.
- a radius of 10 km – for a dispersal within 1.6 km of the outbreak epicentre.
- a radius of 15 km – for a dispersal within 2.5 km of the outbreak epicentre.

It is planned to apply the above proposals in the field and to review them after 5 years of operational experience in Australia.

Source: Dominiak BC (2012) Review of dispersal survival and establishment of *Bactrocera tryoni* (Diptera: Tephritidae) for quarantine purposes. *Annals of the Entomological Society of America* **105**(3), 434-446.

Additional key words: biology, phytosanitary measures **Computer codes:** DACUTR, AU

2013/033 First report of '*Candidatus* Phytoplasma pyri' in Portugal

A study has recently been carried out in Portugal on the following phytoplasma diseases of fruit trees: apple proliferation, pear decline (both EPPO A2 List) and European stone fruit yellows (EU Annexes) which are associated with '*Candidatus* Phytoplasma mali', '*Ca*. P. pyri' and '*Ca*. P. prunorum', respectively. Until this study, there was no evidence of any of these diseases in Portugal, or evidence of the presence of their psyllid vectors (except *Cacopsylla pyri* which is known to occur in Portuguese pear orchards). During this study, '*Ca*. P. mali' and '*Ca*. P. prunorum' were not found in plant samples collected from fruit tree orchards. However, the presence of '*Ca*. P. pyri' was detected (nested-PCR, RFLP, nucleotide sequencing, real-time PCR) in some psyllid and pear tree samples. This is the first time that '*Ca*. P. pyri' has been detected in Portugal. Further studies are being carried out on pear decline to evaluate its distribution and prevent its spread.

The situation of '*Candidatus* Phytoplasma pyri' in Portugal can be described as follows: **Present, detected for the first time in pear orchards in 2012.**

Source: Sousa E, Marques A, Mimoso C, Cardoso F (2012) First occurrence of pear decline disease in Portugal. Abstract of a paper presented at the 22nd International Conference on virus and other graft transmissible diseases of fruit crops (Roma, 2012-06-3/8), p 11.

Additional key words: new record **Computer codes:** PHYPPY, PT

2013/034 Surveys on phytoplasma diseases of fruit trees in Bulgaria

From 2007 to 2011, official surveys were conducted in selected fruit tree orchards in all 28 districts of Bulgaria. Samples were collected from symptomatic and asymptomatic trees, in late autumn when the phytoplasma concentration in the trees was highest. Priority was given to plant material originating from fruit tree nurseries and mother stock plots. All samples were tested by PCR in the Central Laboratory for Plant Quarantine. As a result, phytoplasma infections were found in 10 out of the 28 investigated districts. '*Candidatus* Phytoplasma mali' (associated with apple proliferation – EPPO A2 List) and '*Candidatus* Phytoplasma prunorum' (associated with European stone fruit yellows – EU Annexes) were detected in samples from 5 different districts. Because phytosanitary measures were applied, it was observed that the incidence of apple proliferation in 2009 and 2010 was reduced compared to 2007 and 2008, and no positive cases were detected in 2011. However the situation for European stone fruit yellows was different, as infections were detected in 2, 5 and 5 samples in 2009, 2010, and 2011, respectively. '*Candidatus* Phytoplasma pyri' (associated with pear decline – EPPO A2 List) was detected in pear samples from 7 different districts*. Infections were detected in 2 samples in 2009, 6 in 2010, and 4 in 2011. All infected pear trees were destroyed (burnt) and affected areas were placed under quarantine. The authors concluded that phytosanitary measures should be taken against '*Ca*. P. prunorum' and '*Ca*. P. pyri' to prevent their spread.

* The EPPO Secretariat previously had no data on the occurrence of '*Ca*. P. pyri' in Bulgaria.

Source: Etropolska E, Laginova M (2012) Monitoring distribution of fruit tree phytoplasmas in Bulgaria from 2007 until 2011. Abstract of a paper presented at the 22nd International Conference on virus and other graft transmissible diseases of fruit crops (Roma, 2012-06-3/8), p 22.

Additional key words: new record, detailed record **Computer codes:** PHYPMA, PHYPPR, PHYPPY, BG

2013/035 Official control against Almond witches' broom in Lebanon

Almond witches' broom is a phytoplasma disease (associated with '*Candidatus* Phytoplasma phoenicium' – formerly EPPO Alert List) which is causing severe losses in almond, peach and nectarine production in Lebanon. It is estimated that in less than a decade, it has killed more than 100 000 almond trees. This disease has also been reported from Iran. Surveys conducted in Lebanon in 2009 and 2010 showed that the disease was widespread in the country, as it was detected in 16 out of 26 districts affecting almond, peach and nectarine. Northern Lebanon was considered to be the epidemic centre from which the disease had spread to the other regions. In January 2011, it was officially announced that Almond witches' broom was a regulated pest in Lebanon and that a National plan would be implemented to manage the disease. The major stone fruit-growing regions in Bekaa (West Bekaa and Rachayya) will be given priority and Lebanese extension services will provide support in the eradication process. Growers will be encouraged to eliminate infected trees and will be provided with free seedlings to replant their orchards.

Source: Jawdah YA, Molino-Lova M, Bianco PA, Choueiri E, Fakhr R, Hajj-Hassan S, Haydar L, Al Achi R (2012) Almond witches' broom phytoplasma, officially declared as a regulated pest in Lebanon. Abstract of a paper presented at the 22nd International Conference on virus and other graft transmissible diseases of fruit crops (Roma, 2012-06-3/8), p 21.

Additional key words: control **Computer codes:** PHYPPH, LB

2013/036 A new haplotype of '*Candidatus* Liberibacter solanacearum' identified in Spain

Until recently, 3 haplotypes of '*Candidatus* Liberibacter solanacearum' (EPPO A1 List – solanaceous haplotypes) had been described:
- A and B associated with solanaceous crops (potato, tomato) in the Americas and New Zealand.
- C associated with carrots in Finland.

A 4th haplotype (D) has now been described; it is also associated with carrots but from Spain (mainland and Islas Canarias) and vectored by *Bactericera trigonica*. During these studies, the presence of haplotype C was confirmed in carrot and psyllid samples (*Trioza apicalis*) collected from Sweden and Norway. In addition, the presence of haplotype A was confirmed in potato tubers showing symptoms of Zebra chip collected from potato fields in Idaho, Oregon and Washington states (US).

Source: Nelson WR, Sengoda VG, Alfaro-Fernandez AO, Font MI, Crosslin JM, Munyaneza JE (2012) A new haplotype of '*Candidatus* Liberibacter solanacearum' identified in the Mediterranean region. *European Journal of Plant Pathology*, doi 10.1007/s10658-012-0121-3

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

2013/037 Eradication of *Blueberry scorch virus* from the Netherlands

In 2008, the presence of *Blueberry scorch virus* (*Carlavirus*, BBScV - EPPO A2 List) was detected in 1 plant of *Vaccinium corymbosum* in the Netherlands (EPPO RS 2008/204). This infected plant was immediately destroyed. Surveys were then carried out and the virus was not detected again in the Netherlands. The NPPO now considers that BBScV has been eradicated.

The pest status of *Blueberry scorch virus* in the Netherlands is officially declared as: **Absent, eradicated, confirmed by survey**.

Source: NPPO of the Netherlands (2012-10).

Additional key words: eradication **Computer codes:** BBSCV0, NL

2013/038 Eradication of *Papaya ringspot virus* from Finland

As reported in EPPO RS 2012/061, *Papaya ringspot virus* (*Potyvirus*, PRSV) was found for the first time in Finland in September 2011. PRSV was detected in glasshouse cucumber plants (*Cucumis sativus*) showing unusual symptoms. Phytosanitary measures were taken to eradicate the disease. The infected plants were destroyed and appropriate disinfection measures were taken. As a result, the virus was no longer found and the NPPO of Finland now considers that the virus has been eradicated.

The pest status of *Papaya ringspot virus* in Finland is officially declared as: **Absent, pest eradicated**.

Source: NPPO of Finland (2012-06).

Additional key words: eradication **Computer codes:** PRSV00, FI

2013/039 Melon yellow spot virus: an emerging disease of cucurbits in Asia

Melon yellow spot virus (*Tospovirus*, MYSV) was first identified in 1992 in Japan causing spotted wilt symptoms and a severe chlorosis on melon crops (EPPO RS 2000/158). It was also found that MYSV is transmitted by *Thrips palmi* (EPPO A1 List) in a persistent manner. In addition to melons (*Cucumis melo*), diseases caused by MYSV have been observed on cucumbers (*Cucumis sativus*), watermelon (*Citrullus lanatus*) and balsam pear (*Momordica charantia*). MYSV has also been detected in several weed species commonly occurring around cucumber greenhouses (e.g. *Acalypha australis, Capsella bursa-pastoris, Conyza canadensis, Conyza sumatrensis, Gnaphalium purpureum, Lamium amplexicaule, Oxalis corniculata, Sonchus oleraceus, Stellaria media, Stellaria neglecta, Veronica persica*). At present, MYSV is considered to be one of the most serious threats to cucumber production in Japan. When infection occurs early in the season, yield losses of 30 to 60% have been observed. In addition to Japan, MYSV has been reported during the last decade on cucurbitaceous crops in Taiwan (2006), Thailand (2008), and China (2009, Hainan and Guangxi provinces).

Source:

Chao CH, Chen TC, Kang YC, Li JT, Huang LH, Yeh SD (2010) Characterization of Melon yellow spot virus infecting cucumber (*Cucumis sativus* L.) in Taiwan. *Plant Pathology Bulletin* **19**, 41-52.

Chen TC, Lu, YY, Cheng YH, Chang CA, Yeh SD (2008) Melon yellow spot virus in watermelon: a first record from Taiwan. *Plant Pathology* **57**, p 765.

Chiemsombat P, Gajanandana O, Warin N, Hongprayoon R, Bhunchoth A, Pongsapich, P (2008) Biological and molecular characterization of tospoviruses in Thailand. *Archives of Virology* **153**(3), 571-577 (abst.).

Gu QS, Wu HJ, Chen HY, Zhang XJ, Wu MZ, Wang DM, Peng B, KongXY, Liu JT (2012) Melon yellow spot virus identified in China for the first time. *New Disease Reports* **25**, 7. http://www.ndrs.org.uk/article.php?id=025007

Kato K, Hanada K, Kameya-Iwaki M (2000) Melon yellow spot virus: a distinct species of the genus Tospovirus isolated from melon. *Phytopathology* **90**(4), 422-426.

Peng JC, Yeh SD, Huang LH, Li HH, Cheng YF, Chen TC (2011) Emerging threat of thrips-borne Melon yellow spot virus on melon and watermelon in Taiwan. *European Journal of Plant Pathology* **130**(2), 205-214.

Takeuchi S, Shimomoto Y, Ishikawa K (2009) First report of Melon yellow spot virus infecting balsam pear (*Momordica charantia* L.) in Japan. *Journal of General Plant Pathology* **75**(2), 154-156.

Yamasaki S, Okazaki S, Okuda M (2012) Temporal and spatial dispersal of Melon yellow spot virus in cucumber greenhouses and evaluation of weeds as infection sources. *European Journal of Plant Pathology* **132**(2), 139-177.

Additional key words: new record **Computer codes:** MYSVV0, CN, JP, TH, TW

2013/040 Surveys on *Dothistroma* spp. in France

In France, Dothistroma needle blight has been emerging over the last 15 years. Surveys were carried out in pine forest stands from 2007 to 2010 to better understand the distribution of the two pathogens that are associated with the disease: *Dothistroma septosporum* (teleomorph: *Mycosphaerella pini* - EU Annexes) and *D. pini* (teleomorph unknown), and to investigate whether the emergence of Dothistroma needle blight could be explained by a recent introduction of *D. pini*. Out of the 216 studied stands, *D. septosporum* and *D. pini* were detected in 133 and 123 stands, respectively. On 40 stands, both species were co-existing. Most infected samples were collected from *P. nigra* subsp. *laricio*, although some had been collected from *P. nigra* subsp. *austriaca* (9 samples), *P.*

pinaster (4), and *P. sylvestris* (5). *D. septosporum* was detected in all pine species listed above, whereas *D. pini* was found only on *Pinus nigra* (subsp. *laricio* and *austriaca*). Results also showed that *D. septosporum* was evenly distributed across France, except in the Mediterranean area (rarely found along the Mediterranean Basin and absent from Corsica). *D. pini* showed a more restricted distribution, being very infrequent in Northern and Eastern France, as well as in the mountainous areas of the Massif Central and the Pyrénées. However, *D. pini* was widespread in Southern France. In addition to this field study, herbarium specimens were examined. Most of the specimens studied (21) were found to be infected by *D. septosporum. D. pini* was found in 2 specimens: 1 collected in 1907 at Tourbière du Beillard (Vosges), and 1 collected in 1965 at the Arboretum des Barres (Loiret). These rather old records suggest that the emergence of Dothistroma needle blight cannot be explained by a recent arrival of *D. pini,* but would probably be better explained by climate changes.

Source: Fabre B, Ioos R, Piou D, Marçais B (2012) Is the emergence of *Dothistroma* needle blight of pine in France caused by the cryptic species *Dothistroma pini*? *Phytopathology* **102**(1), 47-54.

Additional key words: detailed record **Computer codes:** DOTSPI, SCIRPI, FR

2013/041 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. Information sent by NPPOs has also been included here. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

- **New records**

Ips amitinus (Coleoptera: Scolytidae – EU Annexes) is reported for the first time from Sweden. It was detected in the northern part of the country. The NPPO recalled that Sweden is not an EU protected zone for this organism (NPPO of Sweden, 2012). **Present, northern part.**

Parasaissetia nigra (Hemiptera: Coccidae - EU annexes) is reported for the first time from Mali. Specimens were collected on *Plumeria* sp. (Muniappan *et al*., 2012). **Present, no details.**

Sphacelotheca reiliana (head smut) was detected for the first time in the Netherlands in October 2012 in several maize fields in the municipality of Oss, near the river Maas (province of Noord-Brabant). The source of the infestation is not known, but natural spread from neighbouring countries is suspected. Phytosanitary measures have not been taken because the pathogen has a wide distribution in Europe. The pest status of *Sphacelotheca reiliana* in the Netherlands is officially declared as: **Present, localised – not actionable** (NPPO of the Netherlands, 2012)**.**

In September 2008, symptoms resembling those of *Tomato torrado virus* (*Torradovirus*, ToTV – EPPO Alert List) were observed on tomato plants (*Solanum lycopersicum*) grown in plastic houses near Villa de Leyva (northeast of Bogota) in Colombia. Laboratory analysis (serological, molecular and biological tests) confirmed the presence of ToTV. This is the

first time that ToTV is reported from Colombia (Verbeek and Dullemans, 2012). **Present, first found in 2008 near Villa de Leyva.**

The NPPO of Latvia has recently informed the EPPO Secretariat of the first record of *Ophiostoma ulmi* on its territory. *O. ulmi* was found on wilting elm trees (*Ulmus* spp.) in the towns of Tukums and Salaspils (region of Riga). One case was reported by a member of the public and the other was found during the annual official survey of the botanical garden. The identity of the pathogen was officially confirmed on 2012-07-10.
The pest status of *Ophiostoma ulmi* in Latvia is officially declared as: **Present** (NPPO of Latvia, 2012).

Stephanitis pyrioides (Hemiptera: Tingidae – formerly EPPO Alert List) occurs in Slovenia. It was first found in 2009 in Nova Gorica on azaleas (*Rhododendron japonicum*) (Gogala and Seljak, 2010). **Present, first found in 2009 in Nova Gorica.**

- **Detailed records**

In the United Kingdom, the eradication campaign against *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 List) is continuing in the Paddock Wood area (EPPO RS 2012/069). As of July 2012, delimiting surveys have shown that 67 trees were infested and more than 250 live larvae have been found inside these trees. All infested trees are being destroyed and many trees have been felled in a buffer zone around the findings. Members of the public are also invited to look out for beetles and signs of infestation (IPPC and Forestry Commission, 2012).

In 2011, 80 samples of vegetables, ornamentals and weeds collected from Montenegro were tested for the presence of pospiviroids. During this study, the presence of *Citrus exocortis viroid* (CEVd) was detected in one sample of *Verbena* sp. This is the first time that CEVd is detected on *Verbena* in Montenegro (Virščeк Marn *et al*., 2012).

In the USA, *Drosophila suzukii* (Diptera: Drosophilidae – EPPO A2 List) has been detected in Illinois and nearby states including Iowa, Wisconsin and Minnesota (Plant Health Progress, 2012).

During a survey carried out in Southwestern Germany *Iris yellow spot virus* (*Tospovirus* – formerly EPPO Alert List) was detected in numerous commercial onion and leek fields of the Rhine valley area. No yield losses have been observed in bulb onions (*Allium cepa*) or leek (*A. porrum*). It is also noted that a small number of lesions was probably sufficient to reduce the quality of bunching onions (*A. fistulosum*), as affected leaves have to be removed before commercialization. However, economic data was lacking to evaluate this potential commercial impact (Krauthausen *et al*., 2012).

Meloidogyne enterolobii (EPPO A2 List) occurs in Liaoning, China (Niu *et al*., 2012).

Paysandisia archon (Lepidoptera: Castniidae – EPPO A2 List) has been detected in Aquitaine region (Gironde), France. The pest was detected on 1 *Trachycarpus fortunei* in a private garden (Anon., 2012).

- **New host plants**

The causal agent of pitch canker, *Gibberella circinata* (EPPO A2 List), was not known to occur on hosts other than *Pinus* species. However, studies conducted in California (US) during July and August 2011 showed that *G. circinata* could be recovered from several symptomless Poaceae collected near naturally infected pine stands (i.e. *Pinus radiata* on the Monterey Peninsula, and *P. muricata* at Point Reyes National Seashore). *G. circinata* was recovered from *Holcus lanatus* and *Festuca arundinacea*. These isolates were then shown to be pathogenic to *Pinus radiata* in artificial inoculation tests. Further studies are underway to better characterize the host range of *G. circinata* and assess the possible role of symptomless Poaceae in the epidemiology of pine pitch canker (Swett & Gordon, 2012).

In Iran (Fars province), *Spiroplasma citri* (EU Annexes) has been found in association with a disease of safflower (*Carthamus tinctorius*) characterized by stunting, yellowing, phloem discoloration and necrosis (Khanchezar *et al*., 2012).

In Turkey, *Colletrotricum acutatum* (anamorph of *Glomerella acutata*) was detected on hazelnut (*Corylus avellana*) during surveys conducted in 2008-2009. Necrotic, sunken lesions and rot were observed on leaves, fruit clusters and pedicels of hazelnut trees growing near Ordu, Giresun and Trabzon (Black Sea region). The disease caused significant cluster drop in some orchards on hazelnut cultivars 'Tombul', 'Sivri' and 'Palaz'. This is the first time that *C. acutatum* is reported to be a pathogen of hazelnut (Sezer & Dolar, 2012).

In July 2010, numerous adults and immature stages of *Diaphorina citri* (Hemiptera: Psyllidae – EPPO A1 List) were found infesting a fig tree (*Ficus carica*) in a private garden in Welasco, Texas (US). Glasshouse experiments confirmed that *D. citri* was able to complete its life cycle on potted fig trees. Although *D. citri* breeds mainly on a narrow host range within the Rutaceae family, it seems that some non-preferred plants outside this family might be acceptable alternatives (Thomas & de León, 2011).

In Australia, symptoms of black scab were observed in many jojoba (*Simmondsia chinensis* - Buxaceae) plantations in New South Wales and Southern Queensland, in 2005 and 2006. This new disease was shown to be caused by *Elsinoe australis* (EU Annexes), a pathogen which is normally associated with citrus (Rutaceae). Although molecular analysis of the pathogen indicated that it is closely related to the *C. natsudaidai* and *C. sinensis* pathotypes of *E. australis*, glasshouse and laboratory experiments demonstrated that it is not pathogenic to a range of citrus cultivars grown in Australia. It is therefore suggested that the isolates from *S. chinensis* represent a new pathotype of *E. australis* (Ash *et al*., 2012).

- **New species**

'Candidatus Liberibacter europaeus' sp. nov. was recently found in pear (*Pyrus communis*) trees without causing symptoms in Northwestern Italy (Piemonte and Valle d'Aosta regions). It is associated with and transmitted by the psyllid *Cacopsylla pyri*. However, 'Ca. L. europaeus' apparently behaves as an endophyte rather than a pathogen (Raddadi *et al*., 2010). In further studies conducted in Italy (in the same regions), Israel and Hungary, '*Ca*. L. europaeus' was detected for the first time in Hungary (Pest county) but not in Israel. The bacterium was also detected in other plant species (*Crataegus monogyna, Malus domestica, Prunus spinosa*) and other *Cacopsylla* species (*C. affinis, C. ambigua, C.*

breviantennata, C. melanoneura, C. nigrita, C. peregrina, C. pyricola, C. pyrisuga) (Camerota *et al*., 2012).

Two new species of *Gymnosporangium* have been recently described from the Republic of Korea:
- *Gymnosporangium monticola* sp. nov. was found in 4 localities on *Sorbus alnifolia* (aecial host) and *Juniperus rigida* (telial host).
- *Gymnosporangium unicorne* sp. nov. was found in several localities in the Chungnam and Seoul provinces on *Juniperus chinensis* var. *globosa* and *Juniperus chinensis* var. *argentii* (telial hosts). The aecial stage was not observed in nature, but several rosaceous hosts were inoculated with teliospores and could produce the aecial stage (*Crataegus pinnatifida, Chaenomeles speciosa, Pseudocydonia sinensis, Pyrus pyrifolia* var. *culta, P. ussuriensis*) (Yun *et al*., 2009).

- **Denied records**

The NPPO of the Netherlands informed the EPPO Secretariat that *Cowpea aphid-borne mosaic virus* is absent from the Netherlands. The source of an earlier record (Bos, 1970) which appears in the EPPO/CABI distribution map no. 1075 (2010) concerned in fact an isolate obtained from Italy for research purposes (NPPO, 2012).

Source:

Anonymous (2012) Phyto région. *Paysandisia* signalé. *Phytoma - La Défense des Végétaux* no. 651, p 7.

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INTERNET

- IPPC website. Official Pest Reports – United Kingdom. First UK Asian longhorn beetle outbreak (update of 2012-07-18). https://www.ippc.int/index.php
- Forestry Commission, UK (2012-07-18) Public urged to look out for exotic beetle pest of trees. http://www.forestry.gov.uk/newsrele.nsf/AllByUNID/DBF28E04AB49081280257A3F004C8CD6
- Plant Health Progress. New pest found in fruit crops (dated 2012-10-26). http://www.plantmanagementnetwork.org/pub/php/news/2012/NewPest/

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mediated isothermal amplification (LAP) assays based on 5S rDNA-IGS2 regions for detecting *Meloidogyne enterolobii*. *Plant Pathology* **61**(4), 809-819
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Raddadi N, Gonella E, Camerota C, Pizzinat A, Tedeschi R, Crotti E, Mandrioli M, Bianco PA, Daffonchio D, Alma A (2010) '*Candidatus* Liberibacter europaeus' sp. nov. that is associated with and transmitted by the psyllid *Cacopsylla pyri* apparently behaves as an endophyte rather than a pathogen. *Environmental Microbiology* **13**(2), 414–426.
Sezer A, Dolar FS (2012) *Colletotrichum acutatum*, a new pathogen of hazelnut. *Journal of Phytopathology* **160**(7/8), 428-430.
Swett CL, Gordon TR (2012) First report of grass species (Poaceae) as naturally occurring hosts of the pine pathogen *Gibberella circinata*. *Plant Disease* **96**(6), p 908.
Thomas DB, de León JH (2011) Is the old world fig, *Ficus carica* L. (Moraceae), an alternative host for the Asian psyllid, *Diaphorina citri* (Kuwayama) (Homoptera: Psyllidae)? *Florida Entomologist* **94**(4), 1081-1083.
Verbeek M, Dullemans AM (2012) First report of *Tomato torrado virus* infecting tomato in Colombia. *Plant Disease* **96**(4), p 592.
Virščeк Marn M, Mavrič Pleško I, Zindović J (2012) First report of *Citrus exocortis viroid* in a *Verbena* sp. in Montenegro. *Plant Disease* **96**(4), p 593.

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

Computer codes: CERAUL, CEVD00, DIAACI, DROSSU, ELSIAY, GIBBCI, GYMNMO, GYMNUN, IPSXAM, IYSV00, MELGMY, PAYSAR, SAISSNI, SPIRCI, TOTV00, AU, CN, CO, DE, FR, IR, KR, LV, ME, ML, NL, SE, US

2013/042 EPPO Standards on efficacy evaluation of plant protection products: update of the web-based database

The EPPO Standards for the efficacy evaluation of plant protection products (PP1) describe the conduct of trials carried out to assess the efficacy of plant protection products against specific pests. They are addressed to all institutions, official registration authorities, public institutes or private firms carrying out such trials. Since February 2009 the whole series of EPPO PP1 Standards (more than 260 standards covering a wide range of crops and pests) is available in an online database. A new interface has been released in July 2012 to facilitate access to PP1 Standards. All Standards can be easily retrieved as PDF files by using a simple search tool.

The database has been updated with new and revised standards adopted by EPPO Council in September 2012. It also includes consolidated versions incorporating changes described in the errata published for PP1/50(3) and PP1/158(3).

Specific standards

- *Prays oleae* (revision PP 1/130)
- *Bactrocera oleae* – canopy spray (revision PP 1/108)
- *Bactrocera oleae* – bait application (PP 1/280) (new)
- Foliage diseases of *Asparagus officinalis* (PP 1/279) (new)
- Foliar and ear diseases on cereals (revision PP 1/26)
- Seed treatments against seedling diseases (revision PP 1/125)
- Weeds in grapevine (revision PP 1/64)
- Regulation of growth in grapevine (except sucker control) (revision PP 1/171)

- Control of suckers in hop (revision PP 1/162)
- Retardation of growth in grass (revision PP 1/146)

General Standards

- Principles of efficacy evaluation for microbial plant protection products (PP 1/276) (new)
- Insecticide co-formulated mixtures (PP 1/277) (new)
- Principles of zonal data production and evaluation (PP 1/278) (new)
- Dose expression for plant protection products (revision PP 1/239)
- Introduction to the efficacy evaluation of plant protection products (revision PP 1/223)
- Number of efficacy trials (revision PP 1/226)
- Minimum effective dose (revision PP 1/225)
- Principles of acceptable efficacy (revision PP 1/214)
- Design and analysis of efficacy evaluation trials (revision PP 1/152)
- Conduct and reporting of efficacy evaluation trials (revision PP 1/181)
- Resistance risk analysis (revision PP1/213)

All general Standards (e.g. design, conduct, reporting and analysis of trials, phytotoxicity, effects on succeeding crops, analysis of resistance risk, minor uses) can be accessed free of charge. Access to specific Standards (e.g. aphids on potato, weeds in cereals) is provided for an annual fee (400 EUR for single user – 1000 EUR for multiple users). Subscriptions should be made directly online via the database.
Direct access to the database: http://pp1.eppo.int

In addition, 4 new extrapolation tables have been adopted to accompany EPPO Standard PP 1/257 *Efficacy and crop safety extrapolations for minor uses.* All extrapolation tables are on the EPPO website: http://www.eppo.int/PPPRODUCTS/minor_uses/minor_uses.htm

Source: EPPO Secretariat, 2013-01.
http://www.eppo.org/DATABASES/pp1/pp1.htm

2013/043 Code of conduct on horticulture and invasive alien plants translated into Italian

The EPPO/Council of Europe Code of conduct on horticulture and invasive alien plants has been translated into Italian. The translation was made by the botanist Michela Marignani (University of Cagliari), and the publishing was undertaken by the Italian Ministry for the Environment and by the Italian Botanical Society.

Source: Heywood V & Brunel S (2008) Florovivaismo, verde ornamentale e specie esotiche invasive: Codice di comportamento. *Informatore Botanica Italiano. Bolletino della Società Botanica Italiana onlus* **44**(4), 1-47.
Contact: Giuseppe Brundu, Univesità di Sassari, DIPNET, email: gbrundu@tin.it

Additional key words: Invasive alien plants, Code of conduct **Computer codes:** IT

2013/044 Invasive alien plants in Israel

A new book on invasive alien plants in Israel by Jean-Marc Dufour-Dror has been published by the Ministry of Environmental Protection and the Israel Nature and Parks Authority. This book provides a full list of the 166 alien plants established in Israel, indicating the habitats and the climatic area in which they occur. Among those, 50 have been identified as representing a threat in Israel. For each of these 50 species a datasheet is provided and includes a description of the plant, pictures, history of introduction, biology and ecology, distribution in Israel and effects on native species. The EPPO Secretariat has summarized below the information that is provided for these 50 invasive alien plants about their origin, presence in the EPPO region, habitat and their situation in Israel.

Species	Origin	Presence in the EPPO region*	Habitat, situation in Israel
Acacia cyclops (Fabaceae)	SW-Aus.	CY, DZ, ES (incl. Canarias), IL, MA, PT (incl. Azores), TN	Mediterranean area; natural dry habitat; rare in IL
Acacia karroo (Fabaceae)	Trop. Af.	CY, ES, FR (incl. Corse), IL, IT (incl. Sardinia, Sicilia), MA, PT, TR	Mediterranean area; natural dry and disturbed dry habitats; common in IL
Acacia paradoxa (Fabaceae)	SE-Aus.	IL	Mediterranean area; disturbed rare habitats; very rare in IL
Acacia salicina (Fabaceae)	E-Aus.	IL	Desert area; natural dry and disturbed dry habitats and urban environments; very common in IL
Acacia saligna (Fabaceae)	SW-Aus.	CY, DZ, ES (incl. Baleares, Canarias), FR (incl. Corse), GR, IL, IT (incl. Sardinia, Sicilia), JO, MA, PT (incl. Azores), TN, TR	Mediterranean and semi-arid areas; natural dry, natural moist, disturbed dry and disturbed or artificial moist habitats; very common in IL
Acacia victoriae (Fabaceae)	Aus.	IL	Mediterranean and semi-arid areas; disturbed dry habitats; rare in IL
Ailanthus altissima (Simaroubaceae, EPPO List of IAP)	As.	Widespread	Mediterranean area; natural dry and disturbed dry habitats and urban environments; common in IL

Species	Origin	Presence in the EPPO region*	Habitat, situation in Israel
Ambrosia confertiflora (Asteraceae)	C-Am.	IL	Mediterranean area; natural moist and disturbed dry habitats; very rare in IL
Atriplex holocarpa (Amaranthaceae)	Aus.	(Casual in BE), IL	Desert area; natural dry and disturbed dry habitats; common in IL
Azolla filiculoides (Salviniaceae, EPPO Observation List of IAP)	Am.	Widespread	Mediterranean area; natural moist and disturbed or artificial moist habitats; very rare in IL
Carpobrotus edulis (Aizoaceae, EPPO List of IAP)	S-Af.	Widespread	Mediterranean area; natural dry habitat and urban environments; common in IL
Conyza bonariensis (Asteraceae)	Trop. S-Am.	Widespread	Mediterranean, semi-arid and desert areas; natural moist, disturbed dry, disturbed or artificial moist habitats and urban environments; very common in IL
Conyza canadensis (Asteraceae)	N-Am.	Widespread	Mediterranean, semi-arid and desert areas; natural moist, disturbed dry, disturbed or artificial moist habitats and urban environments; very common in IL
Conyza sumatrensis (Asteraceae)	Trop. S-Am.	Widespread	Mediterranean, semi-arid and desert areas; natural moist, disturbed dry, disturbed or artificial moist habitats; rare in IL
Cyperus flabelliformis (Cyperaceae)	Trop. Af.	ES (incl. Baleares, Canarias), FR (Corse), GR, IL, IT (incl. Sicilia), PT (incl. Azores, Madeira)	Mediterranean, semi-arid areas; natural moist habitats; very rare in IL
Cyperus odoratus (Cyperaceae)	Pan-Trop.	IL, RO	Mediterranean area; natural moist habitat; rare in IL
Datura stramonium (Solanaceae)	S-Am.	Widespread	Mediterranean, semi-arid and desert areas; disturbed dry, disturbed or artificial moist habitats and urban environments; very common in IL
Dodonaea viscosa (Sapindaceae)	Trop.	CY, IL	Mediterranean area; natural dry, disturbed dry habitats; rare in IL
Eichhornia crassipes (Pontederiaceae, EPPO A2 List)	S-Am.	ES, FR (Corse), IL, IT (Sardinia), JO, PT	Mediterranean area; natural moist and disturbed or artificial moist habitats; very rare in IL
Eucalyptus camaldulensis (Myrtaceae)	Aus.	AL, CY, DZ, ES (incl. Canarias), GR, IL, IT (incl. Sicilia), MA, MT PT, TN, TR	Mediterranean, semi-arid areas; natural dry, natural moist, disturbed or artificial moist habitats; rare in IL
Ficus benghalensis (Moraceae)	Ind.	IL	Semi-arid area; natural moist habitats; very rare in IL
Ficus microcarpa (Moraceae)	Trop. Asia, Aus.	IL, IT (Sicilia)	Semi-arid area; natural moist habitats; very rare in IL
Ficus religiosa (Moraceae)	Trop. As.	IIL	Semi-arid area; natural moist habitats; very rare in IL
Heterotheca subaxillaris (Asteraceae)	E N-Am	/	Mediterranean area; natural dry, disturbed dry habitats; common in IL
Ipomoea aquatica (Convolvulaceae)	SE As.	IL, TN, TR	Mediterranean area; natural moist habitat; very rare in IL

Species	Origin	Presence in the EPPO region*	Habitat, situation in Israel
Lantana camara (Verbenaceae)	Trop. S-Am.	ES (incl. Baleares, Canarias), FR (Corse), IL, IT (incl. Sicilia), PT (Azores, Madeira), TR	Mediterranean, desert areas; Natural dry, disturbed dry habitats; common in IL
Melia azedarach (Meliaceae)	Aus., Trop. As.	AL, CY, ES (incl. Azores), FR, GR, HR, IL, IT (incl. Sicilia), JO, PT (Madeira), MA, MT, TN, TR	Mediterranean area; disturbed dry habitats and urban environment; common in IL
Myriophyllum aquaticum (Haloragaceae, EPPO List of IAP)	S-Am.	Widespread	Mediterranean area; natural moist and disturbed or artificial moist habitats; very rare in IL
Nicotiana glauca (Solanaceae)	S-Am.	Widespread	Mediterranean, desert areas; disturbed dry, disturbed or artificial moist habitats, urban environment; very common in IL
Oenothera drummondii (Onagraceae)	Am.	ES, IL, MA	Mediterranean area; natural dry and disturbed dry habitats; common in IL
Oxalis pes-caprae (Oxalidaceae, EPPO List of IAP)	S-Af.	Widespread	Mediterranean area; disturbed dry, disturbed or artificial moist habitats, urban environment; common in IL
Parkinsonia aculeata (Fabaceae)	Central & Trop. S-Am.	CY, DZ, ES (Incl. Baleares, Canarias), GR, IL, IT (incl. Sicilia), MA	Mediterranean, semi-arid areas; natural moist, disturbed dry and disturbed or artificial moist habitats; common in IL
Paspalum distichum (Poaceae, EPPO List of IAP)	Am.	Widespread	Mediterranean area; natural moist and disturbed or artificial moist habitats; rare in IL
Pennisetum clandestinum (Poaceae)	E Trop. Af.	CY, DZ, ES (incl. Canarias), FR (Corse), GR (Crete), IL, MA, PT (Madeira), TN	Mediterranean, semi-arid areas; natural moist and disturbed or artificial moist habitats; rare in IL
Phytolacca americana (Phytolaccaceae)	N-Am.	Widespread	Mediterranean area; natural moist and disturbed or artificial moist habitats; rare in IL
Pinus brutia (Pinaceae)	Med, Temp. As.	Native in a part of the region	Mediterranean area; natural dry, disturbed dry habitats; common in IL
Pistia stratiotes (Araceae, EPPO List of IAP)	Trop. S-Am.	ES (incl. Azores, Canarias), HU, IL, IT, PT	Mediterranean area; natural moist and disturbed or artificial moist habitats; very rare in IL
Populus alba (Salicaceae)	Eur. Temp. As.	Widespread	Mediterranean area; natural moist habitats; very rare in IL
Prosopis juliflora (Fabaceae)	C. Am.	DZ, IL, JO, MA, TN	Semi-arid, desert areas; natural dry, disturbed dry habitats; very rare in IL
Ricinus communis (Euphorbiaceae)	Trop. Af.	Widespread	Mediterranean, semi-arid, desert areas; natural moist, disturbed dry and disturbed or artificial moist habitats; common in IL
Robinia pseudo-acacia (Fabaceae)	Temp. N-Am.	Widespread	Mediterranean area; disturbed dry habitats; common in IL
Salvinia molesta (Salviniaceae, EPPO List of IAP)	Trop. S-Am.	FR (Corse), IL, IT	Mediterranean area; natural moist habitats; very rare in IL
Schinus molle (Anacardiaceae)	Trop. S-Am.	ES (incl. Canarias), IL, IT, MT, PT (Madeira)	Mediterranean area; natural dry and disturbed dry habitats; rare in IL

Species	Origin	Presence in the EPPO region*	Habitat, situation in Israel
Schinus terebinthifolius (Anacardiaceae)	Trop. S-Am.	ES, IL, MT, PT	Mediterranean, semi-arid, desert areas; natural moist and disturbed dry habitats; rare in IL
Sesbania sesban (Fabaceae)	Trop. E Af.	IL	Mediterranean area; natural moist and disturbed or artificial moist habitats; very rare in IL
Solanum elaeagnifolium (Solanaceae, EPPO A2 List)	S-Am.	AL, CS, CY, ES, FR, GR, HR, IL, IT (incl. Sardinia, Sicilia), MA, TN, TR	Mediterranean, semi-arid, desert areas; disturbed dry habitats; common in IL
Verbesina encelioides (Asteraceae, EPPO Observation list of IAP)	N-Am.	ES, GB, IL	Mediterranean, semi-arid, desert areas; natural dry and disturbed dry habitats; common in IL
Washingtonia robusta (Arecaceae)	N-Am.	IL	Mediterranean area; natural moist and disturbed dry habitats, urban environment; common in IL
Xanthium strumarium (Asteraceae)	N-Am.	Widespread	Mediterranean, semi-arid, desert areas; natural moist, disturbed dry and disturbed or artificial moist habitats; common in IL

* The presence of the species in the EPPO region has been checked against the DAISIE Database and the CABI Invasive Species Compendium and may not be exhaustive.

Some of these species are of limited distribution at the scale of the EPPO region, and may represent emerging invasive alien plants, in particular in the Mediterranean Basin:

- *Acacia* spp. (Fabaceae) are recognized to be a major threat to Mediterranean countries. *A. paradoxa, A. salicina* and *A. victoriae* are absent from the rest of the EPPO region and form dense stands displacing native species in Israel.
- *Ambrosia confertifolia* (Asteraceae) is absent from the rest of the EPPO region. In Israel, it replaces the native vegetation, changes the ecosystem and is also a problem in cultivated fields and citrus groves. The species is recorded as a severe allergen according to the Pollen library.
- *Heterotheca subaxillaris* (Asteraceae) is absent from the rest of the EPPO region. It invades coastal sands, outcompeting native species and transforming the habitat.
- *Parkinsonia aculeata* (Fabaceae) is reported as occurring in Algeria, Cyprus, Greece, Italy, Morocco and Spain. In Israel it forms dense stands that displace native species.
- *Pennisetum clandestinum* (Poaceae) is reported in Algeria, Cyprus, Spain, Corse (France), Crete (Greece), Morocco, Madeira (Portugal) and Tunisia. In Israel it forms dense mats displacing native plants.
- *Prosopis juliflora* (Fabaceae) is recorded in Algeria, Jordan, Morocco and Tunisia. In Israel, the species is reported to significantly reduce the diversity of plants and birds, and displays allelopathic effects.

Furthermore, a few alien species in Israel not listed among those 50 species should be followed with care:

- *Parthenium hysterophorus* (Asteraceae, EPPO Alert list) is only occurring in a palm date plantation in Israel and is a major noxious weed in Africa, Australia and India.
- *Maireana brevifolia* (Amaranthaceae) is recorded in Israel as well as in Islas Canarias (Spain) where it is regulated as invasive.

Source: CABI Invasive Species Compendium.
http://www.cabi.org/isc/

DAISIE Database.
http://www.europe-aliens.org/default.do

Dufour-Dror JM (2012) Alien Invasive Plants in Israel. The Middle East Nature Conservation Promotion Association. 213 pp

Pollen library website – Weak-Leaf Burr-Ragweed (Ambrosia confertiflora).
http://www.pollenlibrary.com/Specie/Ambrosia+confertiflora/

Additional key words: invasive alien plants

Computer codes: ACAAR, ACACC, ACAKA, ACASA, ACASC, ACAVI, AILAL, AZOFI, CBSED, CYPFE, DATST, DODVI, EICCR, EUCCM, ERISU, FIUBG, FIUMI, FIURE, FRSCO, HTTSU, IPOAQ, SCITE, LANCA, MEIAZ, MRNBR, MYPBR, NIOGL, OEODR, OXAPC, PESCL, PHTAM, PIUBR, POPAL, PRCJU, PTNHY, RIICO, SAVMO, SCIMO, SEBSE, VEEEN, WATRO, XANST

2013/045 A new regulation on invasive alien plants in Poland

A decree of the Polish Ministry of Environment on invasive alien species was released in September 2011 and came into force in September 2012. It imposes restrictions concerning 52 invasive alien species (16 plants and 36 animals). The aim of the new regulation is to reduce the risk of introduction of the most invasive alien species that are either absent, or still restricted in their range in Poland.
Official permission should be obtained from the General Director for Environmental Protection to import, keep, breed or sell these species. Breaking the law is subject to a fine or jail.
The regulated alien plant species are: *Ailanthus altissima* (Simaroubaceae, EPPO List of Invasive Alien Plants), *Asclepias curassavica* (Asclepiadoideae), *Azolla filiculoides* (Azolaceae, EPPO Observation List of Invasive Alien Plants), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Echinocystis lobata* (Cucurbitaceae), *Elodea nuttalli* (Hydrocharitaceae, EPPO List of IAP), *Fallopia x bohemica* (Polygonaceae, EPPO List of IAP), *Fallopia japonica* (Polygonaceae, EPPO List of IAP), *Fallopia sachalinensis* (Polygonaceae, EPPO List of IAP), *Heracleum mantegazzianum* (Apiaceae, EPPO List of IAP), *Heracleum sosnowskyi* (Apiaceae, EPPO A2 List), *Impatiens capensis* (Balsaminaceae), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP), *Lysichiton americanus* (Araceae, EPPO Observation List of IAP), *Spartina anglica* (Poaceae) and *Ulex europaeus* (Fabaceae).

Source: Polish Official Journal n°210, article 2011.1260, list of invasive alien plants and animal that may pose a threat for native species and habitats [in Polish]
http://isap.sejm.gov.pl/DetailsServlet?id=WDU20112101260&min=1

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Additional key words: invasive alien plants, regulation

Computer codes: AILAL, ASCCU, AZOFI, CSBHE, ECNLO, ELDNU, HERMZ, HERSO, IPACA, IPAGL, LYSAM, POLCU, REYBO, REYSA, SPTAN, ULEEU, PL

2013/046 *Gunnera tinctoria*: addition to the EPPO Alert List

Why

Gunnera tinctoria (Gunneraceae) is a large herbaceous plant originating from South America. It is used as an ornamental waterside plant. Two of its English common names are 'Chilean rhubarb' or 'giant rhubarb'. It reproduces vigorously by seeds which are spread by birds and water. It also reproduces vegetatively by rhizomes. The plant smothers other plants in riparian habitats and forests, and is considered as invasive in New Zealand and in the British Isles. In the EPPO region, it is only recorded in France, Ireland, the United Kingdom and Azores (Portugal). As *G. tinctoria* still has a limited distribution in the EPPO region and presents an invasive behaviour in areas where it has been introduced, the EPPO Secretariat decided to add it to the EPPO Alert List.

Geographic distribution

EPPO Region: France (Côtes d'Armor), Ireland, Portugal (Azores: São Miguel Island), the United Kingdom (England, Scotland, Wales).
South America (native): Argentina, Bolivia, Colombia, Chile, Ecuador, Peru, Venezuela.
North America: USA (California).
Oceania: New Zealand.

Note: In its native range, *G. tinctoria* occurs predominantly in the Andean region of Chile and Colombia. In its native range, this plant is a delicacy associated with Mapuche Indian customs, the young petioles are eaten raw with salt and chili. The species is present in Spain but not naturalized. Although the species has been mentioned as native to Brazil and recorded in Australia, no records could be found to validate these occurrences.

Morphology

G. tinctoria is a large, clump forming, herbaceous plant growing up to 2 m tall and resembling rhubarb. It has horizontal rhizomes which can grow up to 1.5-2 m for mature plants. Stems are spiny, leaves can be up to 2 m in diameter with 5 to 7 lobes, very coriaceous and hairy underneath, in particular on the veins. Flowers are borne on a panicle 1 m long, rising from the base of the leaves. Flowers resemble elongated broccoli and there can be 3 or 4 per plant. Individual flowers are green, sessile, densely packed, apetalous and only 1 mm long. A plant can produce hundreds of drupes which are reddish, oblong, 1.5 to 2 mm long, each containing a single ovoid seed of approximately 1.2 mm by 1.5 mm and weighing about 4 mg.

In which habitats

The plant is found on coastal cliffs, riparian zones, forests and wetlands as well as in areas that have been transformed by human activity such as former agricultural fields, quarries and road sides. According to the Corine Land Cover nomenclature, the following habitats are invaded: mixed forests, broad-leaved forests; inland wetlands (marshes, peat bogs); coastal wetlands; banks of continental water, riverbanks/canalsides (dry river beds); road and rail networks and associated land; other artificial surfaces (wastelands); green urban areas, including parks, gardens, sport and leisure facilities.

Biology and ecology

G. tinctoria is a geophyte that grows in temperate areas with high rainfall. It can occupy a variety of habitats but prefers moist soils (it establishes less often on well drained sandy or stony soils), and tolerates seasonally water logged wet soils. It also tolerates salt spray and can grow at the high tide mark in coastal areas. The plant also forms a symbiosis with nitrogen fixing Cyanobacteria (genus *Nostoc*) present inside its cells.

The plant is perennial but it is deciduous or semi-deciduous under harsh winter conditions. During winter, it may die back but new leaves are produced in spring. Growth starts in early spring (e.g. in March in Ireland), prior to the emergence of native species. Under cold conditions, the plant may take 3 years to reach its maximum height, and flowers only after 3 to 5 years. The plant blooms early in spring and flowers last at least for a month. It is wind pollinated, although hymenopterans, in particular bees, are reported to pollinate the plant in New Zealand. Fruits mature in late summer-early autumn. A single plant can produce 250 000 seeds per year. Seeds have a very high germination rate, but are not expected to have a very long viability although the plant is reported to be able to form a large and persistent soil seed bank. The species can also grow from stem fragments or from rhizomes. These rhizomes can increase by 15 cm annually when established. Seed germination occurs from spring through summer.

Pathways

The plant is used as an ornamental waterside plant. The thousands of seeds produced are naturally dispersed by water and birds. Anthropogenic activities such as clearing ditches, road building and movement of soil may also spread the plant.

Impacts

The huge leaves of *G. tinctoria* which grows in colonies shade out any plant or animal present beneath. The formation of almost monospecific stands of *G. tinctoria* leads to changes in plant communities in Western Ireland, and the species-rich native grasslands are replaced by a sparse cover of dicotyledonous plants (which are not found in uninfested grasslands). *G. tinctoria* also replaces *Salix cinerea* (Salicaceae) in Great Britain, thus altering the process of natural vegetation succession. In New Zealand, *G. tinctoria* is reported to affect nationally threatened plant species or uncommon species on coastal cliffs. Furthermore, it colonizes habitats of high ecological importance. In the United Kingdom it indeed occurs in mires, heaths, wet grasslands and along watercourses, including habitats which are of patrimonial value. In the Azores, it is found in nature reserves and colonizes conservation habitats: the Macaronesian laurel forest and the endemic forests with *Juniperus* spp. However, the species exhibits different invasiveness behaviour across these different countries and in different situations.

The species can also block drains and streams and obstruct access to natural and recreational areas. It may cause erosion when colonizing steep areas, and increase the risk of flooding. The species is also reported to create a negative visual impact on the landscape.

Control

G. tinctoria is difficult to control as the environments in which it grows may be difficult to access (e.g. steep slopes).

Flower heads should be removed and destroyed as soon as possible, in particular near streams or sites of high conservation value. Concerning chemical treatments, the highest efficacy was obtained when herbicides were sprayed early in the growing season before seed could mature. Satisfactory results have been obtained in New Zealand with triclopyr 600 EC as it had fewer impacts on adjacent desirable plants. Cutting the leaves and flower stalks at the base and applying manually 25% glyphosate has also shown satisfactory results. The plant can be controlled by mechanical means, but it is imperative to remove

the entire rhizome as small pieces of it can re-sprout. Monitoring of management actions should be undertaken within a year to ensure that the population is diminishing.

Source: Gioria M & Osborne BA (2013) Biological of the British Isles: *Gunnera tinctoria*. *Journal of Ecology* **101**, 243-264.

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Tela Botanica website, *Gunnera tinctoria.* http://www.tela-botanica.org/bdtfx-nn-30664

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Additional key words: invasive alien plant, alert list **Computer codes:** GUATI

2013/047 12th International EMAPi Conference, Pirenópolis (BR), 2013-09-22/26

The 12th International EMAPi Conference 'Ecology and Management of Alien Plant Invasions' will be held in Pirenópolis (BR) on 2013-09-22/26.
The theme of this EMAPi conference is 'A perspective of effects and actions'. Sessions will address methods of study, pathways of invasion, methods of control, governmental policies, population dynamics, genetic structure, etc.
The deadline for submission of abstracts is the 28th of June 2013.

Source: EMAPi 2013 Website http://www.emapi2013.org/index.php/en/

Additional key words: invasive alien plants, conference **Computer codes:** BR

2013/048 1st Mediterranean Workshop on *Solanum elaeagnifolium*, Thessaloniki (GR), 2013-07-04/06

USDA-ARS EBCL, the Perrotis College and the American Farm School will organize the 1st Mediterranean Workshop on *Solanum elaeagnifolium* (Solanaceae, EPPO A2 List) in Thessaloniki (GR) on 2013-07-04/06. The Workshop will include 2 days of lectures and a 1 day field trip to visit areas infested by *S. elaeagnifolium*. The main topics addressed during this Workshop will be:
- Impact of *S. elaeagnifolium* on Mediterranean agriculture.
- Future of *S. elaeagnifolium* in the Mediterranean climate zone.
- Controlling *S. elaeagnifolium*: biological, chemical and other means of control.
- Possible collective efforts in the field of research and control.

The deadline for submission of abstracts is the 30th of April 2013.

Source: Perrotis College website: http://afs.edu.gr/page/default.asp?id=2762&la=2

Additional key words: invasive alien plants, conference **Computer codes:** SOLEL, GR