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2016/162 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 (or formerly 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**

Tomato chlorosis virus (*Crinivirus*, ToCV – EPPO A2 List) occurs in South Africa. In Mpumalanga province, ToCV has been detected in field and protected tomato (*Solanum lycopersicum*) crops and weeds (*Datura stramonium*) growing nearby (Moodley *et al.,* 2016). **Present, no details.**

- **Detailed records**

Symptoms of chestnut blight were first observed in November 2011 on *Castanea sativa* on the island of Corfu (GR). Laboratory analysis confirmed the occurrence of *Cryphonectria parasitica* (EPPO A2 List). According to the authors, this is the first report of *C. parasitica* on the island of Corfu, one of the few areas in the country thought to be free of the disease (Tziros and Diamandis, 2016).

In the Republic of Korea, *Erwinia amylovora* (EPPO A2 List) was reported for the first time in pear (*Pyrus* sp.) orchards in May 2015 in the cities of Anseong and Cheonan (EPPO RS 2015/089). In June and July 2015, typical symptoms of fireblight were also observed on shoots and leaves of apple (*Malus domestica*) in 2 commercial orchards located in the cities of Anseong and Jecheon. Eradication is continuing (Myung *et al*., 2016).

From 2009 to 2012, surveys on *Diplodia pinea, Fusarium circinatum* (EPPO A2 List) and *Mycosphaerella* spp. have been conducted in *Pinus radiata* plantations in Pais Vasco (ES). Results showed that *D. pinea* caused shoot blight in 24% of sampled plantations. *Fusarium circinatum* and *Mycosphaerella* spp. were detected in 15 and 71% of surveyed plantations, respectively (Iturritxa *et al*., 2015).

Grapevine Pinot gris virus (*Trichovirus*, GPGV) occurs in British Columbia, Canada (Poojari *et al*., 2016).

Until recently, '*Candidatus* Phytoplasma solani' (EPPO A2 List) had only been detected in Montenegro in association with bois noir disease of grapevine. However, during a study conducted in July and August 2015, the pathogen was detected in symptomatic potato (*Solanum tuberosum*) plants at 2 locations in Central Montenegro (Nikšić and Danilovgrad). In both locations, approximately 10 to 15% of the plants showed symptoms of potato stolbur (i.e. leaf redness and yellowing, swollen stems, and aerial tuber formation). Laboratory analysis (PCR, RFLP, sequencing) confirmed the presence of '*Ca*. P. solani' (Radonjić *et al*., 2016).

Laurel wilt, caused by *Raffaelea lauricola* (EPPO Alert List), a fungal symbiont of the redbay ambrosia beetle (*Xyleborus glabratus*) occurs in Texas (US). In March 2015, dead and dying redbay trees (*Persea borbonia*) were observed near Lumberton, in Hardin county. The identity of the fungus was confirmed by laboratory studies (morphology, sequencing, pathogenicity tests). A survey for symptomatic trees was conducted in areas around Lumberton in May 2015, and the pathogen was isolated from wilted redbay trees at 3 additional locations in Hardin and Jasper counties, ranging from 3 to 23 km west and

northwest of the original location. The vector, *X. glabratus,* was trapped at several sites around Lumberton (Menard *et al*., 2016).

- **Diagnostics**

A multiplex real-time PCR has been developed for the simultaneous detection and differentiation of the four bacteria that are associated with bacterial spot of tomato (EPPO A2 List): *Xanthomonas euvesicatoria, X. vesicatoria, X. perforans* and *X. gardneri* (Strayer *et al*., 2016).

- **Host plants**

In Sicilia (IT), *Rhynchophorus ferrugineus* (Coleoptera Curculionidae - EPPO A2 List) has been found mainly on *Phoenix canariensis*, as well as on several other Arecaceae in urban environments (*Phoenix dactylifera*, *Washingtonia* spp., *Chamaerops humilis*, *Syagrus romanzoffiana*, *Jubaea chilensis*, *Howea forsteriana*, *Livistona chinensis*), and on *Chamaerops humilis* in natural conditions. In September 2015, the pest was found in wither and dying plants of *Strelitzia nicolai* (Strelitziaceae) growing in the 'Bioparco di Sicilia' (Carini, Palermo province). Several larvae and cocoons were collected at their bases and an exit hole was observed on a stem. This is the first time that a *Strelitzia* species is reported to host *R. ferrugineus* (Fiorello *et al.,* 2015).

- **Epidemiology**

Studies on the long-term survival of *Acidovorax citrulli* (EPPO A1 List) in seeds of *Citrullus lanatus* var. *citroides* (citron melon) have indicated that the bacterium may survive in these seeds for at least 7 years (Dutta *et al*., 2014).

Studies have been carried out to determine the length of time *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd – EPPO A2 List) remains infective in extracted tomato leaf sap on common surfaces. When sap from PSTVd-infected tomato leaves was applied to 8 common surfaces (cotton, wood, rubber tire, leather, metal, plastic, human skin, and string) and left for various periods of time (5 min to 24 h) before rehydrating the surface and rubbing onto healthy tomato plants, PSTVd remained infective for 24 h on all surfaces except human skin. It survived best on leather, plastic, and string. It survived less well after 6 h on wood, cotton, and rubber and after 60 min on metal. On human skin, PSTVd remained infective for only 30 min. These results highlight the importance of good hygiene practices to ensure effective management of PSTVd (Mackie *et al*., 2015).

- **New pests**

Tomato necrotic streak virus (*Ilarvirus*, TomNSV) is newly described virus which has been observed on tomato (*Solanum lycopersicum*) crops in Florida (US) at a relatively low incidence since 2013. Affected tomato plants show necrotic streaks along the leaflet veins and necrotic rings or spots on fruits (Badillo-Varguas *et al*., 2016).

Outbreaks of a rust disease have been observed in eucalyptus forestry plantations and nurseries in Kenya, Mozambique and South Africa since 2009. Studies have shown that these outbreaks were associated with a new fungus species *Phakopsora myrtacearum* sp. nov. This new rust species has been found on at least 3 *Eucalyptus* species, *E. cloeziana, E. grandis,* and *E. nitens*. It is considered that *P. myrtacearum* might be a threat to eucalyptus trees grown for forestry purposes. However, its host range and potential economic impacts remain to be further studied (Maier *et al*., 2016).

Sources:

Badillo-Vargas IE, Baker CA, Turechek WW, Frantz G, Mellinger HC, Funderburk JE, Adkins S (2016) Genomic and biological characterization of Tomato necrotic streak virus, a novel subgroup 2 Ilarvirus infecting tomato in Florida. *Plant Disease* **100**(6), 1046-1053.

Dutta B, Sanders H, Langston DB, Booth C, Smith S, Gitaitis RD (2014) Long-term survival of *Acidovorax citrulli* in citron melon (*Citrullus lanatus* var. *citroides*) seeds. *Plant Pathology* **63**, 1130–1137.

Fiorello A, Speciale M, Lo Verde G, Massa B (2015) *Strelitzia nicolai* (Strelitziaceae), new host plant for *Rhynchophorus ferrugineus* (Coleoptera Curculionidae) in Sicily. *Naturalista siciliano* **39**(2), 435-438.

Iturritxa E, Mesanza N, Brenning A (2015), Spatial analysis of the risk of major forest diseases in Monterey pine plantations. *Plant Pathology* **64**, 880–889.

Mackie EA, Coutts BA, Barbetti MJ, Rodoni BC, McKirdy SJ, Jones RAC (2015) *Potato spindle tuber viroid:* stability on common surfaces and inactivation with disinfectants. *Plant Disease* **99**(6), 770-775.

Maier W, McTaggart AR, Roux J, Wingfield MJ (2016) *Phakopsora myrtacearum* sp. nov., a newly described rust (Pucciniales) on eucalypts in eastern and southern Africa. *Plant Pathology* **65**(2), 189–195.

Menard RD, Clarke SR, Fraedrich SW, Harrington TC (2016) First report of laurel wilt, caused by *Raffaelea lauricola*, on redbay (*Persea borbonia*) in Texas. *Plant Disease* **100**(7), p 1502.

Moodley V, Gubba A, Mafongoya PL (2016) Occurrence of *Tomato chlorosis virus* (ToCV) on *Datura stramonium* near tomato crops (*Solanum lycopersicum*) in South Africa. *Plant Disease* **100**(7), p 1512.

Myung IS, Lee JY, Yun MJ, Lee YH, Lee YK, Park DH, Oh CS (2016) Fire blight of apple, caused by *Erwinia amylovora*, a new disease in Korea. *Plant Disease* **100**(8), 1774-1774.

Poojari S, Lowery T, Rott M, Schmidt AM, Úrbez-Torres JR (2016) First report of Grapevine Pinot gris virus in British Columbia, Canada. *Plant Disease* **100**(7), p 1513.

Radonjić S, Hrnčić S, Kosovac A, Krstić O, Mitrović M, Jović J, Toševski I (2016) First report of '*Candidatus* Phytoplasma solani' associated with potato stolbur disease in Montenegro. *Plant Disease* **100**(8), p 1775.

Strayer AL, Jeyaprakash A, Minsavage GV, Timilsina S, Vallad GE, Jones JB, Paret ML (2016) A multiplex real-time PCR assay differentiates four *Xanthomonas* species associated with bacterial spot of tomato. *Plant Disease* **100**(8), 1660-1668.

Tziros GT, Diamandis S (2016) First report of chestnut blight caused by *Cryphonectria parasitica* on European chestnut (*Castanea sativa*) on Corfu Island, Greece. *Plant Disease* **100**(7), p 1502.

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

Computer codes: DIPDPI, ENDOPA, ERWIAM, GIBBCI, GPGV00, PHAKMY, PHYPSO, PSDMAC, PSTVD0, RAFFLA, RHYCFE, TOCV00, TOMNSV, XANTEU, XANTGA, XANTPF, XANTVE, XYLBGR, CA, ES, GR, IT, KR, ME, US, ZA

2016/163 First report of *Globodera pallida* in Japan

Until recently, the only species of potato cyst nematode know to occur in Japan was *Globodera rostochiensis* (EPPO A2 list). But in August 2015, mature *Globodera* females and cysts were observed on the roots of potatoes resistant to the Ro1 pathotype of *G. rostochiensis* in a field in Abashiri, Hokkaido. Females adhering to potato roots were white or pale yellow, and were clearly distinguishable from *G. rostochiensis* females, which are brilliant gold. Laboratory analysis (morphology, PCR-RFLP, sequencing) confirmed the presence of *Globodera pallida*. This is the first report of *G. pallida* in Japan. Pathotype identification and screening for resistance to *G. pallida* among potato cultivars in Japan are underway.
The situation of *Globodera pallida* in Japan can be described as follows: **Present, first found in 2015 in a potato field in Hokkaido.**

Source: Narabu T, Ohki T, Onodera K, Fujimoto R, Itou K, Maoka T (2016) First report of the pale potato cyst nematode, *Globodera pallida*, on potato in Japan. *Plant Disease* **100**(8), p 1794.

Pictures: *Globodera pallida*. https://gd.eppo.int/taxon/HETDPA/photos

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

2016/164 First report of *Trichoferus campestris* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first record of *Trichoferus campestris* (Coleoptera: Cerambycidae – EPPO A2 List) on its territory. In July 2016, several beetles of *T. campestris* were found in a residential building by a private individual in Wilhelmshaven (Lower Saxony). The identity of the pest was confirmed on the basis of its morphological characteristics. As a wooden wreath used for decoration with exit holes was found in this home, it is presumed that the beetles had developed inside it and emerged from it. This wreath was made with wooden twigs of a climbing plant whose identity and origin could not be determined for the moment, but further investigations are ongoing. A preliminary risk analysis has been carried out by the German NPPO which concluded that although *T. campestris* probably has the potential to establish outdoors in Germany and other European countries, data was generally lacking to assess its potential of damage. The pest status remains to be determined.

Source: NPPO of Germany (2016-08).

Additional key words: new record **Computer codes:** HESOCA, DE

2016/165 First report of *Scaphoideus titanus* in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first finding of *Scaphoideus titanus* (Hemiptera: Cicadellidae - main vector of flavescence dorée), on its territory. During an official pest specific survey carried out in 2016, the first specimens of *S. titanus* (2 adults and 3 larvae) were caught in a vineyard in the municipality of Valtice (Břeclav district, South Moravian region), a few tens of metres away from the border with Austria. This survey had been initiated following information sent in June 2016 by the

Austrian Chamber of Agriculture about the occurrence of *S. titanus* larvae near the Czech border. It is supposed that *S. titanus* has spread naturally into the Czech Republic from neighbouring infested areas in Austria. No official phytosanitary measures will be taken against *S. titanus* but intensive specific surveys including testing for Grapevine flavescence dorée phytoplasma will be carried out.
The pest status of *Scaphoideus titanus* in the Czech Republic is officially declared as: **Present, only in one locality.**

Source: NPPO of the Czech Republic (2016-08).

Additional key words: new record **Computer codes:** SCAPLI, CZ

2016/166 First report of an unknown *Contarinia* species on *Alstroemeria* in the Netherlands

During summer 2016, unusual damage was noticed in a glasshouse producing cut flowers of *Alstroemeria* (hybrid 'Granada) in the municipality of Kaag en Braassem in the province Zuid-Holland, the Netherlands. In 2 compartments of the glasshouse (of 0.1 ha each), large numbers of *Alstroemeria* flowers and flower buds were malformed. As a consequence, no cut flowers could be harvested from these plants. Damage had initially been observed by the grower who notified a diagnostic laboratory, which in turn notified the Dutch NPPO. The NPPO received a sample for diagnosis and the glasshouse concerned was subsequently visited to assess the impact of the problem. In July 2016, the entomologist of the National Reference Centre found gall midge larvae when opening affected flower buds. These larvae were confirmed to belong to the family Cecidomyiidae (Diptera) and were tentatively identified as *Contarinia* sp. on the basis of preliminary molecular DNA comparisons. The rearing of adults remains necessary to pursue further research and confirm the identification at least at genus level. The possibility that the infestation involved *Contarinia quinquenotata*, which is known to infect *Hemerocallis* in the Netherlands, has been excluded. The origin of this finding is unknown. Given the large impact of the pest on the marketability of cut flowers and the conspicuous damage, it is assumed that the gall midge infestation is recent. No link could be established with imports of cut flowers or plants for planting. The native range of *Alstroemeria* spp. is South America which might also be the most likely origin of the midge species. Interestingly, the NPPO of Japan has intercepted *Contarinia* larvae in *Alstroemeria* flowers imported from Australia and New Zealand (Iwaizumi *et al.*, 2007), but it is not known whether this concerns the same pest species as in the Netherlands. The grower has volunteered to destroy all flowers and flower buds over a 5 week-period to remove all potential sites for egg laying. In addition, plants will be sprayed weekly to eliminate adult midges. The NPPO will monitor the situation during this period, and surveys will be carried out in spring 2017 when the new flower production cycle starts.
The pest status of this unknown *Contarinia* species in the Netherlands is officially declared as: **Transient: actionable, under surveillance.**

Source: NPPO of the Netherlands (2016-08).

Iwaizumi R, Tokuda M, Yukawa J (2007) Identification of gall midges (Diptera: Cecidomyiidae) intercepted under plant quarantine inspection at Japanese sea-and airports from 2000 to 2005. *Applied Entomology and Zoology* **42**(2), 231-240. https://www.jstage.jst.go.jp/article/aez/42/2/42_2_231/_pdf

Additional key words: new pest **Computer codes:** 1CONTG, NL

2016/167 *Rhagoletis suavis* found in Berlin (DE)

In 2013, *Rhagoletis suavis* (Diptera: Tephritidae – EU Annexes) was found for the first time in Germany (see EPPO RS 2014/011). This North American fruit fly was discovered on walnut (*Juglans* sp.) in a private garden in Kleinmachnow (Brandenburg). In August 2016, *R. suavis* was also found in Berlin (borough of Steglitz-Zehlendorf). A single adult specimen was observed on a house wall close to *Juglans regia* trees. This occurrence was notified by a private individual to the NPPO. The pest was identified morphologically by the JKI laboratory in Kleinmachnow. It is supposed that *R. suavis* has spread naturally from Brandenburg to Berlin. The individual was advised to destroy infested nuts and husks in his/her land. No other official phytosanitary measures were taken because the pest has been present in Brandenburg (adjacent to Berlin) for a few years, and no effective phytosanitary measures are currently available.
The pest status of *Rhagoletis suavis* in Germany is officially declared as: **Present, only in certain areas (Brandenburg, Berlin).**

Source: NPPO of Germany (2016-09).

Additional key words: detailed record **Computer codes:** RHAGSU, DE

2016/168 First report of *Illinoia liriodendri* in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first finding of *Illinoia liriodendri* (Homoptera: Aphididae – tulip tree aphid) on its territory. *I. liriodendri* was found during a survey carried out in June 2015 in a public green area located in the municipality of Opava (Moravian-Silesian region). Aphids were found on 1 tulip tree (*Liriodendron tulipifera*). Lower leaves were covered with aphid colonies and typical leaf deformation was observed. Because of the low economic importance of *I. liriodendri* and low prevalence of *L. tulipifera* in the Czech Republic, no official phytosanitary measures were taken.
The pest status of *Illinoia liriodendri* in the Czech Republic is officially declared as: **Present; only in one locality.**

EPPO note: *I. liriodendri* is a North American species, feeding on *L. tulipifera,* which has been introduced into Europe where it is spreading. It has also been reported in Asia (Japan and the Republic of Korea). A geographical distribution can be found in the EPPO Global Database (https://gd.eppo.int/taxon/MACSLR/distribution).

Source: NPPO of the Czech Republic (2016-08).

Additional key words: new record **Computer codes:** MACSLR, CZ

2016/169 First report of *Illinoia liriodendri* in Slovakia

The tulip tree aphid, *Illinoia liriodendri* (Homoptera: Aphididae) is reported for the first time from Slovakia. Colonies of *I. liriodendri* were found on tulip trees, (*Liriodendron tulipifera*) in 2 locations (city park of Nitra and Mlyňany Arboretum) of Southwestern Slovakia in 2014 and 2015. No severe damage was observed. It was also noted that aphid colonies were attacked by *Harmonia axyridis* at both places.

Source: Kollár J, Barta M (2016) The first record of tulip tree aphid, *Illinoia liriodendri* (Hemiptera: Aphididae), from Slovakia – short communication. *Plant Protection Science* **52**(2), 142–146.

Additional key words: new record **Computer codes:** MACSLR, SK

2016/170 The *Hemitarsonemus* species recently found in the Netherlands on *Platycerium alcicorne* is *H. ganeo*

In the EPPO RS 2016/054, the presence of *Hemitarsonemus tepidariorum* (Acarida: Tarsonemidae) was reported for the first time in the Netherlands. The mite had been found on plants for planting of *Platycerium alcicorne* (Polypodiaceae) in 1 greenhouse located at 'De Kwakel' in the municipality of Uithoorn. However, further verification of specimens by experts showed that the first identification of the pest as *Hemitarsonemus tepidariorum* was probably incorrect (EPPO RS 2016/132). Further investigations have now confirmed that the identity of the pest is *Hemitarsonemus ganeo*. In addition to the initial finding recorded in November 2015 on *P. alcicorne*, the pest was detected in early September 2016 on several ferns (*Athyrium filix-femina, Dryopteris carthusiana, Dryopteris filix-mas,* and *Polypodium vulgare*) growing outdoors in public green and forests near Ede and Wageningen (approximately 100 km away from the first finding site). No visible damage was observed on outdoor ferns as opposed to greenhouse *P. alcicorne* plants. *H. ganeo* was first described in Poland on fern species (*Athyrium filix-femina, Dryopteris dilatata, Dryopteris filix-mas*) present in forest habitats (Magowski, 2012). *H. ganeo* is closely related to *H. tepidariorum* which has been recorded in the USA, United Kingdom and Costa Rica before, but its world distribution is highly uncertain. Both species can cause damage on various fern species. Considering the fact that *H. ganeo* occurs outdoors in the Netherlands and in Poland, no official eradication measures are taken. At the place of production, the grower has destroyed all affected *P. alcicorne* plants.
The pest status of *Hemitarsonemus ganeo* in the Netherlands is officially declared as: **Present, in all parts of the Member State concerned.**

Source: NPPO of the Netherlands (2016-09).

Magowski WŁ (2012) Two new species and a new subgenus of tarsonemid mites (Acari: Heterostigmatina: Tarsonemidae) from ferns in Poland. *Zoological Studies* **51**(4), 512-525. http://zoolstud.sinica.edu.tw/Journals/51.4/512.pdf

Additional key words: new record **Computer codes:** HEMTGA, HEMTTE, NL

2016/171 First report of *Thekopsora minima* in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the first finding of *Thekopsora minima* (EPPO Alert List) on its territory. At the end of March 2016, the German NPPO notified Belgium that *Vaccinium* plants originating from an infected production site in Germany had been delivered to a Belgian nursery. This specialized nursery, located in the province of East-Flanders, produces berry plants and sells other soft fruit plants to final consumers mainly. The nursery was inspected in 2016-04-20 and, although symptoms resembling those of *T. minima* were observed in the *Vaccinium* variety concerned by the German notification, the presence of the fungus could not be confirmed. However, at the same nursery 2 other *Vaccinium* varieties delivered by another German and a Dutch company also showed symptoms (62 plants for planting of *Vaccinium corymbosum* cvs. 'Cipria' and 'Sunshine blue'). All 3 lots had been delivered in autumn 2015, so cross-contamination might have taken place. Symptomatic plants were sampled in 2016-04-20 and tested by the NRL (Institute for Agricultural and Fisheries Research). In 2016-05-24, laboratory analysis (morphology, nested-PCR, sequencing) confirmed the identity of the fungus. A short Pest Risk Analysis was conducted and concluded that considering the very high risk of introduction, spread and establishment of the fungus, as well as its host range (Ericaceae), eradication measures were necessary. All infected *Vaccinium* plants in the nursery have already been destroyed. Tracing-back and forward studies are ongoing. As two deliveries to other EU countries had taken place, NPPOs concerned have been notified. Surveys to detect symptoms of *T. minima* will continue.
The pest status of *Thekopsora minima* in Belgium is officially declared as: **Transient: actionable, under eradication.**

Source: NPPO of Belgium (2016-07).

Pictures: *Thekopsora minima*. https://gd.eppo.int/taxon/THEKMI/photos

Additional key words: detailed record **Computer codes:** THEKMI, BE

2016/172 First report of *Eutypella parasitica* in Germany and updated situation in Austria

During studies conducted from 2013 to 2015, *Eutypella parasitica* (formerly EPPO Alert List) was detected for the first time in Germany. The fungus was detected on 105 maple trees (*Acer pseudoplatanus, A. campestre, A. platanoides, A. cappadocicum, A. heldreichii* subsp. *trautvetteri* and *A. hyrcanum*) in Munich (Bayern). Affected trees were located in urban forests (78 trees), urban green areas (20 trees) and private gardens (7 trees). The majority of infected trees (74) occurred on sites adjacent to water bodies (a river, ponds or small lakes), with high air humidity during most of the year. The maximum distance between localities with *Eutypella* canker was about 15 km. *E. parasitica* is native to the USA and Canada and causes perennial cankers and wood decay on several species of maple. In the EPPO region, *E. parasitica* was first recorded in Slovenia (EPPO RS 2005/176) and then in Croatia (EPPO RS 2008/028), Austria (EPPO RS 2007/051), Czech Republic (EPPO RS 2015/210) and Hungary (EPPO RS 2016/108).
In Austria, since the initial finding of *E. parasitica* in 1 forest site near St. Veit an der Gölsen (Niederösterreich) on 5 *A. pseudoplatanus* trees, additional surveys have been conducted. In July 2011, characteristic symptoms of *Eutypella* cankers were observed in the gardens of the Traunsee castle in Altmünster (Oberösterreich) on 2 *A. pseudoplatanus* trees. Considering the rather wide distribution of the pathogen in the EPPO region and the fact that many occurrences have probably not yet been detected, eradication is not

considered feasible. However, it is desirable to prevent any further spread of the disease and several management measures might be recommended such as, destruction of diseased trees with careful disposal of infected plant material, surgery on valuable individual trees (e.g. by cutting a narrow area of bark around the canker margins), growing conditions minimizing spore dispersal.

Source: Cech TL, Schwanda K, Klosterhuber M, Straßer L, Kirisits T (2016) Eutypella canker of maple: first report from Germany and situation in Austria. *Forest Pathology* **46**, 336–340. doi:10.1111/efp.12268

Additional key words: new record **Computer codes:** ETPLPA, DE

2016/173 Outbreak of *Lecanosticta acicola* in Salzburg, Austria

In Austria, *Lecanosticta acicola* (teleomorph *Mycosphaerella dearnessii*– EPPO A2 List) was first found in 1996 (EPPO RS 99/135). The disease was then reported in other localities in the länder of Niederösterreich, Oberösterreich, Steiemark, Vorarlberg, Tyrol and Salzburg on several pine species (*Pinus mugo* subsp. *mugo*, *P. mugo* subsp. *uncinata*, *P. sylvestris* and *P. nigra* – EPPO RS 2012/241, 2015/192). In July 2016, a new outbreak was detected in Salzburg on *P. mugo* subsp. *mugo* and *P. mugo* subsp. *uncinata*. The infected area (approximately 0.4 km²) is located in a bog between the lakes of Grabensee and Mattsee and is also a protected nature reserve. The origin of this outbreak is unknown but it may be associated with the natural spread of spores from infected trees growing in urban sites nearby or with touristic activities (i.e. visitors carrying infectious spores on their shoes and clothes). Phytosanitary measures have been taken to prevent any further spread of the disease, such as: felling and incineration of infected trees, prohibition to transport plant material and wood of host species, use of less susceptible tree species in future reforestation programmes, raising public awareness to avoid spreading fungal spores with shoes and clothes.
The situation of *Lecanosticta acicola* in Austria can be described as follows: **Present in some parts of the area where host species are grown; under surveillance.**

Source: NPPO of Austria (2016-08).

Pictures: *Lecanosticta acicola.* https://gd.eppo.int/taxon/SCIRAC/photos

Additional key words: detailed record **Computer codes:** SCIRAC, AT

2016/174 *Phytophthora ramorum* found again in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of another finding of *Phytophthora ramorum* (EPPO A2 List) on its territory. *P. ramorum* has occasionally been reported in the Czech Republic, in relation with imports of ornamental shrubs from other EU countries, but in all cases eradication measures have been applied. During an official specific survey for *P. ramorum*, suspicious symptoms were observed in September 2015 on several *Rhododendron* plants in one garden centre located in the municipality of Dlouhá Loučka (Olomouc district, Olomouc region). Laboratory tests (PCR with specific primers) confirmed the identity of *P. ramorum*. Diseased plants belonged to a consignment that had been delivered in 2014 from Poland. The whole lot (11 plants of evergreen *Rhododendron* spp.) were showing symptoms of leaf and twig blight. As these plants had

been kept in the garden centre for about one year before the symptoms were detected upon inspection, the source of this infection remains unclear. However, it is noted that *P. ramorum* has not been found in this garden centre or in its vicinity before. In accordance with the Commission Decision 2002/757/EC, the 11 infected *Rhododendron* spp. plants, as well as 23 plants of deciduous *Rhododendron* spp. (azaleas) located within a radius of 2 m (or more) have been destroyed. Surveys will continue in the outdoor part of the garden centre (approximately 800 m²) on potentially susceptible host plants.
The official pest status of *Phytophthora ramorum* in the Czech Republic is officially declared as: **Transient: actionable, under eradication.**

Source: NPPO of the Czech Republic (2016-08).

Additional key words: detailed record **Computer codes:** PHYTRA, CZ

2016/175 First confirmed report of *Potato spindle tuber viroid* in Poland

The NPPO of Poland recently informed the EPPO Secretariat of the first confirmed report of *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd – EPPO A2 List) on its territory. In the past, there had been some reports but they were either doubtful or linked to interceptions, and all surveys had confirmed the absence of the viroid. In 2016, PSTVd was detected in 2 lots of seed potatoes (*Solanum tuberosum* cvs. 'Etola' and 'Denar'). The first case was detected in Melanowo (district of Kamień Krajeński, Kujawsko-pomorskie voivodeship), and the surface of the infected area was estimated at 2.8 ha. The second case was found in Turzyn (district of Nakło, Kujawsko-pomorskie voivodeship), with an estimated infected area of 5 ha. In both cases, the identity of the viroid was confirmed by molecular methods (RT-PCRs using different types of primers, sequencing). Official phytosanitary measures have been implemented in delimited areas corresponding to the whole surface of the 2 places of production (22 ha in the first case and 10.56 ha in the second one). All infected and possibly infected potatoes will be used for industrial purposes (distillery). On infected fields, plantation of potatoes or any other host plants of PSTVd will be prohibited until the end of 2017; volunteer potato plants and other naturally occurring host plants of PSTVd will be eliminated. In 2018, only the cultivation of ware or industrial potatoes will be allowed, and potato harvest will be subject to official sampling and testing. On the infected production sites, all equipment and stores will be disinfected, and surveys will continue.
The pest status of *Potato spindle tuber viroid* in Poland is officially declared as: **Present, at low prevalence.**

Source: NPPO of Poland (2016-07).

Pictures: *Potato spindle tuber viroid*. https://gd.eppo.int/taxon/PSTVD0/photos

Additional key words: new record **Computer codes:** PSTVD0, PL

2016/176 Isolated finding of *Potato spindle tuber viroid* in potato breeding material in the Netherlands

The NPPO of the Netherlands recently informed the EPPO Secretariat that *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd – EPPO A2 List) has been detected in potato (*Solanum tuberosum*) breeding material. During official surveys, PSTVd was detected in one potato genotype. Symptoms (growth cracks) were observed on tubers of infected plants. In total, 4 plants of this genotype were grown in 2 small fields owned by a breeding company in the municipality of Noordoostpolder. This company, of recent establishment, had started performing small-scale field selections of breeding material but did not produce any seed- or ware potatoes. The infected genotype had been imported from Northern Ireland in 2016. All other genotypes cultivated in the same fields tested negative for PSTVd, but a second negative test will be required before this material can be used for further breeding purposes. It is also noted that no direct links exist between the infected genotype and commercially available potato cultivars. The identity of the pathogen was confirmed in August 2016 by laboratory analysis (RT-PCR, sequencing). Phytosanitary measures have been taken and include the destruction of all infected potato material and a prohibition to grow potatoes in both fields for a period of 2 years.
The pest status of *Potato spindle tuber viroid* in the Netherlands is officially declared as:
Outbreak in potato breeding material (*S. tuberosum*) in August 2016, under eradication.
Outbreak in *C. annuum* in 2016, under eradication.
Transient in ornamentals (*S. jasminoides*).
One outbreak in *Dahlia* sp. in 2013, eradicated.
Incidental finding in tomato (*S. lycopersicum*) fruit production in 2013, eradicated.

Source: NPPO of the Netherlands (2016-09).

Pictures: *Potato spindle tuber viroid*. https://gd.eppo.int/taxon/PSTVD0/photos

Additional key words: detailed record **Computer codes:** PSTVD0, NL

2016/177 Biological control of the invasive non-native species *Lagarosiphon major*

The leaf-mining fly *Hydrellia lagarosiphon* (Diptera: Ephydridae) is being considered as a classical biological control agent against the non-native species *Lagarosiphon major* (Hydrocharitaceae: EPPO List of Invasive Alien Plants) in New Zealand and Ireland. *L. major* is an aquatic plant originating from Southern Africa. *L. major* can colonize freshwater lakes, water-bodies, slow-moving streams, deep reservoirs and dams. It is also reported to occur in wetlands, riparian zones as well as in canals and drainage ditches. As observed for most non-native Hydrocharitaceae species, this submerged perennial aquatic plant forms dense monospecific populations which often colonise the entire water body, restrict water movement, cut off light, produce anoxic conditions and trap sediments. *L. major* has been reported to outcompete native aquatic plants (e.g. *Charophytes, Myriophyllum*, *Potamogeton*) especially in Ireland, and following invasion the number of native plants decreased significantly. Historically, no leaf-mining biological control agent has achieved successful control of any submerged macrophyte. However, in the present study, under laboratory conditions larvae of *H. lagarosiphon* have been shown to have substantial impacts on *L. major* and can halt plant growth. Leaf damage varied between different larval abundances ranging from 65 leaves damaged by one larva compared to 168 damaged leaves with 5 larvae per shoot. Overall, both low and high abundances of larvae had an effect on shoot growth where shoot length was 30 to 50 % shorter compared to controls which did not receive larva. The damage incurred by the larvae, at low abundances, show that this species has potential as an effective biological control agent for *L. major.*

Source: Mangan R, Baars J (2016) Can leaf-mining flies generate damage with significant impact on the submerged weed *Lagarosiphon major*? *BioControl* DOI 10.1007/s10526-016-9759-7.

Pictures: *Lagarosiphon major*. https://gd.eppo.int/taxon/LGAMA/photos

Additional key words: invasive alien plants, biological control **Computer codes:** LGAMA, IE, NZ

2016/178 Q-bank electronic keys

Recently 5 electronic identification keys for plants in Q-bank have been updated to include new species and new photographs. These electronic keys have been discussed in the EPPO Bulletin 43(2) (http://onlinelibrary.wiley.com/doi/10.1111/epp.12035/full). The electronic keys include: invasive aquatic plants; invasive terrestrial plants; seeds; seedlings; and weeds in bonsai plants and in the case of the latter, the key has been extended. Until recently only weeds from pot plants originating from China were covered, but following an extensive study on weeds in pot plants originating from Central America, new species have now been included in the key. Currently this key includes 134 species, which are illustrated by some 1000 photographs. The key can be found at http://www.nationaalherbarium.nl/invasieven/Web_EN_Bonsaiweeds/Weeds_in_bonsai.html and a list of species treated in the 5 keys can be consulted at http://www.q-bank.eu/Plants/DefaultInfo.aspx?Page=keys-and-species.

Source: Q-bank website www.q-bank.eu

Additional key words: invasive alien plants

2016/179 Training workshops on prioritization and pest risk analysis for invasive alien plant species (EPPO Headquarters, Paris)

Under the LIFE funded project 'Mitigating the threat of invasive alien plants to the EU through pest risk analysis to support the Regulation 1143/2014', the European and Mediterranean Plant Protection Organization and the NERC Centre of Ecology and Hydrology will conduct two training workshops on (1) the prioritization of invasive alien plants and (2) pest risk analysis of invasive alien plants. If you want to participate in these free training workshops please register by 2016-10-14.

Training workshop 1: *EPPO Prioritization Process for invasive alien plant species compliant with EU Regulation No 1143/2014 (2016-12-14/17)*

Aim: To provide participants with an understanding of the process of prioritizing invasive alien plants for risk assessment within the framework of the EU Regulation No 1143/2014.

Venue: EPPO Headquarters (Paris, FR)

Cost: Free (participants will pay for their own accommodation, travel to and from the workshop and meals for the duration of the training workshop)

Inclusions: Two and half day's tuition, tea/coffee and light lunch (participants will pay 10 Euros per day for lunch).

Format: The two and half-day course will combine introductory lecture material combined with practical exercises to familiarise participants with the prioritization process for invasive alien plants compliant with the EU Regulation No 1143/2014. On day one, participants will learn, through lectures about the need for species prioritization, the information required to complete the prioritization process and important considerations when prioritizing species, including quality of information and uncertainty. Participants will be guided through the prioritization process where the presenters prioritize particular species. On days 2 and 3, participants will prioritize 5 species of their own choosing using the prioritization scheme. This will require some background research prior to the workshop (approximately 2 days) to gather information on each species in order to answer the pre-determined questions. On the afternoon of day 3, participants will have the opportunity to present their results to the group and discuss the outcome.

To register: http://meeting.eppo.int/meeting.php/C4867

Training workshop 2: *EPPO Express PRA for invasive alien plant species compliant with the Regulation (EU) No. 1143/2014 (2017-02-14/17).*

Aim: To provide participants with an understanding of the process of pest risk analysis of invasive alien plants within the framework of the EU Regulation No 1143/2014.

Venue: EPPO Headquarters (Paris, FR)

Cost: Free (participants will pay for their own accommodation, travel to and from the workshop and meals for the duration of the training workshop)

Inclusions: Four days tuition, tea/coffee and light lunch (participants will pay 10 Euros per day for lunch).

Format: The four-day course will combine introductory lecture material combined with practical exercises to familiarise participants with the Express Pest Risk Analysis for invasive alien plants compliant with the EU Regulation No 1143/204. On day one, participants will learn through lectures about the need and requirements of pest risk analysis, the information required to complete a pest risk analysis and important considerations including uncertainty. In the afternoon, participants will be guided through the pest risk analysis process where the presenters will use two case study species. On days 2 and 3, participants will pest risk analyse 2 species selected from the previous workshop using the Express PRA tool, considering the EU or the EPPO region as PRA area. Again, this will require some background research prior to the workshop (approximately 2 days) to gather information on each species in order to answer the pre-determined questions. On day 4, participants will have the opportunity to present their results to the group and discuss the outcome.

To register: http://meeting.eppo.int/meeting.php/A4874

Source: EPPO Secretariat (2016-09).
Project website: http://www.iap-risk.eu

Additional key words: invasive alien plants, training **Computer codes:** FR

2016/180 2nd Invasive weed conference (London, 2016-12-22)

The Property Care Association's second annual Invasive Weed Conference will take place in London on the 22nd of December 2016. This year's Invasive Weed Conference has been designed around the three following key themes: 'risk, roots and research'. Session 1 (Risks): this session will look at the legal landscape around controlling and managing Invasive Non-Native Species. Session 2 (Roots): the second session will look in detail at practical aspects, including surveying and mapping and responding to the increasing problem of aquatic non-native species. Session 3 (Research): this final session will allow participants to hear about some of the latest thinking and findings on topics including biocontrol of non-native invasive species and optimising physiochemical Japanese knotweed control in the United Kingdom. For the full programme and how to register see the link below:

Source: http://www.property-care.org/conferencespca-invasive-weed-conference/

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