ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND
MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO Reporting Service

NO. 6 PARIS, 2018-06

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2018/114 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**

During studies on viruses infecting cultivated and wild beans (*Phaseolus vulgaris*, *P. coccineus*, and *P. leptostachyus*) in the central-western region of Mexico, symptomatic and asymptomatic leaf samples were collected in the states of Guanajuato, Jalisco, and Nayarit between 2013 and 2015. Molecular tests confirmed the presence of *Cowpea mild mottle virus* (*Carlavirus*, CPMMV - EU Annexes) in several samples of cultivated and wild beans collected from the three studied Mexican states. This is the first time that CPMMV is reported from Mexico (Chiquito-Almanza *et al.*, 2018). **Present, only in some areas (Guanajuato, Jalisco, and Nayarit).**

In Belgium, *Fusarium oxysporum* f. sp. *lactucae* race 4 (formerly EPPO Alert List) was reported for the first time in 2018. The first wilting symptoms had been observed on lettuce (*Lactuca sativa*) crops in autumn 2015 in commercial glasshouses in the province of Antwerp. The disease then spread rapidly, and it is estimated that 15% of the glasshouse lettuce production area in Flanders are infected (Claerbout *et al.*, 2018). **Present, only in some areas.**

In the United Kingdom, the first outbreak of *Fusarium oxysporum* f. sp. *lactucae* race 4 (formerly EPPO Alert List) on lettuce (*Lactuca sativa*) was reported in October 2017 (location was not given). In May and June 2018, the disease was found in Lancashire (England) (ProMed, 2017 and 2018). **Present, only in some areas.**

In the Republic of Korea, *Little cherry virus 1* and *Little cherry virus 2* (*Velarivirus*, LChV-1 and LChV-2 - both EU Annexes) were detected in sweet cherry (*Prunus avium*) during studies conducted in July 2016 in Gyeongju-si and Gyeongsangbuk-do. LChV-2 had been detected earlier in the Republic of Korea but only in flowering cherry (*P. yedoensis*) (Cho *et al.*, 2018). **Present, only in some areas.**

In Serbia, *Tetranychus evansi* (EPPO A2 List) was found for the first time in 2013. The first specimens were found in August 2013 on tomato (*Solanum lycopersicum*) grown in 2 greenhouses near Belgrade (Šabac-Debrc). It is noted that climatic conditions prevailing in Serbia will probably not allow *T. evansi* to survive and establish outdoors (Marić *et al.*, 2018). **Present, few occurrences.**

- **Detailed records**

In July 2016, *Tomato spotted wilt orthotospovirus* (TSWV – EPPO A2 List) was found in Beijing on glasshouse chrysanthemums. Affected plants showed a serious stem necrotic disease, as well as irregular chlorotic spots on the upper leaves with shortened internodes. In some cases, discontinuous black streaks on stems near the base of the upper petioles, eventually followed by dieback, were observed. According to the authors, this is the first time that TSWV is detected on chrysanthemums in China (Chen *et al.*, 2018).

During field studies conducted in 2014 near Nevşehir (Central Anatolia region) in Turkey, the pathotype 2 of *Synchytrium endobioticum* (EPPO A2 List) was detected in soil samples

collected from potato fields. According to the authors, this is the first time that pathotype 2 is detected in Turkey (Çakir and Demirci, 2017).

In Iran, surveys on phytoplasmas were conducted from 2013 to 2015 in vineyards (*Vitis vinifera*) in the provinces of Qazvin, Lorestan and Markazi. Symptomatic and asymptomatic grapevine samples were collected and tested (PCR tests and RFLP analyses). As a result, several phytoplasma species were detected: '*Candidatus* Phytoplasma fraxini', '*Ca*. P. aurantifolia' (EU Annexes), '*Ca*. P. solani' (EPPO A2 List) and '*Ca.* P. phoenicium' (EPPO A1 List). It is noted that this is the first time that '*Ca.* P. fraxini' is detected in Iran (Zamharir *et al.*, 2017).

In China, *Viteus vitifoliae* (Hemiptera: Phylloxeridae - EPPO A2 List) was first found in 2005 in Shanghai. It was then found in vineyards in Baqiao (Shaanxi province) and Huaihua (Hunan province) (Zhao *et al*., 2017).

- **Absence**

The NPPO of Latvia recently informed the EPPO Secretariat that the official survey programme which has been carried out since 2008 confirmed the absence of *Fusarium circinatum* from the country (NPPO of Latvia, 2018).
The pest status of *Fusarium circinatum* in Latvia is officially declared as: **Absent, confirmed by survey.**

- **Host plants**

During August and September 2016, typical symptoms of phytoplasma yellows were observed on parsnip plants (*Pastinaca sativa*) in an experimental plot (105 m²) in South Bačka, Vojvodina, in Serbia. Approximately 5 % of the plants showed petiole and leaf redness, as well as chlorosis. Some plants displayed complete foliage necrosis and were therefore no longer suitable for human consumption at the time of harvest in October. Laboratory analysis (PCR with specific primers, sequencing) confirmed the presence of '*Candidatus* Phytoplasma solani' (EPPO A2 List) in symptomatic leaf samples (Medić Pap *et al*., 2018).

Laboratory studies were conducted in the USA to evaluate the suitability of cultivated olive, *Olea europaea*, as a host of *Agrilus planipennis* (Coleoptera: Buprestidae – EPPO A1 List). In this bioassay, several stems cut from an olive tree were used and inoculated with eggs of the insect. As live larvae and adults could be obtained, it is considered that olive is capable of supporting the development of *A. planipennis*. However, these preliminary results obtained in the laboratory should be verified in field conditions (Cipollini *et al.*, 2017).

- **New pests and taxonomy**

During studies carried out on blackcurrants (*Ribes nigrum*) of the USDA germplasm collection (Oregon, US) which were showing virus-like symptoms, a new *Idaeovirus* has been discovered in a blackcurrant accession and tentatively called Blackcurrant idaeovirus (BCIV) (Thekke-Veetil *et al*., 2017).

Sources: Çakir E, Demirci F (2017) A new pathotype of *Synchytrium endobioticum* in Turkey: pathotype 2. *Bitki Koruma Bülteni* **57**(4), 415-422.
Chen DL, Luo C, Liu H, Li XM, Cheng X, Li MY, Wang LL, Huang CL (2018) First report of Chrysanthemum stem blight and dieback caused by *Tomato spotted wilt virus* in China. *Plant Disease* **102**(5), p 1047.

Chiquito-Almanza E, Caballero-Pérez J, Guevara-Olvera L, Acosta-García G, Pérez-Pérez MCI, Acosta-Gallegos JA, Anaya-López JL (2018) First report of *Cowpea mild mottle virus* infecting cultivated and wild *Phaseolus* in the Central-Western region of Mexico. *Plant Disease* **102**(5), p 1047.

Cho SY, Kim H, Yi SI (2018) First report of *Little cherry virus 1* and *2* in sweet cherry in Korea. *Plant Disease* **102**(5), p 1045.

Cipollini D, Rigsby CM, Peterson DL (2017) Feeding and development of emerald ash borer (Coleoptera: Buprestidae) on cultivated olive, *Olea europaea. Journal of Economic Entomology* **110**(4), 1935-1937.

Claerbout J, Venneman S, Vandevelde I, Decombel A, Bleyaert P, Volckaert A, Neukermans J, Höfte M (2018) First report of *Fusarium oxysporum* f. sp. *lactucae* race 4 on lettuce in Belgium. *Plant Disease* **102**(5), p 1037.

INTERNET

- ProMed posting (no. 20171030.5412370) of 2017-10-30. Fusarium wilt, lettuce - UK: 1st rep. http://www.promedmail.org/post/5412370
- ProMed posting (no. 20180618.5861084) of 2018-06-18. Fusarium wilt, lettuce - UK: England. http://www.promedmail.org/post/5861084

Marić I, Marčić D, Petanović R, Auger P (2018) Biodiversity of spider mites (Acari: Tetranychidae) in Serbia: a review, new records and key to all known species. *Acarologia* **58**(1), 3-14.

Medić Pap S, Gvozdanović Varga J, Červenski J, Stepanović J, Rekanović E, Stepanović M, Duduk B (2018) First report of '*Candidatus* Phytoplasma solani' infecting parsnip in Serbia. *Plant Disease* **102**(5), p 1026.

NPPO of Latvia (2018-03).

Thekke-Veetil T, Ho T, Postman JD, Tzanetakis IE (2017) Characterization and detection of a novel idaeovirus infecting blackcurrant. *European Journal of Plant Pathology* **149**(3), 751-757.

Zamharir MG, Paltrinieri S, Hajivand S, Taheri M, Bertaccini A (2017) Molecular identification of diverse '*Candidatus* Phytoplasma' species associated with grapevine decline in Iran. *Journal of Phytopathology* **165**(7-8), 407-413.

Zhao JJ, Zhang Y, Fan DS, Feng JN (2017) Identification and expression profiling of odorant-binding proteins and chemosensory proteins of *Daktulosphaira vitifoliae* (Hemiptera: Phylloxeridae). *Journal of Economic Entomology* **110**(4), 1813-1820.

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

Computer codes: AGRLPL, BCIV00, CPMMV0, FUSALC, GIBBCI, LCHV10, LCHV20, PHYPSO, SYNCEN, TETREV, TSWV00, VITEVI, BE, CN, CN, GB, KR, MX, RS, RS, SI, TR

2018/115 *Acanthotomicus* sp.: a new pest of *Liquidambar styraciflua* in China

In China, *Liquidambar styraciflua* (Altingiaceae – American sweetgum) was introduced in Shanghai at the end of the 20th century and was then widely planted in Eastern and Central China for ornamental purposes. Since at least 2013, an unknown bark beetle has been observed attacking *L. styraciflua* trees and causing tree mortality in Shanghai. A survey conducted from 2013 to 2016 in 13 tree nurseries around Shanghai has shown that more than 10 000 trees have been killed by this insect. Attacked trees display resinous exudates on the trunk, wilted foliage, galleries, and numerous exit holes (approximately 1 mm diameter). In addition to *L. styraciflua*, it has been observed that a Chinese sweetgum, *L. formosana*, could be colonized by this unknown bark beetle. For the moment, the insect has been identified as a species belonging to the genus *Acanthotomicus*. Ongoing morphological and molecular studies suggest that the insect is probably an undescribed species. The estimated economic loss is of at least 4 million USD, but it is noted that the impact of *Acanthotomicus* sp. in private gardens or in other nurseries has not been evaluated. The authors stressed that this insect, most probably native to China, would represent a serious threat to *L. styraciflua* in its native area if it were to be introduced in North America. This statement could probably be extended to other parts of the world including the EPPO region, where *L. styraciflua* is also planted for ornamental purposes.

Source: Gao L, Li Y, Xu Y, Hulcr J, Cognato AI, Wang JG, Ju RT (2017) *Acanthotomicus* sp. (Coleoptera: Curculionidae: Scolytinae), a new destructive insect pest of North American sweetgum *Liquidambar styraciflua* in China. *Journal of Economic Entomology* **110**(4), 1592-1595.
Susaeta A, Soto J, Adams DC, Hulcr J (2017) Expected timber-based economic impacts of a wood-boring beetle (*Acanthotomicus* sp.) that kills American sweetgum. *Journal of Economic Entomology* **110**(4), 1942-1945.

Additional key words: new pest **Computer codes:** ACTTSP, CN

2018/116 First report of *Nematus tibialis* in Slovenia

The NPPO of Slovenia recently informed the EPPO Secretariat of the first record of *Nematus tibialis* (Hymenoptera: Tenthredinidae – locust sawfly) on its territory. A single larva was found in one location (Tivoli park in Ljubljana) but characteristic injuries on *Robinia pseudoacacia* leaves were also observed in several places in Slovenia. This insect makes characteristic holes in the leaves (larvae preferably eating the center of the leaf), causing only aesthetic damage. The larva and damage had been discovered by chance by a professional entomologist. The identify of the pest was confirmed by the official laboratory of the Slovenian Forestry Institute. The most likely origin of the introduction of *N. tibialis* into Slovenia is natural spread from neighbouring countries. No official phytosanitary measures will be taken.
The pest status of *Nematus tibialis* in Slovenia is officially declared as: **Present, at low prevalence.**

EPPO note: *N. tibialis* is a North American species developping on *R. pseudoacacia* which has been introduced into several European countries (e.g. Austria, Belgium, Bulgaria, Croatia, Czech Republic, Germany, Finland, France, Greece, Hungary, Italy, Lithuania, Moldova, Netherlands, Poland, Romania, Serbia, Slovakia, Spain, Switzerland, Ukraine, United Kingdom).

Pictures of *N. tibialis* can be viewed on the Internet:
https://www.invasive.org/browse/subthumb.cfm?sub=7066&host=3350
https://sl.wikipedia.org/wiki/Robinijeva_grizlica

Source: NPPO of Slovenia (2018-04).

INTERNET
DAISIE. http://www.europe-aliens.org/speciesFactsheet.do?speciesId=50671#
Fauna Europaea. https://fauna-eu.org/cdm_dataportal/taxon/49efc2ce-6878-42a3-be1a-6b0828c3482b

Additional key words: new record **Computer codes:** NEMATI, SI

2018/117 First report of *Ophraella communa* in Slovenia

The NPPO of Slovenia recently informed the EPPO Secretariat of the first record of *Ophraella communa* (Coleoptera: Galerucinae) on its territory. The first specimens had been noticed by a maize grower in the municipality of Nova Gorica (in Kromberk). 50 beetles and larvae were found on the weed *Ambrosia artemisiifolia* (EPPO List of Invasive Alien Plants) growing in a 0.3 ha maize field. In August 2017, the identity of the insect was confirmed by the official laboratory of the Regional Agriculture and Forestry Institute. Other colonies of *O. communa* were then found in several other locations in Western Slovenia. The most likely origin of *O. communa* in Slovenia is natural spread from Italy where the insect has also been recorded. No phytosanitary measures will be taken against *O. communa*.
The pest status of *Ophraella communa* in Slovenia is officially declared as: **Present, only in some areas.**

EPPO note: *O. communa* has been considered as a potential biological control agent against the weed *A. artemisiifolia* for introduction into Australia and the species is successfully used as a biological control agent in China and in other countries. Although it has not yet been approved for release, *O. communa* may represent a potential biological control agent for *A. artemisiifolia* in Europe.

Source: NPPO of Slovenia (2018-04).

Pictures: *Ophraella communa.* https://gd.eppo.int/taxon/OPHLCO/photos

Additional key words: new record **Computer codes:** OPHLCO, SI

2018/118 *Brevipalpus papayensis* is a vector of Citrus leprosis virus C

According to previous studies, *Brevipalpus phoenicis* (Acari: Tenuipalpidae), the vector of Citrus leprosis disease (EPPO A1 List), is a species complex (EPPO RS 2017/153). *Brevipalpus papayensis* is one of the 8 mite species belonging to this complex. In Brazil, *B. papayensis* occurs in citrus groves but seems to be prevalent in coffee plantations. Recent laboratory studies conducted in Brazil have shown that *B. papayensis* is a vector of *Coffee ringspot dichorhavirus* and of *Citrus leprosis virus C* (*Cilevirus*). As *B. papayensis* is prevalent in coffee plantations in Brazil, it is likely to be the main vector of *Coffee ringspot dichorhavirus* under natural conditions. For citrus crops, it is recalled that *B. yothersi* has been shown to transmit cileviruses and that *B. phoenicis* sensu stricto has been shown to transmit the tentative dichorhavirus Citrus leprosis virus N.

Source: Nunes MA, de Carvalho Mineiro JL, Rogerio LA, Ferreira LM, Tassi A, Novelli VM, Kitajima EW, Freitas-Astúa EW (2018) First report of *Brevipalpus papayensis* as vector of *Coffee ringspot virus* and *Citrus leprosis virus C*. *Plant Disease* **102**(5), p 1046.

Pictures: Citrus leprosis virus sensu lato. https://gd.eppo.int/taxon/CILV00/photos

Additional key words: epidemiology Computer codes: CILVC0, BRVPPA

2018/119 Surveys on *Globodera pallida* and *G. rostochiensis* in Norway

During 2009-2016, all production areas of ware potato (*Solanum tuberosum*) in Norway were surveyed for the presence of potato cyst nematodes, *Globodera pallida* and *G. rostochiensis* (both EPPO A2 List). During this period, a total of 18 846 soil samples were collected and tested. Most samples were taken from fields used for ware potato production, but 4 895 samples were also taken from packing houses handling ware potatoes. Potato cyst nematodes were found in 995 samples, representing 5.2 % of the tested samples. 946 samples tested positive for *G. rostochiensis* and 92 for *G. pallida*. Mixed populations of both species were found in 73 samples. *Globodera* spp. were not found in samples from the counties of Hordaland, Nordland, Troms and Finnmark, and they were found in less than 1 % of the samples from Nord-Trøndelag, Sør-Trøndelag, Møre og Romsdal and Hedmark. Counties where findings of *Globodera* spp. had been made in earlier surveys had the highest percentage of infested samples in the 2009-2016 survey: Østfold (18 %), Rogaland (17 %), Aust-Agder (8.5 %) and Vest-Agder (8.1 %). *G. pallida* was found in samples from Rogaland (89 samples), Aust-Agder (2) and Vest-Agder (1). In the past, *G. pallida* had only been found in these 3 counties and based on the new information provided by the 2009-2016 survey, it is considered that *G. pallida* had not spread to new counties.
Phytosanitary measures were taken to prevent any further spread of *Globodera* species. In the case of *G. rostochiensis*, measures include a prohibition of removing soil from the farm, restrictions concerning the production and use of farm-saved seed potatoes, a duty to communicate about the pest status, and to clean all machinery and equipment to be used outside the farm. In the case of *G. pallida*, measures include a prohibition of removing soil and farm-saved seed potatoes from the farm, a prohibition to grow potatoes on the field where *G. pallida* was detected, restrictions concerning the production and use of farm-saved seed potatoes, a duty to communicate about the pest status, and to clean all machinery and equipment to be used outside the farm.
Finally, the NPPO added that the Norwegian seed potato production is also tested annually for *Globodera* spp., but these activities are not part of the present survey. It is stressed that both *G. pallida* and *G. rostochiensis* have never been found in seed potato production in Norway.

The pest status of *Globodera pallida* in Norway is officially declared as: **Present, only in some areas (present only in few counties, restricted distribution), subject to official control.**

The pest status of *Globodera rostochiensis* in Norway is officially declared as: **Present, only in some areas (present in many counties, widespread in some and with restricted distribution in others), subject to official control.**

Source: NPPO of Norway (2018-06).

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

Additional key words: detailed record **Computer codes:** HETDPA, HETDRO, NO

2018/120 First report of *Meloidogyne enterolobii* in Portugal

The NPPO of Portugal recently informed the EPPO Secretariat of the first record of *Meloidogyne enterolobii* (EPPO A2 List) on its territory. The pest was found during a survey carried out by a University in the framework of a student's MSc (Master of Science). Samples had been collected in October 2017 from 2 ornamental plants (*Physalis peruviana*) in one private garden of 150 m² located in the municipality of Arazede (Coimbra district, Centro region). The identity of the nematode was confirmed by the University in May 2018. Official measures were taken to prevent any further spread of the pest. In particular, the owner of the garden was requested not to move rooted plants from the garden and to disinfect tools and shoes before leaving the infested site. A survey is being carried out in the surrounding areas to evaluate the extent of the infestation. In 2019, the national survey for other *Meloidogyne* species (i.e. *M. fallax* and *M. chitwoodi*) will also include *M. enterolobii*. This is the first time that *M. enterolobii* is reported from Portugal.
The pest status of *Meloidogyne enterolobii* in Portugal is officially declared as: **Present*.**

* Pest status is still under investigation and official surveys will be carried out.

Source: NPPO of Portugal (2018-06).

Pictures: *Meloidogyne enterolobii*. https://gd.eppo.int/taxon/MELGMY/photos

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

2018/121 First report of *Neonectria neomacrospora* in France

The NPPO of France recently informed the EPPO Secretariat of the first record of *Neonectria neomacrospora* (EPPO Alert List) on its territory. The fungus was identified in October 2017 on a sample (twig with needles) which had been collected from a dying *Abies alba* tree in the Peguère forest, located in the municipality of Cauterets (Hautes-Pyrénées). It is noted that in the tested sample, other fungal species (*Phomopsis* sp. and *Rhizosphaera* sp.) were identified. As this montaneous area (1630 m altitude) cannot be accessed during winter because of snow, the site will be surveyed again in 2018 between April and October to delimit the extent of the infection and to determine whether *N. neomacrospora* is the cause of dieback symptoms observed.
The pest status of *Neonectria neomacrospora* in France is officially declared as: **Present, only in some parts of the Member State concerned.**

Source: NPPO of France (2018-05).

Pictures: *Neonectria neomacrospora*. https://gd.eppo.int/taxon/NECTMA/photos

Additional key words: new record **Computer codes:** NECTMA, FR

2018/122 First report of *Phytophthora alni* in Latvia

The NPPO of Latvia informed the EPPO Secretariat of the first record of *Phytophthora alni* (formerly EPPO Alert List) on its territory. In October 2015, *P. alni* was found on *Alnus glutinosa* trees in a private forest near the city of Riga. The forest owner had contacted the NPPO of Latvia because unusual symptoms characterized by black exudates at the basis of the trees were observed. The forest was inspected and it was found that 40% of the *A. glutinosa* trees showed these symptoms. Samples were taken, and the identity of the pathogen was confirmed in November 2015 by molecular tests (DNA sequencing). No official measures were taken.
The pest status of *Phytophthora alni* in Latvia is officially declared as: **Present: only in some areas where host crop(s) are grown.**

Source: NPPO of Latvia (2018-03).

Pictures: *Phytophthora alni*. https://gd.eppo.int/taxon/PHYTAL/photos

Additional key words: new record **Computer codes:** PHYTAL, LV

2018/123 First report of '*Candidatus* Phytoplasma pyri' in Norway

In Norway, during an official survey conducted in 2016 and 2017, '*Candidatus* Phytoplasma pyri' (associated with pear decline - EPPO A2 List) was detected for the first time. During this survey, 1123 samples were collected from pear (*Pyrus communis*) trees from 46 locations in 10 fruit-producing counties. During these investigations, the psyllid vectors, *Cacopsylla pyri* and *C. pyricola*, were also collected from 6 locations and tested. '*Ca.* Phytoplasma pyri' was detected (real-time PCR) in 85 samples from 12 locations in the counties Akershus, Aust-Agder, Buskerud, Hordaland, Telemark, Vestfold and Østfold. Most detections were made in symptomless plants, but some pear trees were showing upward leaf rolling. No damage on fruit was observed. 304 psyllids were collected and '*Ca.* Phytoplasma pyri' was detected in

21 specimens from 2 locations. Official control measures were taken. All individual plants in the nuclear stock collection were tested and infected plants were destroyed.
The pest status of '*Candidatus* Phytoplasma pyri' in Norway is officially declared as: **Present: only in some areas where host crop(s) are grown.**

Source: NPPO of Norway (2018-06).

Pictures: '*Candidatus* Phytoplasma pyri'. https://gd.eppo.int/taxon/PHYPPY/photos

Additional key words: new record **Computer codes:** PHYPPY, NO

2018/124 Surveys on huanglongbing in Spain: absence of the disease and more details about *Trioza erytreae*

In the EPPO region, huanglongbing (associated with '*Candidatus* Liberibacter asiaticum', '*Ca*. L. africanus', '*Ca*. L. americanum' – EPPO A1 List) is still absent but the detection of one of its vectors, *Trioza erytreae* (Hemiptera: Triozidae – EPPO A2 List), in the Iberian Peninsula has triggered intensive surveys in Spain and the development of a contingency plan. It is recalled that *T. erytreae* was first detected in Madeira (Portugal) in 1994, in Islas Canarias (Spain) in 2002 and then in the mainland along the Atlantic coast in Portugal and Spain (Galicia). Extensive surveys were conducted in Islas Canarias and Galicia from 2009 to 2015 and confirmed the absence of huanglongbing.

Islas Canarias
Survey results showed that *T. erytreae* occurs in El Hierro, Gran Canaria, La Gomera, La Palma, Tenerife, but is still absent from Fuerteventura, La Gracioza, and Lanzarote. On islands where the pest occurs, almost all monitored commercial citrus crops were infested. In general, the most affected citrus species were lemon (*Citrus limon*) and mandarin (*C. reticulata*) trees, whereas sweet and sour orange (*C. sinensis* and *C. aurantium*) trees were less damaged by the insect. From a total of 108 270 inspected trees in Islas Canarias, 3 355 were tested for the presence of '*Ca*. Liberibacter' species, as well as 1 464 specimens of *T. erytreae*. None of the '*Ca*. Liberibacter' species associated with huanglongbing were detected.

Galicia
The monitored areas covered the provinces of Pontevedra and A Coruña. Results showed that *T. erytreae* occurs in the western part of both provinces, near the border with Portugal and along the Atlantic coast. A total of 2 735 trees were studied and 66% of the inspected trees showed signs of the presence of *T. erytreae*, in many cases only mature leaves of a few shoots were showing leaf galls. Although lemon trees were the most severely affected, damage could also be observed in mandarin, sweet and sour orange, as well as in grapefruit (*C. paradisi*) trees. From a total of 2 735 inspected trees, 1 941 were tested, as well as 105 specimens of *T. erytreae*. As for Islas Canarias, none of the '*Ca*. Liberibacter' species associated with huanglongbing were detected.

Source: Siverio F, Marco-Noales E, Bertolini E, Teresani GR, Peñalver J, Mansilla P, Aguín O, Pérez-Otero R, Abelleira A, Guerra-García A, Hernández E, Cambra M, López MM (2017) Survey of huanglongbing associated with '*Candidatus* Liberibacter' species in Spain: analyses of citrus plants and *Trioza erytreae*. *Phytopathologia Mediterranea* **56**(1), 98-110.

Pictures: '*Candidatus* Liberibacter asiaticus'. https://gd.eppo.int/taxon/LIBEAS/photos

Trioza erytreae. https://gd.eppo.int/taxon/TRIZER/photos

Additional key words: abence, detailed record **Computer codes:** TRIZER, LIBEAS, ES

2018/125 Preliminary survey on *Xylella fastidiosa* in Morocco confirms the absence of the bacterium

Considering the potential risk that *Xylella fastidiosa* (EPPO A2 List) could present to several crops in Morocco, a preliminary survey was conducted in citrus (*Citrus* spp.), grapevine (*Vitis vinifera*) and olive (*Olea europaea*) crops from May to September 2015 in 6 different regions (Azilal, Gharb, Haouz, Loukkos, Meknès, Souss). In total 43 commercial orchards and vineyards were visually inspected and samples were collected. In total, 900 samples were randomly collected as follows: 220 samples from olives trees in Azilal and Meknès regions; 410 from citrus trees in Gharb, Haouz, Loukkos and Souss regions; 270 from grapevine (table and wine grapes) in Gharb, Haouz and Meknès regions. Collected samples were tested (ELISA, PCR) but all gave negative results. It is concluded that this preliminary survey indicates that *X. fastidiosa* does not occur in Morocco. However, frequent and extensive surveys in different Moroccan regions are needed to continue to verify its absence.

Source: Afechtal M, Ait Friha A, Bibi I (2018) A preliminary survey on the presence of *Xylella fastidiosa* in olive, citrus and grapevine groves in Morocco. *Revue Marocaine des Sciences Agronomiques et Vétérinaires* **6**(1), 6-9.

Pictures: *Xylella fastidiosa*. https://gd.eppo.int/taxon/XYLEFA/photos

Additional key words: absence **Computer codes:** XYLEFA, MA

2018/126 First report of *Brenneria goodwinii* and *Gibbsiella quercinecans* in Latvia

In Latvia, *Brenneria goodwinii* and *Gibbsiella quercinecans* were detected for the first time in 2018 in several forest sites on oak trees (*Quercus robur*). These bacteria have been associated with acute oak decline, a syndrome which was observed in the United Kingdom in the 1980s and more recently in Switzerland (EPPO RS 2018/104). In Latvia, affected oak trees showed dark exudates on the trunks and wilting symptoms. *B. goodwinii* and *G. quercinecans* were detected in the following sites on:

- 4 oak trees in the municipality of Talsu novads (Kurzeme region) in a private forest and in a nature conservation area ('Talsu pauguraine'). In the nature conservation area, signs of the presence of *Agrilus biguttatus* (a possible vector) were observed.
- 3 oak trees in the municipality of Aizputes novads (2 trees in the parish of Kazdanga and 1 tree in the parish of Cirava - Kurzeme region).

Research on acute oak decline will be conducted in Latvia, as well as monitoring *Q. robur* trees in forests.

The pest status of *Brenneria goodwinii* and *Gibbsiella quercinecans* in Latvia is officially declared as: **Present, only in some parts of the Member State concerned.**

Source: NPPO of Latvia (2018-06).

Additional key words: new record **Computer codes:** BRNNGO, GIBSQU

2018/127 First report of *Xanthomonas arboricola* pv. *pruni* in Norway

The NPPO of Norway recently informed the EPPO Secretariat of the first record of *Xanthomonas arboricola* pv. *pruni* (EPPO A2 List) on its territory. The bacterium was detected for the first time during summer and autumn 2015. During official surveys conducted in 2015, 2016 and 2017, a total of 1322 samples were taken from symptomless *Prunus* spp. (i.e. *Prunus domestica, P. avium, P. cerasus, P. laurocerasus* and other ornamental *Prunus*) in nurseries (2015), fruit orchards (2016 and 2017) and public greens (2017). Collected samples were then tested by real-time-PCR methods. *X. arboricola* pv. *pruni* was found in 11 samples from 5 nurseries in Østfold (1 nursery), Oslo (1), Buskerud (1) and Hordaland (2). Concerning host plants, the bacterium was found in *P. domestica* in 4 nurseries and in *P. laurocerasus* in 1 nursery. Official measures were taken and all infected plants have been destroyed.
The pest status of *Xanthomonas arboricola* pv. *pruni* in Norway is officially declared as: **Present: but managed.**

Source: NPPO of Norway (2018-06).

Pictures: *Xanthomonas arboricola* pv. *pruni*. https://gd.eppo.int/taxon/XANTPR/photos

Additional key words: new record **Computer codes:** XANTPR, NO

2018/128 *Xanthomonas prunicola*: a new bacterium isolated from nectarine trees in Spain

In Spain, a new bacterium has recently been isolated from nectarine trees (*Prunus persica* var. *nectarina*) cultivated in Murcia. Three bacterial isolates could be obtained and characterized. These isolates showed yellow and mucoid colonies, similar to those of *Xanthomonas arboricola* pv. *pruni,* but gave negative results when tested (serological tests, real-time PCR) for this pathogen. Further studies using both phenotypic and genomic methods showed that these isolates belonged to a new and distinct species for which the name *Xanthomonas prunicola* sp. nov was proposed. In addition, the three isolates were confirmed to be pathogenic also on peach (*Prunus persica*), causing necrotic lesions on leaves.

Source: López MM, Lopez-Soriano P, Garita-Cambronero J, Beltrán C, Taghouti G, Portier P, Cubero J, Fischer-Le Saux M, Marco-Noales E (2018) *Xanthomonas prunicola* sp. nov., a novel pathogen that affects nectarine (*Prunus persica* var. *nectarina*) trees. *International Journal of Systematic and Evolutionary Microbiology* **68**(6), 1857-1866 (abst.) (via PestLens).

Additional key words: new pest **Computer codes:** XANTPC, ES

2018/129 First report of *Tomato chlorosis virus* in the United Kingdom

The NPPO of the United Kingdom recently informed the EPPO Secretariat of the first record of *Tomato chlorosis virus* (*Crinivirus,* ToCV - EPPO A2 List) on its territory. In May 2018, an outbreak of ToCV was detected in a tomato (*Solanum lycopersicum*) production glasshouse (6.2 ha) in Kent. The virus was detected by ELISA from asymptomatic tomato leaves following the information from the NPPO of the Netherlands that a positive sample had been detected by a laboratory in plant material submitted by a UK grower. Official phytosanitary measures will be taken with the aim of eradicating this outbreak.
The pest status of *Tomato chlorosis virus* in the United Kingdom is officially declared as: **Transient, actionable, under eradication**

Source: NPPO of the United Kingdom (2018-05).

Pictures: *Tomato chlorosis crinivirus.* https://gd.eppo.int/taxon/TOCV00/photos

Additional key words: new record **Computer codes:** TOCV00, GB

2018/130 Can camels disperse seeds of the invasive tree *Prosopis juliflora*?

Prosopis juliflora (Fabaceae) is a is a tree 3-12 m tall, sometimes shrubby with spreading branches. The species is native to Mexico, Central and South America and the Caribbean and has been introduced to many regions of the world, including the EPPO region where it is present in Algeria, Spain (mainland and the Canary Islands: Gran Canaria), Israel, Jordan, Morocco, Tunisia. In the native and introduced ranges, *P. juliflora* is found in a number of different habitats including: wastelands, forests, managed and natural grasslands, coastal areas (including coastal dunes), wetlands, abandoned fields and urban areas (for example roadsides). In particular, in the introduced range, *P. juliflora* can invade rangeland, where it can form impenetrable thickets, and encroaches upon agricultural and abandoned land and can quickly invade uncultivated fields. *P. juliflora* was introduced intentionally into the Gebel Elba National Park in Egypt in the 1980s for agroforestry uses and has since become an invasive species. Camels have been suggested as an important dispersal mechanism for *Prosopis* species in this area as the spread of the species follows trade routes and animal tracks. In the current study, four camels of similar age and weight were fed 70 fruits containing approximately 1 000 seeds which were then retrieved from the camel's dung at 24-hour intervals over 96 hours. Retrieved seeds were tested for germination and viability and compared to control seeds (seeds not eaten by camels). The passage of seeds through the camel's gut accelerated seed germination (48 % - 75 %) compared to control seeds (15 % germination). This was mainly shown to be due to the pericarp being removed as the fruits passed through the camel. Those fruits that remained intact following passage through the gut had decreased germination (20 % lower) compared to the control.

Source: Abbas AM, Mancilla-Leyton JM, Castillo JM (2018) Can camels disperse seeds of the invasive tree *Prosopis juliflora*. *Weed Research* **58**, 221-228.

Additional key words: invasive alien plants **Computer codes:** PRCJU, EG

2018/131 Invasive alien plants along roadsides in Europe

Roadsides can play an important role in the spread of invasive alien plants by providing corridors which support establishment and spread throughout regions. The turbulence of passing vehicles can act to facilitate the dispersal of propagules and the maintenance and construction along roadsides can spread rhizome material of species such as *Fallopia japonica*. Through expert consultation and literature reviews the occurrence of invasive alien plants was evaluated in seven European countries Austria, Germany, the Netherlands, Ireland, Norway, Slovenia, and Sweden. Almost 500 invasive alien plant species were assessed for their occurrence along roadsides in the selected countries and 89 species were identified as occurring in this habitat. The highest number of invasive alien plants were identified for Norway (45), followed by Slovenia (29) and Sweden (24), and the lowest number for Ireland (12). Thirteen species (see table 1) were identified to occur in four or more of the seven countries and of these three species were *Fallopia* species. In addition, three shrub and tree species were among the most commonly found species along roadsides (*Ailanthus altissima*, *Robinia pseudoacacia* and *Rosa rugosa). Broussonetia papyrifera* (Moraceae) is a tree species which is also reported as present along roadsides in Slovenia. The species is native to Asia and has been listed on the EPPO Alert List since 2016. The authors of the present study highlight that further research is required to increase our knowledge on control methods for invasive alien plants along roadsides in order to prevent further spread.

Table 1. The 13 species most commonly found along roadsides during the study.

Species	EPPO / EU List	Family	Origin	Country
Ailanthus altissima	EPPO List IAP	Simaroubaceae	Asia	AT, DE, NL, SI
Ambrosia artemisiifolia	EPPO List IAP	Asteraceae	N- America	AT, DE, NL, SI
Epilobium ciliatum		Onagraceae	N-America	NL, NO, SE, SI
Fallopia japonica	EPPO List IAP	Polygonaceae	Asia	AT, DE, NL, IE, NO, SE, SI
Fallopia sachalinensis	EPPO List IAP	Polygonaceae	Asia	AT, DE, NL, IE, NO, SI
Fallopia x bohemica	EPPO List IAP	Polygonaceae	Hybrid	AT, DE, NL, IE, NO, SI
Heracleum mantegazzianum	EPPO List IAP/ EU List	Apiaceae	Caucasus	AT, DE, NL, IE, NO, SE
Impatiens glandulifera	EPPO List IAP/ EU List	Balsaminaceae	India	AT, DE, NL, IE, NO, SE, SI
Lupinus polyphyllus	EPPO Observation List	Fabaceae	N-America	DE, NO, SE, SI
Rosa rugosa		Rosaceae	E-Asia	DE, NL, NO, SE
Senecio inaequidens	EPPO List IAP	Asteraceae	S-Africa	AT, DE, NL, NO, SE, SI
Solidago canadensis	EPPO List IAP	Asteraceae	N-America	AT, DE, NL, NO, SE, SI
Solidago gigantea	EPPO List IAP	Asteraceae	N-America	AT, DE, NL, NO, SE, SI

EPPO List IAP: EPPO List of Invasive Alien Plants.
EU List: list of invasive alien species of Union concern.

Source: Follak S, Eberius M, Essl F, Furdős A, Sedlacek N, Trognitz F (2018) Invasive alien plants along roadsides in Europe. *EPPO Bulletin* **48**(early view). DOI: https://doi.org/10.1111/epp.12465

Additional key words: invasive alien plants

Computer codes: AILAL, AMBEL, BRNPA, EPICT, HERMZ, IPAGL, LUPPO, POLCU, REYBO, REYSA, ROSRG, SENIQ, SOOCA, SOOGI, AT, DE, NL, IE, NO, SE, SI

2018/132 Perceptions of the impact of alien plants in urban environments

Many alien plant species are introduced into urban environments to create or restore ecosystem services. This can include planting species for regulating services including climate, floods and water quality and cultural services for recreation, aesthetic and spiritual benefits. However, some species can spread from their planted positions and negatively impact on ecosystem services creating ecosystem 'disservices'. In the present study, an online and face to face questionnaire was conducted to assess the perceptions of urban residents regarding their capacity to provide ecosystem services and ecosystem disservices. The results of the questionnaire showed that most residents perceive invasive alien plants negatively and agreed that they provide ecosystem disservices rather than promoting ecosystem services, however, many recognise their importance in providing ecosystem services. Although most residents are not opposed to the management of invasive alien plants, such actions were not perceived as high priority relative to other environmental problems. Socio-demographic variables such as age, education, environmental awareness, and ethnicity shape urban residents' perceptions of invasive alien plants in urban areas. Older, more educated respondents were more likely to perceive alien plants negatively, while respondents with greater environmental awareness were aware of the benefits provided by alien plants. This study highlights the need to integrate public perceptions into the planning and management of invasive alien plants and emphasises the importance of including ecosystem service assessments into the decision-making process, particularly in urban areas.

Source: Potgieter L, Gaertner M, O'Farrell PJ, Richardson DM (2018) Perceptions of impact: Invasive alien plants in the urban environment. Journal of Environmental Management. DOI: https://doi.org/10.1016/j.jenvman.2018.05.080

Additional key words: invasive alien plants **Computer codes:** ZA

2018/133 Update on LIFE project IAP-RISK

The LIFE project IAP-RISK is drawing to an end with a project completion date of 2018-06-30. Following recent updates, ten pest risk analysis (PRAs) have been presented to the Working Party on Phytosanitary Regulations (WPPR) in June 2018 and were subsequently endorsed. These species were: *Ambrosia confertiflora, Andropogon virginicus, Cortaderia jubata, Ehrharta calycina, Hakea sericea, Humulus scandens, Lespedeza cuneata, Lygodium japonicum, Prosopis juliflora* and *Triadica sebifera*. In September 2018 these ten PRAs will be presented to the EPPO Council for approval and subsequently listed on the EPPO A1 or A2 Lists of pests recommended for regulation as quarantine pests. In addition, a number of new information documents have been added to the projects website including the fourth and final LIFE IAP Newsletter and species-specific posters and leaflets which can be downloaded and amended to suit the requirements of various stakeholders. Finally, two extra documents will be added to the projects website this summer, the first one is a Layman's Report which summarises the work conducted within the project to a general audience and the second is an AfterLife Communication Plan which highlights the actions that will continue following the completion of the project.

Source: LIFE IAP-RISK website: www.iap-risk.eu

Additional key words: invasive alien plants **Computer codes:** ANOVI, CDTJU, EHRCA, FRSCO, HKASE, HUMJA, LESCU, LYFJA, PRCJU, SAQSE