



ORGANISATION EUROPEENNE  
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POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN  
PLANT PROTECTION  
ORGANIZATION

# EPPO Reporting Service

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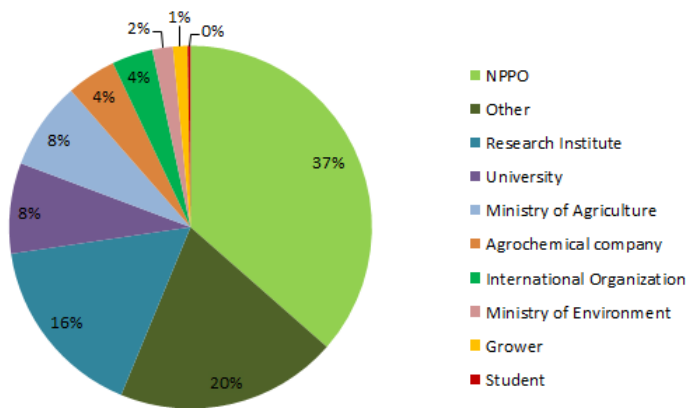
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**2016/001 Results of the questionnaire on the EPPO Reporting Service**

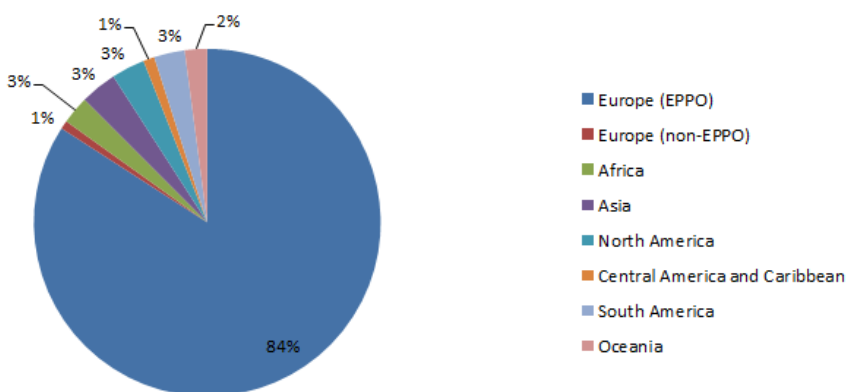
In September 2015, an online questionnaire was launched to get more information on who the readers of the EPPO Reporting Service are, and to improve this information service (RS 2015/156). This was the first time that a questionnaire on the EPPO Reporting Service was sent out, and the EPPO Secretariat takes this opportunity to thank all the respondents who have taken the time to send their opinion. The main results of this questionnaire are summarized below.

**A response rate of 10%:** a link to the questionnaire was sent to approximately 3800 email addresses and responses were sent by 384 readers.

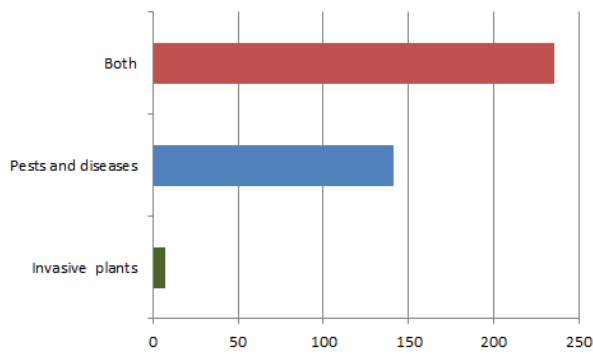
Readers are mainly from NPPOs (37%), but not only. Research institutes, universities, and ministries of agriculture (32%), agrochemical companies (4%) and international organizations (4%) are also represented.



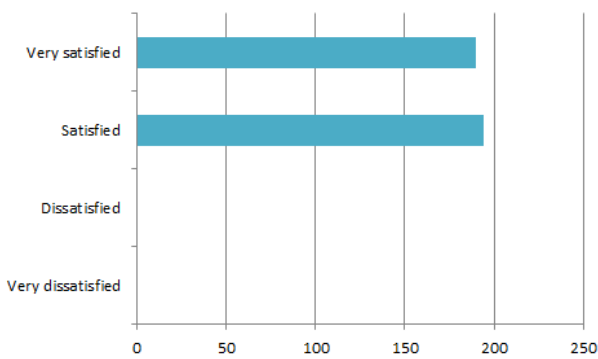
Readers are largely based in EPPO member countries but all continents are represented (answers were received from 70 countries and from all continents).



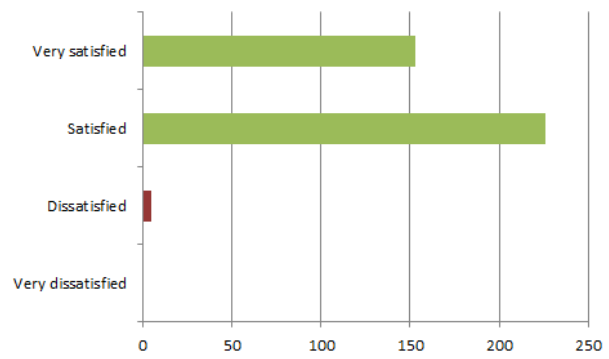
Both sections on 'pest and diseases' and 'invasive plants' are read. Most readers are interested by both sections (236). A rather large part of the respondents mainly read the pests and disease section (141), and only a small number of readers (7) are only interested in the invasive plants section.



**Readers are generally quite satisfied with the EPPO Reporting Service**



Overall satisfaction with the contents (score 3.5).  
No dissatisfaction expressed.



Overall satisfaction with the format (score 3.4).  
5 persons were dissatisfied.

The overall score within brackets was obtained by giving the following scores to the 4 categories below and calculating the average score.

1 Very dissatisfied - 2 Dissatisfied - 3 Satisfied - 4 Very satisfied

**Suggestions for further improvements**

Although readers are generally satisfied with the EPPO Reporting Service, a number of useful suggestions and remarks have been made. These have been discussed at the EPPO Panel on Information in Plant Protection and the following changes were decided.

- Use PDF format or links to send the EPPO Reporting Service: from now on the EPPO Reporting Service will be sent as a PDF (no longer in a Word format) together with a link to the EPPO website where all issues are stored.
- Provide a better ordering and separation of the different articles: in the contents of the EPPO Reporting Service, separations are being inserted to make a distinction between general topics, pests, diseases, invasive alien plants.
- Include more links to documents used as sources: the EPPO Secretariat will try to include more links to papers when these are freely available online.
- Include pest pictures: as for technical reasons (file size) it is not possible for the moment to include pictures in the text itself, but links will be made to the EPPO Global Database whenever pictures are available in this database.

Once again, many thanks to all readers who have participated in this questionnaire!

Source: EPPO Secretariat (2015-12).

**2016/002 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 280 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 2015.

**General Standards**

- PP 1/213(4) Resistance risk analysis (Revision)
- PP 1/271(2) Guidance on comparative assessment (Minor revision to harmonize requirements with the DG SANCO 11507/2013)

**Specific standards**

- PP 1/16 *Botryotinia fuckeliana* on strawberries (Revision)
- PP 1/95 Slugs (Revision, the Standards PP 1/95 Slugs on vegetables, strawberry and ornamentals and PP 1/96 Slugs in field crops have been merged into one and revised. PP 1/96 has been withdrawn)
- PP 1/182 Chemical hybridizing agents in cereals (except maize) (Revision)
- PP 1/285 Fusarium ear rot of maize (New)
- PP 1/286 *Phthorimaea operculella* (New)
- PP 1/287 *Anarsia lineatella* (New)
- PP 1/288 *Grapholita molesta* (New)
- PP 1/289 The design and use of molluscicide small plot cage (barriered) field trials (New)
- PP 1/290 Weeds in asparagus (New)

In addition, seven new extrapolation tables have been adopted to accompany EPPO Standard PP 1/257 *Efficacy and crop safety extrapolations for minor uses* ([http://www.eppo.int/PPP/PRODUCTS/minor\\_uses/minor\\_uses.htm](http://www.eppo.int/PPP/PRODUCTS/minor_uses/minor_uses.htm)) and other tables have been revised.

Two new examples of zonal efficacy evaluation to accompany EPPO Standard PP 1/278 *Principles of zonal data production and evaluation* are now available on the EPPO website ([http://www.eppo.int/PPP/PRODUCTS/zonal\\_efficacy/zonal\\_efficacy.htm](http://www.eppo.int/PPP/PRODUCTS/zonal_efficacy/zonal_efficacy.htm)):

- Clarification of efficacy data requirements for the authorization of a fungicide (protectant applications and curative treatments) for the control of apple scab (*Venturia inaequalis*, VENTIN) on apple (*Malus domestica*, MABSD) in the European Central authorization zone
- Clarification of efficacy data requirements for the authorization of a plant growth regulator in winter oilseed rape in the European Central authorization zone.

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. Subscriptions should be made directly online via the database. For more information on the detailed contents of the database and subscriptions, please consult our web page: <http://www.eppo.org/DATABASES/pp1/pp1.htm>

Direct access to the database: <http://pp1.eppo.int>. Extrapolation tables are available at [http://www.eppo.int/PPPRODUCTS/minor\\_uses/minor\\_uses.htm](http://www.eppo.int/PPPRODUCTS/minor_uses/minor_uses.htm)

Source: Eppo Secretariat (2015-12).

### 2016/003 IPPC photo contest: The Shocking Impacts of Pest

The IPPC Secretariat is organizing a photo contest on pests, entitled 'The Shocking Impacts of Pests'. Photographers from all over the world can contribute pictures. Thirty shortlisted photos will be printed and displayed at various events and exhibition of the IPPC Commission on Phytosanitary Measures, and the three winners will be awarded prizes consisting of photographic trainings. The contest is open to anyone above the age of 18, and a maximum of 5 photos can be submitted per person. The deadline to submit photos is 2016-02-29.

More information can be found on the IPPC website:

<http://www.phytopsanitary.info/2016-ippc-photo-contest-shocking-impacts-pests>

Source: Eppo Secretariat (2015-01).

Additional key words: communication, IPPC

### 2016/004 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**

*Bemisia tabaci* (Hemiptera: Aleyrodidae - EPPO A2 List) occurs in Laos where it is considered to be a major pest of cucumber (*Cucumis sativa*), melon (*Cucurbita melo*) and tomato (*Solanum lycopersicum*) crops in both the dry and wet seasons (Anonymous, 2014). **Present, no details.**

In Montenegro, the first specimens of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) were trapped in October 2013 in several localities along the sea coast (Lastva Grbaljska, Đenovići, Baošići, Kumbor and Herceg Novi). Further surveys showed that the pest was present all along the coastal area from Ulcinj to Herceg Novi, as well as around the city of Podgorica (Radonjić and Hrnčić, 2014). **Present, restricted distribution.**

In Syria, *Glycaspis brimblecombei* (Hemiptera: Aphalaridae - formerly EPPO Alert List) was first found in June 2015 during a survey carried out in the province of Lattakia (Abo Kaf and Mohammed, 2015). **Present, restricted distribution.**

*Liriomyza huidobrensis* (Diptera: Agromyzidae - EPPO A2 List) occurs in Zimbabwe where it has been shown to cause up to 40 % damage in faba bean (*Vicia faba*) crops (Musundire *et al.*, 2011). **Present, no details.**

*Liriomyza sativae* (Diptera: Agromyzidae - EPPO A2 List) occurs in Bangladesh. The identity of the pest has been confirmed by molecular tests. During a survey carried out from October 2008 to September 2011, *L. sativae* was found infesting many vegetable crops across the country (Bhuiya *et al.*, 2011). **Present, widespread.**

*Monilinia fructicola* (EPPO A2 List) occurs in Greece. It was detected on samples (infected fruit or blossoms) collected in 2012 from apricot, cherry and plum orchards in the regions of Imathia and Larissa (Papavasileiou *et al.*, 2015). **Present, restricted distribution.**

*Monilia polystroma* is reported for the first time from Slovenia. It was found during a survey for brown rot pathogens conducted in pome and stone fruit orchards from 2010 to 2013. *M. polystroma* was detected in symptomatic peaches (*Prunus persica*) which had been collected in August 2011 in an orchard located in Goriška, western Slovenia (Munda, 2015). **Present, restricted distribution.**

*Plasmopara halstedii* (EU Annexes) occurs in Myanmar (IPPC, 2015). **Present, no details.**

*Scirtothrips dorsalis* (Thysanoptera: Thripidae - EPPO A2 List) occurs in Kenya. It was found in low numbers in the areas of Kirinyaga and Loitokitok during surveys carried out from December 2012 to December 2013 in the main tomato-growing areas (Macharia *et al.*, 2015). **Present, restricted distribution.**

In Benin, *Tetranychus evansi* (EPPO A2 List) was first found in 2008 causing serious damage to tomato (*Solanum lycopersicum*) crops in the area of Sèmè-Podji. Since then, frequent outbreaks have been observed in Southern Benin on Solanaceae and other leafy vegetables, such as: *Amaranthus cruentus* (Amaranthaceae) and *Vernonia amygdalina* (Asteraceae - bitter leaf). During a survey conducted in January 2013 in the three major vegetable-growing areas in Southern Benin (Sèmè-Kpodji, Grand-Popo and Pahou), *T. evansi* was the only mite observed. Production losses were estimated at 65% for *S. macrocarpon*, 56% for *S. lycopersicum* and 25% for *A. cruentus* (Azandémè-Hounmalon *et al.*, 2015). **Present, restricted distribution (Southern Benin).**

*Thrips palmi* (Thysanoptera: Thripidae - EPPO A1 List) occurs in Laos where it is considered to be a major pest of tomato (*Solanum lycopersicum*) crops during the dry and wet seasons (Anonymous, 2014). **Present, no details.**

*Thrips setosus* (Thysanoptera: Thripidae - EPPO Alert List) occurs in Indonesia. It was found in *Capsicum annuum* crops in the region of Jambi (Sumatra) (Johari, 2015). **Present, no details.**

In Georgia, *Tuta absoluta* (Lepidoptera: Gelechiidae - EPPO A2 List) was first found 2011 in the village of Khorga, (near Khobi, Samegrelo-Zemo Svaneti region) in the Western part of the country (Kakhadze *et al.*, 2014). **Present, first found in 2011.**

*Spodoptera eridania* (Lepidoptera: Noctuidae - EPPO A1 List) occurs in Bahamas, Colombia, Costa Rica, El Salvador, Guyana, Panama, Suriname, Venezuela (Pogue, 2002). **Present, no details.**

In Laos, *Tomato yellow leaf curl virus* (*Begomovirus* - EPPO A2 List) and *Ralstonia solanacearum* (EPPO A2 List) are both considered to be major diseases of tomato crops during the wet season (Anonymous, 2014). Present, no details.

- Detailed records

In September 2015, the presence of *Bactrocera dorsalis* (Diptera: Tephritidae - EPPO A1 List) was detected on the Amami Oshima Island (Kagoshima Prefecture - Kyushu) in Japan. Between 2015-09-01 and 2015-10-31, 531 adult flies were trapped. Eradication measures are being implemented (IPPC, 2015).

*Tomato spotted wilt virus* (*Tospovirus*, TSWV - EPPO A2 List) occurs in Syria. During a survey conducted in 2007 and 2008, TSWV was detected in tomato (*Solanum lycopersicum*) and pepper (*Capsicum* sp.) samples collected from 4 governorates (Dara'a, Damascus, Hama and Idlib) (Ismaeil *et al.*, 2015).

In June 2013, symptoms of bacterial blight were observed on leaves of *Anthurium crystallinum* plants in a commercial greenhouse in Guangzhou (Guangdong province), China. Laboratory tests confirmed the presence of *Xanthomonas axonopodis* pv. *dieffenbachiae* (EPPO A2 List) in symptomatic samples. During studies conducted in 2014, the disease was found in 7 out of the 10 greenhouses investigated, with an incidence reaching 60% in one greenhouse. As this is the first time that *X. axonopodis* pv. *dieffenbachiae* is found on *A. crystallinum* in China, it is noted that further surveys are needed to determine the impact of the disease on this specific host plant in China (Liu and Zhou, 2015).

During surveys carried out in commercial vineyards in Yakima Valley, Washington state (US) in 2013 and 2014, severe leaf deformation and general decline were observed on grapevine (*Vitis vinifera* cv. 'Grenache'). Laboratory analysis (ELISA, RT-PCR, sequencing) confirmed the presence of *Tobacco ringspot virus* (*Nepovirus*, TRSV - EPPO A2 List) in symptomatic samples. This is the first time that TRSV is detected on grapevine in Washington state (Walker *et al.*, 2015).

- Eradication

In 2007, *Tomato chlorotic dwarf viroid* (*Pospiviroid*, TCDVd) was detected on *Petunia* samples collected from 5 nurseries in Scotland (EPPO RS 2008/006). All infected lots were destroyed. In October 2015, the NPPO of the United Kingdom officially declared that TCDVd has been eradicated from its territory (IPPC, 2015).

In the United Kingdom, *Tuta absoluta* (Lepidoptera: Gelechiidae - EPPO A2 List) was found for the first time in a packing station in Essex in 2009. Other outbreaks were then reported in tomato crops (EPPO RS 2009/152 and RS 2011/075) and eradication measures were implemented. In October 2015, the NPPO of the United Kingdom officially declared that *T. absoluta* has been eradicated from its territory (IPPC, 2015).

- Diagnostics

Two real-time PCR assays have been developed in Switzerland for the detection and identification of *Meloidogyne enterolobii* (EPPO A2 List) (Kiewnick *et al.*, 2015).

A new DNA extraction method and a new quantitative real-time-PCR have been developed for the detection and identification of *Meloidogyne enterolobii* (EPPO A2 List). In addition, a test performance study, involving 7 laboratories has been conducted to validate the developed protocols, in accordance with the EPPO Standard PM7/98. This comparison study demonstrated the accuracy, repeatability and reproducibility of the developed methods (Braun-Kiewnick *et al.*, 2016).

- Source: Abo Kaf N, Mohammed E (2015) First record of the red gum lerp psyllid, *Glycaspis brimblecombei* Moore, 1964 (Hemiptera: Aphalaridae) and its natural enemies on eucalyptus trees in the province of Lattakia, Syria. *Arab and Near East Plant Protection Newsletter* 66, p 5.
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- IPPC website. Official Pest Reports - United Kingdom (GBR-02/3 2015-10-30) *Columnnea latent viroid*. <https://www.ippc.int/index.php>
- IPPC website. Official Pest Reports - United Kingdom (GBR-17/3 2015-10-30) *Tuta absoluta*. <https://www.ippc.int/index.php>
- IPPC website. Official Pest Reports - Japan (JPN-03/6 2015-11-06) Detection of *Bactrocera dorsalis* species complex (Oriental fruit flies) in Amami Oshima Island, Japan. <https://www.ippc.int/index.php>
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**Additional key words:** new record, detailed record, eradication, diagnostic

**Computer codes:** BEMITA, DACUDO, DROSSU, GLYSBR, GNORAB, GNORAB, LIRIHU, LIRISA, MELGMY, MONIFC, MONIPO, PLASHA, PRODER, RALSSO, SCITDO, TCDVDO, TETREV, THRIPL, THRISE, TRSV000, TSWV00, TYLCVO, XANTDF, BJ, BS, CN, CO, CR, GB, GE, GR, GY, ID, JP, KE, LA, ME, MM, PA, SI, SR, SV, SY, US, VZ, ZW

**2016/005 Presence of *Rhagoletis completa* suspected in the Netherlands**

The NPPO of the Netherlands recently informed the EPPO Secretariat of the probable presence of *Rhagoletis completa* (EU Annexes) on its territory. In September 2015, larvae infesting husks of walnuts (*Juglans regia*) were found in a private garden in the municipality of Helden (Limburg province) and the garden owner posted this information on the website of a professional entomology network (<http://natuurbericht.nl/?id=14420>). In November 2015, the Dutch NPPO received two samples of Tephritidae puparia (placed in alcohol) which had been collected from the private garden in Helden, and from another one in the municipality of Helmond (Noord-Brabant province). Molecular tests were carried out and indicated that the Dutch specimens belonged to a species group comprising *R. completa*, *R. zoqui* and *R. ramosae* (all can be found in walnut husks) but not to *R. suavis* (another walnut husk pest, recently found in Germany - see EPPO RS 2014/011). Considering that *R. completa* is the only walnut-infesting species known to occur in Europe and that DNA data appear to exclude *R. suavis*, the Dutch specimens most likely represent *R. completa*. As a final identification can only be done on adults flies (which will emerge in 2016), the presence of *R. completa* remains only a suspicion for the moment. If the identity of the pest is confirmed, this would be the first record of *R. completa* in the Netherlands.

The pest status of *Rhagoletis completa* in the Netherlands is officially declared as: **Present: at low prevalence.**

Source: NPPO of the Netherlands (2015-11).

INTERNET

Ministry of Economic Affairs. Netherlands Food and Consumer Product Safety Authority. Pest reports.

<https://www.nvwa.nl/onderwerpen/planten-plantaardige-producten/dossier/pest-reporting/pest-reports>

Pictures *Rhagoletis completa*: <https://gd.eppo.int/taxon/RHAGCO/photos>

Additional key words: new record

Computer codes: RHAGCO, NL

**2016/006 Interception of a new and undescribed species of *Josephiella* on *Ficus microcarpa* bonsais from China**

The Italian NPPO recently informed the EPPO Secretariat that during regular import controls carried out in November 2015 at the Napoli seaport, 921 *Ficus microcarpa* bonsai plants from China were inspected and found to be infested by several pests. The entire consignment was stored in a refrigerated container. During the inspection, several scale insects and galls were detected on shoots. Samples were collected in order to identify the scale species and determine the possible causes of gall formation. Samples of growing medium (soil) were also taken to verify the presence of nematodes. The presence of *Lecanium* sp., (Hemiptera: Coccidae), *Ceroplastes floridensis* (Hemiptera: Coccidae) and nematodes (*Meloidogyne* sp.) was confirmed with the scientific support of Dr Umberto Bernardo from the Institute for Sustainable Plant Protection, National Council of Research (CNR - Portici, Napoli). As a consequence, official measures were taken: the imported consignment was rejected and an interception procedure was initiated through Europhyt, the EU interception notification system.

The determination of the possible causes that induced gall formation has proven to be more difficult because no similar description of galls on shoots and branches of *F. microcarpa* could be found in literature. The dissection of galls, under a microscope, showed that they were mono- or multilocular and only occurred on stems. Galls on old shoots displayed adult exit holes while those on young shoots did not show any holes. Many dead adults were found inside old galls but some living larvae were found inside young galls. Some insect specimens were dissected to prepare slides, while others were mounted on cards as dried specimens or used to extract DNA. Morphological identification has shown that specimens belonged to the genus *Josephiella* (Hymenoptera: Agaonidae) but corresponded to an undescribed species. A comparison with pictures sent by Dr Rasplus (INRA, France), an expert of this insect group, confirmed this identification. Investigations are continuing to describe this new *Josephiella* species.

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**EPP0 note:** until now, only two species of *Josephiella* have been described: *Josephiella malabarensis* and *Josephiella microcarpae* (blister leaf gall wasp). These species are reported to cause leaf galls (and not shoot galls) in *Ficus* spp. *J. malabarensis* was first identified in 1993 from leaf galls collected from *F. bengalensis* in Kerala, India. *J. microcarpae* was first identified on leaf galls of *F. microcarpa* collected in the late 1900s from Hawaii (US), California (US) and Islas Canarias (Tenerife, La Gomera - Spain). The presence of *J. microcarpae* has also been reported in Sicilia (2002 - Italy), Florida (2007 - US), and Malta (reported in 2011 but leaf galls have been observed since 2006 at least). In Florida, defoliation of *F. microcarpa* caused by *J. microcarpae* has been reported in some cases. The native range of *J. microcarpae* is unknown but in some publications this species is mentioned as originating from Southeast Asia.

View distribution maps in EPP0 Global Database:

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

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

Source: NPP0 of Italy (2015-12).

Additional key words: interception

Computer codes: JOSEMA, JOSEMI, JOSESP, IT, CN

### 2016/007 Presence of *Contarinia pseudotsugae* suspected in Belgium

Since the beginning of 2015, the presence of unusual symptoms has been observed on *Pseudotsuga menziesii* (Douglas fir) trees growing in Walloon forests, Belgium. Samples were collected and sent to the laboratory of CRA-W (Centre Wallon de Recherches agronomiques). Symptoms were characterized by brownish to reddish or purplish discolorations on the current years' needles. Affected needles were swollen or bent. Results showed that in addition to fungal pathogens (*Phaeocryptopus gaeumanii* and *Sirococcus conigerus*), larvae of an insect, tentatively identified as *Contarinia pseudotsugae* (Diptera: Cecidomyiidae - Douglas fir needle midge), were also present. As only larval stages could be found in Belgium, a final identification was not possible. Three North American species: *C. pseudotsugae*, *C. cuniculator* and *C. constricta* are known to cause this type of symptoms on *P. menziesii*. Deformations observed on needles correspond to the presence of galls induced by larvae, and those observed in Belgium resembled those that are caused by *C. pseudotsugae*. In addition, it is noted that in North America, among the three *Contarinia* species, *C. pseudotsugae* is the most abundant one. Recent observations made in the Walloon region suggest that the insect is established and

widespread, as signs of its presence were noted in all visited sites (more than 30 in Ardennes, Famenne and Lorraine). On these sites, low infestation levels were found (10%). However, infestation levels reaching 50% have been observed in some young plantations. Interestingly, similar findings have been made in the Netherlands (see EPPO RS 2016/008). If the identity of the pest is confirmed, these new records in Belgium and the Netherlands would be the first ones of this North American needle midge in the EPPO region.

Source: INTERNET  
OWSF. La santé des forêts en Wallonie. *Contarinia pseudotsugae*: un nouvel insecte détecté sur Douglas. <http://owsf.environnement.wallonie.be/fr/26-11-2015-contarinia-pseudotsugae-un-nouvel-insecte-detecte-sur-douglas.html?IDD=4971&IDC=5798>

Additional key words: new record

Computer codes: CONTPS, BE

### 2016/008 Presence of *Contarinia pseudotsugae* suspected in the Netherlands

The NPPO of the Netherlands recently informed the EPPO Secretariat of the finding of an insect species, tentatively identified as *Contarinia pseudotsugae* (Diptera: Cecidomyiidae - Douglas fir needle midge) on numerous forest trees of *Pseudotsuga menziesii* (Douglas fir) at 4 locations in the provinces of Gelderland, Limburg and Noord-Brabant. These findings were made in November 2015 in the framework of the yearly Dutch survey of forest stands targeting fungal pathogens (*Mycosphaerella* spp.). Interestingly, a Douglas fir needle midge, also tentatively identified as *C. pseudotsugae* has been reported in Belgium (see EPPO RS 2016/007). The fact that *C. pseudotsugae* has been found at four widely dispersed locations in the Netherlands in natural stands planted with thousands of Douglas fir trees indicates that the pest is now established and has probably been present for several years. The current impact appears to be limited and corresponds to minor wilting symptoms of the needles on lower branches. However, it is noted that *C. pseudotsugae* might pose a risk to young trees in nurseries. The origin of this finding is unknown but so far, *C. pseudotsugae* and related species causing similar types of damage (e.g. *C. cuniculator* and *C. constricta*) were only known to occur in North America. No official phytosanitary measures were taken due to the wide distribution of the pest and that fact that it has probably been present for a long period. A quick scan is being carried out by the Dutch NPPO to evaluate the potential risks presented by *C. pseudotsugae*.

Pictures of *C. pseudotsugae* in the Netherlands were kindly provided by the Dutch NPPO and can be viewed at: <https://gd.eppo.int/taxon/CONTPS/photos>

The pest status of *C. pseudotsugae* in the Netherlands is officially declared as: **Present**, in specific parts of the areas where host plants are grown.

Source: NPPO of the Netherlands (2015-12).

Additional key words: new record

Computer codes: CONTPS, NL

**2016/009 Addition of *Contarinia pseudotsugae* to the EPPO Alert List**

**Why:** *Contarinia pseudotsugae* (Diptera: Cecidomyiidae) is one of three North American species of needle midge (*C. pseudotsugae*, *C. constricta*, *C. cuniculator*) which can attack *Pseudotsuga menziesii* (Douglas fir) trees and cause some damage. Its presence in two European countries, Belgium and the Netherlands, is suspected. In these two countries, as larvae only could be recovered from *P. menziesii*, a more definitive identification is awaiting the collection or rearing of adult flies. Nevertheless, the EPPO Secretariat considered that the possible presence of a new forest pest in the EPPO region should be brought to the attention of the NPPOs.

**Where:** until the reports about its possible presence in Belgium and the Netherlands which were made in 2015, *C. pseudotsugae* (as well as its related species, *C. constricta* and *C. cuniculator*) was only known to occur in North America.

**EPPO region:** Belgium, Netherlands. Both records are awaiting a final confirmation of the pest identity.

**North America:** Canada (British Columbia), Mexico, USA (California, Idaho, Michigan, Montana, Oregon, Pennsylvania, Washington). In the USA, it seems that the occurrence of *C. pseudotsugae* has remained limited for a long time in the Pacific Northwestern part. In the Northeastern part of the USA, it was observed in Michigan for the first time in 2003 and it is considered there as a 'native invader' transported by human activities into a new habitat. No data could be found for Pennsylvania, but this US state was not mentioned in the distribution list given by Furniss & Carolin in 1977.

**On which plants:** *Pseudotsuga menziesii* is the only known host of *C. pseudotsugae*.

**Damage:** larvae of *C. pseudotsugae* bore into the needles of *P. menziesii* and their feeding activity results in the formation of galls. Attacked needles are swollen and frequently bent. Initially, the damaged area is pale in colour, but as the season progresses, it darkens and eventually turns into a reddish to brownish colour. Attacked needles usually fall prematurely. In the USA, damage has occasionally been reported in plantations of Christmas trees, as the presence of the pest could significantly reduce their aesthetic and market value. Heavy infestation can cause severe defoliation and if trees are defoliated for several consecutive years, twig dieback can occur. However, damage caused by *C. pseudotsugae* is generally not a mortality-inducing factor.

*C. pseudotsugae* has one generation per year. It overwinters as larvae in the soil under infested trees. In early spring, larvae pupate and adult midges emerge from the soil to mate and females lay eggs in the needles of the expanding twigs. Eggs hatch within a few days and larvae bore into the needles, feeding on them throughout the summer. In autumn, larvae drop from the needles to the ground, leaving a small triangular exit hole. In the USA, it is reported that *C. pseudotsugae* populations fluctuate widely from year to year.

Adults are small, orange flies (3 mm long). During the emergence period, they can be observed resting on the tips of the needles. Females can be distinguished by their long ovipositor with which they probe between bud scales and into partially opened buds. This elongated ovipositor enables the female to lay long, narrow, orange-coloured eggs in protected areas. Adult life span is short (male: 1-2 days - female: 2-4 days).

**Dissemination:** adults can fly but no data is available about their potential for natural spread. The origin of the outbreaks detected in the EPPO region (if confirmed) is unknown. Over long distances, trade of infested *P. menziesii* could cause pest spread.

**Pathway:** plants for planting, cut branches (including Christmas trees) of *P. menziesii*, soil from countries where *C. pseudotsugae* occurs.

**Possible risks:** *P. menziesii* originates from the west coast of North America, but has been planted in the EPPO region for timber production and reforestation on a large scale. It is considered that it is now the economically most important exotic tree species in European forests. It is also planted for ornamental purposes in parks and gardens. In North America, *C. pseudotsugae* is considered as a pest of *P. menziesii*, in particular in Christmas tree plantations and seed tree orchards where pest control is sometimes necessary. Management strategies against *C. pseudotsugae* usually involves trapping (emergence traps placed onto the ground near trees) to determine the emergence period of the adults and ensure application of insecticide treatments at the right moment against adults. In forest, chemical control is not considered feasible and the presence of chalcid wasps (unspecified) is reported to regulate pest populations. For the moment, no severe damage has been reported in Europe on *P. menziesii* in association with Douglas-fir needle midge. The future impacts of *C. pseudotsugae* (or related species) are difficult to predict for the moment but it cannot be excluded that this pest could present a risk to *P. menziesii* in forests, nurseries and parks and gardens.

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EPPO RS 2016/007, 2016/008, 2016/009

Panel review date -

Entry date 2016-01

Additional key words: Alert List

Computer codes: CONTPS

**2016/010 First reports of *Macrohormotoma gladiata* in Italy and Algeria**

*Macrohormotoma gladiata* (Hemiptera: Homotomidae) is a psyllid of Asian origin which feeds on *Ficus microcarpa* (other *Ficus* species such as *F. benghalensis* and *F. microphylla* are mentioned in the literature but these host records are considered doubtful by several authors). Colonies of *M. gladiata* develop and feed on new shoots, which become covered by white waxy secretions. Young stages of the psyllid live protected under these secretions. Following feeding, shoots become deformed, stop developing and may finally die. This pest first came to the attention of the EPPO Secretariat when scientists reported its presence in Spain near Alicante (see [EPPO webpage](#) and EPPO RS 2011/219). In Spain, *M. gladiata* was initially recorded in October 2009 in Balears on the Island of Mallorca in the municipalities of Andratx, Palma and Marratxí, and then in Ibiza. Additional studies detected the pest in several provinces in mainland Spain (Alicante, Cádiz, Málaga, Murcia, and Valencia) and on Islas Canarias.

In Italy, *M. gladiata* was observed for the first time in July 2011 in Napoli (Campania region) on ornamental *Ficus* planted along two avenues (set far apart). In 2014, specimens of *M. gladiata* were collected on *F. microcarpa* in Sicilia, in different sites (urban and suburban) of the cities of Catania and Siracusa

Finally, severe damage caused by *M. gladiata* has been reported on urban *Ficus* trees in the city of Mostaganem in Algeria since spring 2015.

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Additional key words: new record

Computer codes: MAHOGL, DZ, ES, IT

**2016/011 First report of *Neophyllaphis podocarpi* in Spain**

In October 2011, several specimens of *Neophyllaphis podocarpi* (Hemiptera: Aphididae) were found in a botanical garden in Blanes, near Girona, Spain. This aphid was also found in September 2014 in Barcelona in the Ciudadella Park and in the district of Pedralbes. All aphid colonies were collected from *Podocarpus neriifolius* trees (Podocarpaceae). This is the first time that *N. podocarpi* is reported from Spain. *N. podocarpi* is an oligophagous species which feeds on leaves, young twigs and fruit peduncles of several species of *Podocarpus*. Feeding activity can cause leaf chlorosis and is accompanied by the production of honeydew and the development of sooty mold. This aphid occurs in Asia and Australia, and it has been introduced into North America and the Azores (PT). In 1989, *N. podocarpi* was detected on an imported *Podocarpus* sp. bonsai plant in Milano, Italy. However, as no other records were made, it is assumed that this finding has not led to the establishment of *N. podocarpi* in Italy. This is the first report of *Neophyllaphis podocarpi* in Spain.

**Source:** Pérez Hidalgo N, Hernández-Castellano C, Garcia Figueres F (2015) First record of *Neophyllaphis podocarpi* Takahashi (Hemiptera: Aphididae) in the Iberian Peninsula. *Bulletin OEPP/EPPO Bulletin* 45(1), 103-105.

**Additional key words:** new record

**Computer codes:** NEOHPO, ES

**2016/012 First report of *Sipha flava* in Spain**

During a sampling campaign carried out in June 2014, colonies of *Sipha flava* (Hemiptera: Aphididae - yellow sugarcane aphid) were found on *Hyparrhenia hirta* (Poaceae, common thatching grass) in an organic citrus grove located in La Selva del Camp (Tarragona province), Spain. *S. flava* is an oligophagous aphid species which has been recorded on approximately 62 species of Poaceae, as well as on a few Cyperaceae and Commelinaceae. It is considered to be a serious pest of sugarcane, sorghum and other Poaceae, including pasture grasses, small grain cereals and rice. *S. flava* is thought to originate from North America. It has become established in Central America, the Caribbean, and South America. *S. flava* has also been found in the Azores (PT) and more recently, in Morocco. This is the first time that *S. flava* is reported in Spain, and in Europe.

**Source:** Hernández-Castellano C, Pérez-Hidalgo N (2014) First record of the yellow sugarcane aphid *Sipha flava* (Forbes) (Hemiptera Aphididae) in the European continent. *Redia* XCVII, 137-140.

**Additional key words:** new record

**Computer codes:** SIPHFL, ES



**2016/013 First report of *Tomato chlorosis virus* in Jordan**

In January 2014, symptoms of interveinal yellowing, bronzing, thickening, and downward rolling of lower leaves were observed on tomato (*Solanum lycopersicum*) crops grown under plastic houses and open fields in the Jordan Valley, Jordan. In diseased crops, large numbers of whiteflies (*Bemisia tabaci*) were also observed. Leaf samples were collected from symptomatic tomato plants and tested (PCR tests, sequencing) for the presence of criniviruses. Results confirmed the presence of *Tomato chlorosis virus* (*Crinivirus*, ToCV - EPPO A2 List) in symptomatic samples. In addition, experiments with *B. tabaci* adults exposed to symptomatic tomato leaves for a 48-h acquisition access period resulted in the transmission of ToCV to healthy tomato plants (with a 48-h inoculation access period). This is the first time that ToCV is reported from Jordan. Further studies are needed to determine the incidence and distribution of ToCV in the country.

The situation of *Tomato chlorosis virus* in Jordan can be described as follows: **Present, first found in 2014 in the Jordan Valley on both protected and outdoor tomato crops.**

Source: Salem NM, Mansour AN, Abdeen AO, Araj S, Khrfan WI (2015) First report of *Tomato chlorosis virus* infecting tomato crops in Jordan. *Plant Disease* 99(9), p 1286.

Additional key words: new record

Computer codes: TOCV00, JO

**2016/014 First report of *Puccinia horiana* in India**

In 2013, a survey on fungal diseases of chrysanthemum was conducted in Kothagiri Hills (Nilgiris district) and Yercaud Hills (Salem district) in Tamil Nadu, India. During this survey, rust symptoms resembling those of *Puccinia horiana* (EPPO A2 List) were observed on one chrysanthemum cultivar (*Dendranthema grandiflora* cv. 'Saffin Pink'). The disease mainly affected leaves, but in some cases, it spread to stems, bracts, and even flowers. In severe cases, pustules coalesced leading to complete drying and death of the plant. The disease incidence ranged from 70 to 80% across all the areas surveyed and was observed in three crops cultivated throughout the year. Laboratory tests (morphological, molecular, pathogenicity) confirmed the identity of the fungus. This is the first time that *P. horiana* is reported in India.

The situation of *Puccinia horiana* in India can be described as follows: **Present, first found in 2013 in 3 crops of the same cultivar in Tamil Nadu.**

Source: Dheepa R, Renukadevi P, Vinod Kumar S, Nakkeeran S (2015) First report of chrysanthemum white rust (*Puccinia horiana*) in India. *Plant Disease* 99(9), p 1279.

Pictures *Puccinia horiana*: <https://gd.eppo.int/taxon/PUCCHN/photos>

Additional key words: new record

Computer codes: PUCCHN, IN

**2016/015 First report of *Quambalaria eucalypti* in Portugal**

During a survey on pathogens of commercial eucalyptus plantations carried out in Portugal, the presence of a plant pathogenic fungus, *Quambalaria eucalypti*, was found on *Eucalyptus globulus* in 15 different locations scattered over Portugal (out of a total of 41 surveyed sites). The identity of the pathogen was confirmed by sequence analyses of the internal transcribed spacer (ITS) region of the rDNA operon, as well as morphological characteristics. In nurseries, the most common symptom was the presence of white masses of powdery spores on stem lesions. In plantations, no symptoms were observed on mature adult foliage, but *Q. eucalypti* was found to be associated with cankers and bark splitting on the trunk. *Q. eucalypti* is thought to originate from Australia, but it was first reported from South Africa on *E. grandis*. It is known to occur in several countries of the Southern Hemisphere, including South Africa, Brazil, Uruguay and Australia. This is the first time that *Q. eucalypti* is reported from Portugal and from the EPPO region.

Source: Bragança H, Diogo ELF, Neves L, Valente C, Araújo C, Bonifácio L, Phillips AJL (2015) *Quambalaria eucalypti* a pathogen of *Eucalyptus globulus* newly reported in Portugal and in Europe. *Forest Pathology* DOI: 10.1111/efp.12221

Additional key words: new record

Computer codes: QUAMEU, PT

**2016/016 Tar spot disease of maize found for the first time in the USA**

Tar spot of maize (*Zea mays*) is a disease caused by a complex of several fungal pathogens which has been observed in America causing serious yield losses in some countries. Yield losses exceeding 50% annually have recently been noted in Colombia, El Salvador, Guatemala, Mexico and Nicaragua. Initial symptoms of tar spot are brownish lesions on maize leaves. Black spore-producing structures (ascomata), protruding from the leaf surface, appear later and can densely cover the leaf surface. Lesions may coalesce to cause large areas of blighted leaf tissue. Symptoms and signs of tar spot can also be present on leaf sheaths and husks. The disease reduces photosynthetic potential and therefore plant vigour. Affected ears have fewer kernels which may germinate prematurely on the cob.

At present, three fungal species have been found in association with this disease: *Phyllachora maydis*, *Monographella maydis*, and in some cases, *Coniothyrium phyllachorae*. In the areas where this disease is commonly found (e.g. Mexico, Central and South America), *Phyllachora maydis* is usually the first species found in association with leaf lesions. While *Monographella maydis* is usually considered to be a common saprophyte on leaf surfaces, it becomes pathogenic in association with *Phyllachora maydis* and forms necrotic rings around *Phyllachora maydis* lesions. *Coniothyrium phyllachorae* might be a hyperparasite of the other two species, but its role is not fully understood yet.

In September 2015, the presence of *Phyllachora maydis* (only) was confirmed for the first time in the USA, in samples collected from a maize field in Indiana (US). A few days later, *P. maydis* was also detected in leaf samples collected from commercial maize fields in 3 counties of Illinois (LaSalle, DeKalb and Bureau). It is pointed out that the causal agents of tar spot are not known to be seed borne. Studies will be carried out to determine how this fungus arrived in the USA and whether measures need to be taken to prevent future disease outbreaks.

- Source: INTERNET
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Additional key words: new record

Computer codes: CONIOPH, MONGMA, PHYRMA, US

**2016/017 First report of *Solanum elaeagnifolium* in Bulgaria**

*Solanum elaeagnifolium* (Solanaceae: EPPO A2 List) is a herbaceous perennial or a small shrub, native to the Americas and an alien invasive plant in parts of Asia, Africa and the EPPO region. In 2015, *S. elaeagnifolium* was recorded for the first time in Bulgaria in the valley of the River Struma where it has invaded a wasteland area beside a road. In other areas within the EPPO region *S. elaeagnifolium* has invaded cultivated land, orchards, managed grasslands and associated man-made habitats, natural grasslands, riverbanks, canal sides, rail and road sides and wastelands. *S. elaeagnifolium* is considered one of the worst invasive alien plants worldwide. The species has an extensive root system where just a small fragment can regenerate into a viable plant. A single plant can produce 40-60 fruits. Each fruit can contain 60-120 seeds which are spread both naturally (via wind and waterbodies facilities spread) and through human assisted spread (dispersal via agricultural machinery). Numerous negative impacts have been recorded, including outcompeting native species, reducing crop yields in agriculture systems and negative impact on ecosystem services (for example pollinators). To-date, *S. elaeagnifolium* has only been recorded in one discrete site in Bulgaria but further spread is likely especially when considering similar climatic/ecological areas where the species has a wide distribution (for example Northern Greece).

**Source:** Vladimirov V, Bancheva S, Delcheva M (2015) *Solanum elaeagnifolium* (Solanaceae), a new alien species for the Bulgarian flora. *Flora Mediterranean* 25, 121-125.

**Pictures** *Solanum elaeagnifolium*: <https://gd.eppo.int/taxon/SOLEL/photos>

**Additional key words:** invasive alien plants, new record

**Computer codes:** SOLEL, BG

**2016/018 *Arctotheca calendula*: an emerging invasive alien plant in Italy**

*Arctotheca calendula* (Asteraceae: EPPO List of Invasive Alien Plants) is a short lived herbaceous plant which was first introduced into Europe as a garden ornamental in the early 18<sup>th</sup> century. Native to South Africa, *A. calendula* has been recorded in France, Israel, Italy, Morocco, Portugal, Spain and Tunisia. In Italy, *A. calendula* was recorded for the first time at a camping site on the island of Lipari (Sicily) and now the species occurs in the Campania, Calabria, Sicily and Sardinia regions. In Sardinia, *A. calendula* survives on three different habitat and land use types which include ploughed pasture land, intensive agricultural land and disturbed garrigue. Further spread is likely and the warmer Italian regions which comprise the Mediterranean bioclimatic division are most at risk of invasion by this species. *A. calendula* is also spreading in other EPPO countries including Morocco, Tunisia and Israel where spread is facilitated by movement of machinery, soil and livestock. In the USA, *A. calendula* is classified as a noxious weed and in Australia the species invades a number of cropping systems where it has negative impacts on yields. Ecological impacts associated with the species include competition with native species for space and water resources. In Spain, ecological impacts have been recorded where the species has been reported to penetrate valuable and vulnerable coastal dune systems.

**Source:** Brundu G, Lozano V, Manca M, Celesti-Grappo L, Sulas L (2015) *Arctotheca calendula* (L.) Levyns: An emerging invasive species in Italy. *Plant Biosystems* 149, 954-957.

**Pictures** *Arctotheca calendula*: <https://gd.eppo.int/taxon/AROCA/photos>

**Additional key words:** invasive alien plants, detailed record

**Computer codes:** AROCA, IT

**2016/019    *Manihot grahamii*: a new alien plant species in Europe**

*Manihot* (Euphorbiaceae) is a genus of some 75-100 species which are native to North and South America. Species within the genus have been recorded as alien in North America, Asia, Africa and Australia. In 2014 *Manihot esculenta* was recorded for the first time as a casual alien in Europe where a population of 22 specimens was found in natural woodland in the Campania region in Southern Italy. Although *M. esculenta* is extensively cultivated as a crop in tropical and subtropical regions of the world, it is thought that the species is rarely grown as a garden ornamental in Europe. In 2015, the second record for this genus in Europe was reported where *Manihot grahamii* was identified in wasteland habitat (growing in clay substrate along ditches) in the Lazio region of Central Italy. *M. grahamii* was intentionally introduced into Italy as a garden ornamental in the 1970s. The current naturalized population consists of an established stand of 34 individuals of different ages which has been present for approximately ten years. Iberite & Iamónico (2015) note that further investigations are needed to verify the potential invasiveness of *M. grahamii* in Italy and other European regions.

Source: Iberite M, Iamónico D (2015) *Manihot grahamii* Hook. (Euphorbiaceae), a new alien species for the Eurasian area with nomenclatural, taxonomical, morphological and ecological notes. *Acta Botanica Croatica* 74, 143-150.  
Stinca A, D'Auria & Motti R (2014) *Manihot esculenta* (Euphorbiaceae) a new alien species in Italy *Hacquetia* 13, 335-357.

Additional key words: invasive alien plants, new record

Computer codes: MANES, MANGR, IT

**2016/020    Potted plants as pathway for introducing invasive alien plants**

Although potted plants are a well-known pathway for introducing weeds in general (see Q-bank interactive key), and often mentioned as a potential pathway in EPPO PRAs for invasive plant species (e.g. *Polygonum perfoliatum* (Polygonaceae) and *Microstegium vimineum* (Poaceae); both EPPO A2 pests) actual proof is generally missing to support such an assertion. However, recently a number of invasive alien plants have been intercepted by the Dutch NPPO as a contaminant of potted plants. In a targeted survey for contaminants in potted plants from South America, *Parthenium hysterophorus* (EPPO A2 pest) was discovered in an import of *Coffea arabica* (Rubiaceae) from Honduras. In another example, in August 2015, a single contaminated *Chaenomeles* (Rosaceae) potted plant (from a consignment from China) was sent to the NPPO for identification. The consignment had already been inspected in the summer of 2014 however, the inspector noted the presence of a thorny weed within the pot but no report or action was taken. In 2015, following a routine inspection on planting at an import/export production facility, *P. perfoliatum* was identified from the consignment of *Chaenomeles* which had remained outdoors the previous winter. Following a simple Google search the inspector was directed to the EPPO website and was able to correctly identify the species as *P. perfoliatum*. The clear warning at the EPPO website resulted in the owner being requested to destroy all infested potted plants and to send one infested plant to the Dutch NPPO for verification purposes. Discussions between inspectors about the interception of *P. perfoliatum* resulted in the same species being identified as a contaminant of a shipment of *Ficus microcarpa* (Moraceae) from China. As a follow up action a survey of the import facility where the shipment of *Chaenomeles* had been outdoors was performed but no other plants of this easily recognisable species were found.

Source: Personal Communication: J. van Valkenburg, Q bank <http://www.q-bank.eu/>  
Q bank interactive key:  
[http://www.q-bank.eu/Plants/DefaultInfo.aspx?Page=opening\\_weeds\\_bonsai](http://www.q-bank.eu/Plants/DefaultInfo.aspx?Page=opening_weeds_bonsai)

Additional key words: invasive alien plants

Computer codes: 1CNMG, COFAR, POLPF, FIUMI, NL

### 2016/021 The influence of mowing regime on the soil seed bank of *Ambrosia artemisiifolia*

*Ambrosia artemisiifolia* (Asteraceae: EPPO List of Invasive Alien Plants) is an annual weed native to North America. In Europe a single plant can produce up to 18 000 seeds which can remain dormant in the soil seed bank for up to 39 years. The persistence of the soil seed bank can compromise the efficacy of control measures and sustainable management over the long-term. In the current study the soil seed bank was sampled at sites in a roadside population in Eastern Australia before and after a three year management regime based on mowing. The management regime consisted of four treatments plus a control (not mown) where each treatment was applied to a 20 x 0.5 m area within the population. The four treatments were (1) two cuts - one before the onset of flowering and the second at the beginning of the seed set, (2) two cuts - one after the beginning of female mass flowering and the second at the start of seed set, (3) three cuts - one before the start of flowering, the second before the onset of male mass flowering and the third at the beginning of seed set and (4) three cuts - one before the start of flowering, the second after the beginning of female mass flowering and the third at the beginning of seed set. After three years, treatments 2, 3 and 4 decreased the soil seed bank by 80 %, 60 % and 45 %, respectively, compared to the control. The most effective mowing regime to reduce the soil seed bank of *A. artemisiifolia* as indicated by this study consists of one cut just after the beginning of the female flowering followed by a second cut 2 - 3 weeks later (at the beginning of the seed set).

Source: Milakovic I, Karrer (2016) The influence of mowing regime on the soil seed bank of the invasive plant *Ambrosia artemisiifolia* L. *NeoBiota* 28, 39-49.

Pictures *Ambrosia artemisiifolia*: <https://gd.eppo.int/taxon/AMBEL/photos>

Additional key words: invasive alien plants, pathways

Computer codes: AMBEL, NL

### 2016/022 *Epilobium adenocaulon* and *Oenothera glazioviana*: two new alien species for Bulgaria

*Epilobium adenocaulon* (Onagraceae) and *Oenothera glazioviana* (Onagraceae) are both native to North America and widespread alien species throughout Europe. Both species have recently been recorded for the first time in Western Bulgaria. *E. adenocaulon* has been recorded as naturalized from 21 European countries where its spread and persistence is facilitated by high seed production (seeds are spread by wind). In Western Bulgaria, *E. adenocaulon* was recorded in at four sites; 1 km south of the central railway Station - Ivan Stambolov St., 1 site at Mt Milevska Planina and two sites in the Cherna Mesta river valley north of Cherna Mesta village. At all four sites, small populations of a few individuals were found. *O. glazioviana* was recorded at one location in Western Bulgaria in the foothills of Rila Mountains, along the river Rilska valley near Stob village. The invasive status of these

two alien species within the EPPO region suggests that both have the potential for further spread within Bulgaria.

**Source:** Kalníková V, Palpurina S (2015) *Epilobium adenocaulon* and *Oenothera glazioviana* (Onagraceae): new alien species for the Bulgarian flora. *Phytologia Balcanica* 21, 21-27.

**Additional key words:** invasive alien plants, new record

**Computer codes:** EPIAC, OEOER, BG

### **2016/023 23rd International Meeting on Weed Control (Dijon, FR, 2016-12-06/08)**

The 23rd Columa Conference: International Meeting on Weed Control will be held in Dijon, France between 2016-12-06/08. Sessions for the conference will include: weed competition and weed biology, cropping systems, agronomy and integrated weed management, new herbicide solutions, conventional or biological control, new technologies, herbicide weed resistance: mechanisms involved, herbicide weed resistance management strategies, the fate of herbicides in water, air, soil and impact mitigation, non-chemical weed control, bio-vigilance and ecology of plant and animal communities.

The deadline for abstract submission is 2016-02-29. The provisional programme and registration forms will be available in June 2016.

**Source:** 23rd Columa Conference: International Meeting on Weed Control  
Website: <http://www.afpp.net/>

**Additional key words:** weed control, conference

**Computer codes:** FR