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2018/187 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**

In Bosnia and Herzegovina, *Aproceros leucopoda* (Hymenoptera: Argidae – formerly EPPO Alert List) was first found in 2017 in the municipality of Vareš on *Ulmus glabra* (Dautbašić *et al.*, 2018).

In France, *Aproceros leucopoda* (Hymenoptera: Argidae – formerly EPPO Alert List) was first found in May 2017 in the Nord department, in the forest of Cassel. It was then also observed in Villers-Saint-Paul (near Creil - Oise department), and in Cergy (Val d'Oise department) (Internet, 2018).

In the United Kingdom, *Aproceros leucopoda* (Hymenoptera: Argidae – formerly EPPO Alert List) was first found in May 2017 as part of local plant recording activity carried out by experienced amateurs in Surrey (near Dorking) in autumn 2017. In June 2018, further reports have come in from across a wide area of south east England and the east Midlands (Internet, 2018).

In China, *Heterodera elachista* (EPPO Alert List) was recently found in a soil sample taken from a rice field in Jiangxi. The authors also mentioned its presence in Hubei (Feng *et al.*, 2018).

In China, *Heterodera glycines* (EPPO A2 List) is reported in Beijing, Shanghai, Sichuan and Yunnan. The authors noted that the soybean cyst nematode was first discovered in Heilongjiang Province in 1899 and is now reported from 23 provinces in China (Feng *et al.*, 2018).

Huanglongbing (associated with 'Candidatus *Liberibacter* spp.' – EPPO A1 List) occurs in Guatemala. It was first found in 2010 in the municipalities of Poptún, Dolores, Sayaxché, San José, San Luis and Melchor de Mencos (Petén department); Livingston and Puerto Barrios (Izabal department); Fray Bartolomé del las Casas (Alta Verapaz department). Under official control (Internet, 2018). **Present, only in some areas, under official control.**

In Morocco, *Pezothrips kellyanus* (Thysanoptera: Thripidae – formerly EPPO Alert List) was first found in 2008 in the region of Beni-Mellal, and a year later in the region of Souss-Massa. It was initially considered to be a minor pest, but severe outbreaks were reported in 2018 in the Souss-Massa region in citrus crops (Smaili *et al.*, 2018).

In Tunisia, *Pezothrips kellyanus* (Thysanoptera: Thripidae – formerly EPPO Alert List) was first found in 2008. It was initially considered to be a secondary pest, but its distribution and damage have increased during the last decade. It is now common in citrus-growing areas of Tunisia (Bizerte, Mornag and Cap-Bon) (Gelaam Kort and Boulahia-Kheder, 2017).

The presence of *Potato mop-top virus* (*Pomovirus*, PMTV) is reported for the first time in 2018 from New Zealand. PMTV has been detected on potato tubers from 2 properties in the Canterbury region (South Island). Biosecurity New Zealand is investigating how the virus may have entered the country (Biosecurity New Zealand, 2018).

- **Detailed records**

Agrilus planipennis (Coleoptera: Buprestidae – EPPO A2 List) occurs in South Dakota (US). Regulated areas have been delimited in the counties of Lincoln, Minnehaha, and Turner. *A. planipennis* also occurs in Vermont. Official control measures are being taken to prevent further spread of the pest (NAPPO, 2018).
The pest status of *Agrilus planipennis* in the USA is officially declared as: **Present in some parts of the United States and subject to official control to prevent further spread.**

- **Eradication**

In the United Kingdom, *Phytophthora foliorum* was detected for the first time March 2016, in a single *Rhododendron ponticum* plant in Scotland (EPPO RS 2016/059). The infected plant was destroyed, and subsequent delimiting surveys have led to no further findings. Therefore, the NPPO of the United Kingdom now considers that this outbreak has been eradicated (NPPO of the United Kingdom, 2018).

In Italy, *Tomato ringspot virus* (*Nepovirus*, ToRSV - EPPO A2 List) was detected in Emilia-Romagna in pomegranate trees (*Punica granatum*) which had been imported from the USA (EPPO RS 2015/194). Since 2015, all plants belonging to the infected lot have been destroyed and specific surveys have been carried out. After two years of investigations, no other cases of ToRSV have been found. Therefore, the NPPO of Italy concluded that ToRSV has been successfully eradicated (NPPO of Italy, 2018).

- **New pests and taxonomy**

Stagonosporopis andigena (=Phoma andigena – EPPO A1 List) causes a leaf spot disease on tomato (*Solanum lycopersicum*) and potato (*S. tuberosum*) in Bolivia and Peru, at altitudes between 2000 and 3500 m. In the 1980s, a variant called *Phoma andina* var. *crystalliniformis* was identified on tomato and potato samples collected in Colombia and Venezuela at altitudes between 1500 and 3700 m (Loerakker *et al.*, 1986). More recent studies (Aveskamp *et al.*, 2010) concluded that *Phoma andina* var. *crystalliniformis* should be considered as a separate species, *Stagonosporopis crystalliniformis*. Revised geographical distributions for both *S. andigena* and *S. crystalliniformis* can be consulted in the EPPO Global Database.
https://gd.eppo.int/taxon/PHOMAN/distribution
https://gd.eppo.int/taxon/STGSCR/distribution

- **Corrections**

In EPPO RS 2018/181: *Dothistroma septosporum* was found in Thiessow (Mecklenburg-Western Pomerania) and **not** in 'Thuringia'.
In EPPO RS 2018/138: the title of the article mentioned a first outbreak of *Anoplophora chinensis* in France (in Royans, Charente-Maritime department). However, the first record of *A. chinensis* in France was made in 2003 in Soyons (Ardèche department) and this first outbreak was then successfully eradicated.
Many thanks to our readers who have spotted these errors! Corrections will be made to the files that are stored in the EPPO Global Database.

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NAPPO Phytosanitary Alert System. Official Pest Reports

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- USA (2018-06-11) *Agrilus planipennis* (Emerald Ash Borer): APHIS adds Vermont to the regulated area in the United States. https://www.pestalerts.org/oprDetail.cfm?oprID=754

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Additional key words: detailed record, eradication, new pest, new record, taxonomy

Computer codes: AGRLPL, AGRLPL, APRCLE, HETDEL, HETDGL, LIBEAS, PEZTKE, PHOMAN, PHYTFM, PMTV00, STGSCR, TORSV0, BH, BO, CH, CN, CO, GB, GT, IT, MA, NZ, PE, TN, US, US, VE

2018/188 International Conference - *Xylella fastidiosa*, an unpredictable threat? Technical and scientific breakthroughs in disease control (Valencia, ES, 2018-12-12/13)

Phytoma-España and the Regional Ministry of Agriculture, Environment, Climate Change and Rural Development of the Valencian Community are organizing an international conference on '*Xylella fastidiosa*, an unpredictable threat? Technical and scientific breakthroughs in disease control' in Valencia, Spain on the 12th and 13th of December 2018. The main objectives of the conference are to share the most recent advances made by researchers from the Americas and Europe about *Xylella fastidiosa*, and to discuss control strategies of the numerous diseases that the bacterium can cause to crops of economic and social importance, such as olive, grapevine, almond and citrus.

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Preliminary programme (in English):
https://www.phytoma.com/images/simposios/ING_PreProgramme_Xylella_ING_231018.pdf
Registration (a reduced rate is offered until the 19th of November):
https://www.phytoma.com/simposio/inscripcion-online

Source: EPPO Secretariat (2018-10).

Additional key words: conference **Computer codes:** XYLEFA, ES

2018/189 First report of *Spodoptera frugiperda* in Mayotte

The NPPO of France recently informed the EPPO Secretariat of the first record *of Spodoptera frugiperda* (Lepidoptera: Noctuidae – EPPO A1 List) in Mayotte. The pest was discovered in August 2018 during specific surveys. Larvae were found in 3 maize fields (*Zea mays*) in 2 different sites. It is noted that in one field, 90% of the area was infested by *S. frugiperda* and on some maize plants up to 7 larvae per plant were observed. The identity of the pest was confirmed on the basis of its morphological characteristics by the French national reference laboratory (ANSES). Additional surveys will be carried out in Mayotte to better determine the extent of the infestation and official control measures are being elaborated.
The pest status of *Spodoptera frugiperda* in Mayotte is officially declared as: **Present, only in some areas.**

Source: NPPO of France (2018-10).

Pictures: *Spodoptera frugiperda*. https://gd.eppo.int/taxon/LAPHFR/photos

Additional key words: new record **Computer codes:** LAPHFR, YT

2018/190 First report of *Spodoptera frugiperda* in Réunion

The NPPO of France recently informed the EPPO Secretariat of the first record *of Spodoptera frugiperda* (Lepidoptera: Noctuidae – EPPO A1 List) in Réunion. The pest was discovered in September 2018 during specific surveys. The pest was found in 2 maize (*Zea mays*) production sites where only 1 to 2% of the plants were attacked. The identity of the pest was confirmed on the basis of its morphological characteristics by the French national reference laboratory (ANSES). Additional surveys will be carried out on the island of Réunion to better determine the extent of the infestation and official control measures are being elaborated.
The pest status of *Spodoptera frugiperda* in Réunion is officially declared as: **Present, only in some areas.**

Source: NPPO of France (2018-10).

Pictures: *Spodoptera frugiperda*. https://gd.eppo.int/taxon/LAPHFR/photos

Additional key words: new record **Computer codes:** LAPHFR, RE

2018/191 *Anoplophora glabripennis* found in Piemonte, Italy

The NPPO of Italy recently informed the EPPO Secretariat of the detection of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A2 List) in Piemonte region. In July 2018, *A. glabripennis* was found in the municipality of Vaie (Torino province). The pest itself or signs of the pest were observed on 2 *Acer* sp. plants in a small urban park, on 23 ornamental *Acer* sp. plants along a road, and on 1 *Salix* plant. On 2 *Acer* sp. trees (12 m high), adults, larvae, eggs and exit holes were observed. On other plants (of smaller size), only signs of the pest (oviposition pits and holes) were observed. Phytosanitary measures have been taken in accordance with decision 2015/893/EU. In particular, a demarcated area was established, trees to be felled were identified, and 3 insecticide treatments were applied. An information

campaign has also been launched. In September 2018, *A. glabripennis* was also found in the municipality of Cuneo (Cuneo province). The infestation concerned 4 *Acer* plants located in a urban area. As above, phytosanitary measures were taken in accordance with decision 2015/893/EU. The origin of these two outbreaks in Piemonte is unknown, but investigations are ongoing.
The pest status of *Anoplophora glabripennis* in Italy is officially declared as: **Present, under eradication.**

Source: NPPO of Italy (2018-09).

Pictures: *Anoplophora glabripennis*. https://gd.eppo.int/taxon/ANOLGL/photos

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

2018/192 *Aleurocanthus spiniferus* found in Croatia

The NPPO of Croatia recently informed the EPPO Secretariat of the first confirmed record of *Aleurocanthus spiniferus* (Hemiptera: Aleyrodidae – EPPO A2 List) on is territory. During an official survey carried out in September 2018 in the Dubrovnik-Neretva county, a pest resembling *A. spiniferus* was observed in a small mandarin orchard (*Citrus reticulata* - 0.05 ha) in Vitaljina (Konavle municipality, south of Dubrovnik). Leaf samples with puparia and exuviae were collected and analysed in the laboratory, and the identity of *A. spiniferus* was confirmed. The infested site, Vitaljina, is very close to the border with Montenegro. According to recent reports from Montenegro, a population of *A. spiniferus* is established in the nearby area of Herceg Novi. Therefore, the NPPO of Croatia assumed that the outbreak in Vitaljina resulted from natural spread of *A. spiniferus* (via passive and/or active flight). It is recalled that in Croatia, *A. spiniferus* had been detected and subsequently eradicated in 2012 in a garden centre (EPPO RS 2015/047), and that this first finding was considered as an interception.
The pest status of *Aleurocanthus spiniferus* in Croatia is officially declared as: **Present, only in specific parts of the area concerned, under containment.**

Source: NPPO of Croatia (2018-10).

Pictures: *Aleurocanthus spiniferus*. https://gd.eppo.int/taxon/ALECSN/photos

Additional key words: detailed record **Computer codes:** ALECSN, HR

2018/193 First report of *Earias roseifera* in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the first record of *Earias roseifera* (Lepidoptera: Noctuidae) in Italy. In June 2018, a phytosanitary inspector collected larvae of an unknown pest actively feeding on azalea (*Rhododendron* sp.) shoots and buds, in a private garden near Como (Lombardia region). Specimens were sent to the diagnostic laboratory where the larvae were reared to the adult stage, and identified by morphological and molecular methods as *Earias roseifera*. This identification was also confirmed by a Japanese expert on lepidoptera. The situation will be monitored in Italy in order to collect more information about this insect species.

The pest status of *Earias roseifera* is officially declared as**: Present in specific parts of the Member State, where host crop(s) are not grown, at low prevalence.**

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EPPO note: Very little information is available from the scientific literature on *E. roseifera*. This insect which feeds on azaleas and rhododendrons (*Rhododendron* spp.) occurs in Asia. It has been recorded in China, Japan, Korea (Republic of), Russia (Amur, Khabarovsk, Primorye) and Taiwan. Images can be viewed on the Internet:
https://bioinfo.lowtem.hokudai.ac.jp/db/modules/zukan/index.php?action=node&node_id=2378
http://www.jpmoth.org/Nolidae/Eariadinae/Earias_roseifera.html

Source: NPPO of Italy (2018-08).

INTERNET
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Additional key words: new record **Computer codes:** EARIRO, IT

2018/194 *Meloidogyne fallax* found in the United Kingdom

In the United Kingdom, *Meloidogyne fallax* (EPPO A2 List) was identified in July 2018 in a field of carrots (*Daucus carota*) in East Anglia. Second stage infective *Meloidogyne* juveniles were identified from extracted soil by morphology and the identity of *M. fallax* was confirmed by molecular tests (real-time PCR, sequencing). This is the first outbreak in this area of the UK and phytosanitary measures were taken to contain the outbreak.
The pest status of *Meloidogyne fallax* in the United Kingdom is officially declared as: **Present, under containment, in case eradication is impossible.**

Source: NPPO of the United Kingdom (2018-07).

Pictures: *Meloidogyne fallax*. https://gd.eppo.int/taxon/MELGFA/photos

Additional key words: detailed record **Computer codes:** MELGFA, GB

2018/195 *Meloidogyne chitwoodi* found in Sweden

In Sweden, *Meloidogyne chitwoodi* (EPPO A2 List) was first found in October 2017 in soil samples collected from 3 potato fields in the municipality of Sölvesborg (Blekinge province) (EPPO RS 2018/031). In May 2018, the nematode was detected in soil samples collected from a field, prior to its cultivation, in the municipality of Kristianstad (Skåne province). In this field, potatoes (*Solanum tuberosum*) had been planted the year before. Phytosanitary measures are being taken to eradicate the pest. Surveys will be conducted to determine the distribution of *M. chitwoodi* in the country.
The pest status of *Meloidogyne chitwoodi* in Sweden is officially declared as: **Present, continued survey activities to gain knowledge on the actual distribution of *M. chitwoodi*, under eradication.**

Source: NPPO of Sweden (2018-06).

Pictures: *Meloidogyne chitwoodi*. https://gd.eppo.int/taxon/MELGCH/photos

Additional key words: detailed record **Computer codes:** MELGCH, SE

2018/196 *Meloidogyne graminicola* found in Lombardia, Italy

In Italy, *Meloidogyne graminicola* (EPPO Alert List) was first reported in 2016 from Piemonte region (EPPO RS 2016/211) on rice (*Oryza sativa*) crops and wild plants growing in their vicinity. The NPPO of Italy recently informed the EPPO Secretariat that this nematode also occurs on rice in Lombardia. In this region, it was first detected in 2017 in the municipality of Garlasco (province of Pavia) in paddy fields. Subsequent surveys detected the nematode in 4 additional paddy fields in the same province (3 in the municipality of Garlasco and 1 in the municipality of Dorno). The total infested area in Lombardia is estimated at 37 ha.
The pest status of *Meloidogyne graminicola* in Italy is officially declared as: **Present in specific parts of the Member State, where host crop(s) are not grown.**

Source: NPPO of Italy (2018-08).

Pictures: *Meloidogyne graminicola*. https://gd.eppo.int/taxon/MELGGC/photos

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

2018/197 *Heterodera elachista* found in Piemonte region, Italy

In Italy, *Heterodera elachista* (EPPO Alert List) was first reported in 2013 in a soil sample which had been collected in 2012 from a maize field (*Zea mays*) in Emilia-Romagna region. This first outbreak was successfully eradicated but in 2017, another outbreak was detected in one farm in Lombardia region where eradication measures were applied (EPPO RS 2014/045 and 2017/042). In May 2018, *H. elachista* was found in the Piemonte region (province of Novara) during official surveys. The nematode was detected in soil samples collected from maize and rice (*Oryza sativa*) fields in the municipalities of Casalvolone, Landiona and Recetto. In infested fields, no damage was observed. The identity of the nematode was confirmed using morphological and molecular methods. Measures will be taken to prevent any further spread, and the potential risks presented by *H. elachista* will

be assessed at national level to determine appropriate phytosanitary measures. In the meantime, agricultural machinery, tools and footwear will be cleaned before being moved or used in other fields. The source of this new outbreak in Piemonte is unknown.
The pest status of *Heterodera elachista* in Italy is officially declared as: **Present, in specific parts of the Member State, where host crop(s) are not grown; under containment, in case eradication is impossible.**

Source: NPPO of Italy (2018-06).

Pictures: *Heterodera elachista*. https://gd.eppo.int/taxon/HETDEL/photos

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

2018/198 Grapevine Roditis leaf discoloration-associated virus: addition to the EPPO Alert List

Why: in the 1980s, a virus-like disease 'Grapevine Roditis leaf discoloration' was first observed and described in Greece. This disease was initially found on 4-year old plants (*Vitis vinifera* cv. Roditis, a redberry cultivar, grafted on 110R) in the vineyards of Almyros province. The aetiology of the disease remained undermined for a long time. In 2015, a new virus species called Grapevine Roditis leaf discoloration-associated virus (GRLDaV) and belonging to the genus *Badnavirus* was isolated from symptomatic vines using high throughput sequencing (HTS). In 2015, GRLDaV was detected (by HTS) in a symptomless grapevine plant (*V. vinifera* cv. Bombino nero) growing in a foundation block in Apulia, Italy. In June 2016, GRLDaV was detected in 4 samples collected from 3 different vineyards in the Adana province in Turkey. More recently, GRLDaV was detected in some grapevine cultivars in Croatia using HTS. Considering the emergence of GRLDaV in grapevine, the EPPO Panel on Phytosanitary Measures suggested that this virus should be added to the EPPO Alert List.

Where: until now, GRLDaV has only been detected (mainly using HTS) in small numbers of grapevine samples (symptomatic and asymptomatic) from the EPPO countries listed below. Being a newly described virus, its geographical distribution remains to be further studied.
EPPO region: Croatia, Greece, Italy, Turkey.

On which plants: the only known host of GRLDaV is grapevine (*Vitis vinifera*).

Damage: diseased plants show yellow and/or reddish discolorations on the leaves, along the veins or between the veins. These discolorations can be rather uniformly distributed over the entire leaf blade or only affecting leaf sectors. The latter being of variable shape and size. Discoloured areas also show abnormal venation and downward leaf curling. Grape clusters are smaller and do not develop their full colour, remaining green and unripe. At harvest time, they often have lower sugar content.

Transmission: early studies carried out in Greece have shown that the virus is mechanically transmissible to grapevine (e.g. *V. vinifera* cv. Mission) and to some herbaceous test plants (*Chenopodium quinoa, Gomphrena globosa* and *Nicotiana benthamiana*). As some natural spread has been observed in Greece between 1988 and 1992 and as GRLDaV is a *Badnavirus*, it is hypothetized that a vector (possibly mealybugs) might be involved in disease transmission in the field but this remains to be demonstrated.

Pathways: plants for planting of *V. vinifera* from countries where GRLDaV occurs.

Possible risks: grapevine is grown in many countries of the EPPO region, and the emergence of a new virus might represent a threat to this crop which is of major economic and cultural importance. However, the risks associated with GRLDaV are currently difficult to assess considering the general lack of data about its biology, epidemiology, distribution and impacts on grapevine production. In Croatia, Italy, and Turkey, GRLDaV was detected only in a small number of samples, some of which were asymptomatic. In the early studies conducted in Greece in the 1980s, it was noted that the incidence of the disease was very low (less than 1%) but some negative impacts on plant growth and sugar content of the grapes were described. Despite this high incertitude about the economic impact of the disease, it seems wise that grapevine-growing countries verify the presence or absence of GRLDaV in their crops, and eventually include this new virus in certification schemes to avoid its further spread.

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EPPO RS 2018/198

Panel review date – Entry date 2018-10

Additional key words: Alert List **Computer codes:** GRIDAV, GR, HR, IT, TR

2018/199 First report of huanglongbing in Venezuela

In Venezuela, the presence of huanglongbing (associated with '*Candidatus* Liberibacter spp.' – EPPO A1 List) was first reported in June 2018. Outbreaks were detected in the states of Aragua, Carabobo, and Yaracuy. The identity of the pathogen was confirmed by microscopy and molecular tests (PCR). Official measures are being taken to contain the disease.
The pest status of huanglongbing in Venezuela was officially declared as: **Present: subject to official control.**

Source: IPPC website. Official Pest Reports – Venezuela - Bolivarian Republic of (VEN-01/1 of 2018-06-27) Reporte de Plagas. https://www.ippc.int/en/countries/venezuela-bolivarian-republic-of/pestreports/2018/06/reporte-de-plagas/

Pictures: '*Ca.* L. asiaticus'. https://gd.eppo.int/taxon/LIBEAS/photos

Additional key words: new record **Computer codes:** LIBEAS, VE

2018/200 Update on the situation of huanglongbing in Argentina

In Argentina, huanglongbing (associated with '*Candidatus* Liberibacter asiaticus' – EPPO A1 List) was detected for the first time in June 2012 on urban citrus plants, in the Northeastern part of Misiones province near the border with Brazil (EPPO RS 2012/183). In accordance with a national contingency plan, eradication measures were implemented and included intensive surveys and destruction of all infected trees. In 2015, the disease spread within

Misiones province and was detected in commercial orchards. In 2017, outbreaks were also detected in urban areas in Corrientes, Santiago del Estero, Chaco and Formosa (all in Northeastern Argentina). In December 2017, huanglongbing was detected in the province of Entre Ríos in commercial citrus orchards (approximately 10 ha). Eradication of huanglongbing continues in Argentina.
The situation of '*Candidatus* Liberibacter asiaticus' in Argentina can be described as follows: **Present, only in some areas of Northeastern Argentina, under eradication.**

Sources: INTERNET
- Asociación Citrícola del Noroeste Argentino (ACNOA) Situatión actual del HLB en Argentina. http://acnoa.com.ar/situacion-actual-del-hlb-en-argentina/
- Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA). HLB. http://www.senasa.gob.ar/hlb

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

Additional key words: detailed record **Computer codes:** LIBEAS, AR

2018/201 Eradication of *Ralstonia solanacearum* from Switzerland

In Switzerland, *Ralstonia solanacearum* race 1 (EPPO A2 List) had been found in 5 sites (glasshouses) of rose cut flower production in the cantons of Bern, Solothurn and Zürich (EPPO RS 2017/085, RS 2018/084). After eradication measures had been taken at the beginning of 2017, the 5 sites and their vicinity were monitored for the presence of the bacterium. As *R. solanacearum* has no longer been found, the NPPO of Switzerland now considers that the bacterium has been eradicated.
The pest status of *Ralstonia solanacearum* in Switzerland is officially declared as: **Absent, pest eradicated.**

Source: NPPO of Switzerland (2018-10).

Pictures: *Ralstonia solanacearum*. https://gd.eppo.int/taxon/RALSSO/photos

Additional key words: absence, eradication **Computer codes:** RALSSO, CH

2018/202 *Erwinia amylovora* found in Corse, France

The NPPO of France recently informed the EPPO Secretariat that 2 outbreaks of fireblight (*Erwinia amylovora* – EPPO A2 List) have been detected in Corse (FR). During summer 2018, the pathogen was detected in 2 apple (*Malus domestica*) orchards in the municipalities of Vescovato and San-Giuliano (both in Haute-Corse). Eradication measures were taken.

Source: NPPO of France (2018-07).

Pictures: *Erwinia amylovora*. https://gd.eppo.int/taxon/ERWIAM/photos

Additional key words: detailed record **Computer codes:** ERWIAM, FR

2018/203 Update on the situation of *Pantoea stewartii* in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the detection of *Pantoea stewartii* (EPPO A2 List) on maize (*Zea mays*) crops in the regions of Emilia-Romagna and Lombardia. The NPPO recalled that the last records of the bacterium had been made in 2016 in Emilia-Romagna, and in 2017 in Friuli Venezia Giulia (EPPO RS 2018/038) and Veneto. In all cases, eradication measures were taken.

Emilia-Romagna: In May 2018, symptoms resembling those of *P. stewartii* were observed during official inspections in 2 farms in the province of Bologna in maize seed crops (hybrid maize). Affected plants showed long leaf chlorotic streaks with irregular margins and vascular browning. Symptomatic samples were collected, and molecular tests confirmed the presence of the bacterium. The origin of this outbreak is unknown, but it is suspected that imports of infected parental lines might be a source. The NPPO noted that it is now required that seed companies should test parental lines before sowing.

Lombardia: In July 2018, symptoms resembling those of *P. stewartii* were observed during official inspections in 2 farms in the province of Cremona in maize seed crops. Symptomatic samples were collected, and molecular tests confirmed the presence of the bacterium. The number of infected plants was very low, and no crop losses were observed. The maize harvest will be used for animal feed rather than seed production as had been initially planned.

The pest status of *Pantoea stewartii* in Italy is officially declared as: **Present, in specific parts of the Member State, where host crop(s) are not grown, under eradication.**

Source: NPPO of Italy (2018-08, 2018-09).

Pictures: *Pantoea stewartii*. https://gd.eppo.int/taxon/ERWIST/photos

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

2018/204 *Phytophthora fragariae* found in Sweden

The NPPO of Sweden recently informed the EPPO Secretariat of the detection of *Phytophthora fragariae* (EPPO A2 List) in one strawberry production site located in the municipality of Örkelljunga. In May 2018, a grower notified the NPPO of the presence of suspect symptoms in his strawberry (*Fragaria vesca*) outdoor production. Approximately, 200 strawberry plants (out of 5000) showed symptoms. Laboratory tests confirmed the presence of *P. fragariae*. Phytosanitary measures were taken to eradicate the pathogen and included the destruction of infected plants and cultivation equipment (e.g. substrate, plastic foil, irrigation equipment).
The pest status of *Phytophthora fragariae* in Sweden is officially declared as: **Present, under eradication.**

Source: NPPO of Sweden (2018-06).

Pictures: *Phytophthora fragariae*. https://gd.eppo.int/taxon/PHYTFR/photos

Additional key words: detailed record **Computer codes:** PHYTFR, SE

2018/205 New invasive alien plant species recommended for regulation in the EPPO region

Ten invasive alien plant species have been added to the EPPO A1 and A2 Lists in 2018 and therefore recommended for regulation within the EPPO region. All species were risk assessed within the framework of the LIFE funded project: Mitigating the threat of invasive alien plants in the EU through pest risk analysis to support the EU Regulation 1143/2014. The ten species (table 1) include three grass species (*Andropogon virginicus, Cortaderia jubata* and *Ehrharta calycina*), two vines (*Humulus scandens* and *Lygodium japonicum*), two tree species (*Prosopis juliflora* and *Triadica sebifera*), one shrub (*Hakea sericea*) and two perennial herbs (*Ambrosia confertiflora* and *Lespedeza cuneata*). The majority of plants listed below were assessed to enter the EPPO region on the pathway 'plants for planting'. For *A. confertiflora*, seed contaminant of livestock (wool) and feed mixtures was highlighted as the most likely pathway and for *A. virginicus* contamination of used machinery (military vehicles) was identified as a historic pathway for the entry of the species into the EPPO region. Pathways for *L. japonicum* include plants for planting but also contamination of nursery material (the species has been intercepted as a contaminant of bonsai plants from Asia to the Netherlands).

Table 1. Invasive alien plant species recommended for regulation, 2018.

Species	Family	Type	Origin	EPPO List
Ambrosia confertiflora	Asteraceae	Perennial herb	North America	A2
Andropogon virginicus	Poaceae	Grass	North America	A2
Cortaderia jubata	Poaceae	Grass	South America	A1
Ehrharta calycina	Poaceae	Grass	Africa	A2
Hakea sericea	Proteaceae	Shrub	Australia	A2
Humulus scandens	Cannabaceae	Vine	Asia	A2
Lespedeza cuneata	Fabaceae	Perennial legume	Asia	A1
Lygodium japonicum	Lygodiaceae	Vine	Asia	A1
Prosopis juliflora	Fabaceae	Tree	Americas	A2
Triadica sebifera	Euphorbiaceae	Tree	Asia	A1

Source: EPPO website: https://www.eppo.int/ACTIVITIES/invasive_alien_plants/iap_lists

Additional key words: invasive alien plants

Computer codes: ANOVI, CDTJU, EHRCA, FRSCO, HKASE, HUMJA, LESCU, LYFJA, PRCJU, SAQSE

2018/206 Negative impacts of *Prunus laurocerasus* in deciduous forests in Switzerland

Prunus laurocerasus (Rosaceae) is a shrub species native to Southeastern Europe and Southwestern Asia. In the USA, the species is reported as having invasive behaviour in California, Oregon and Washington. *P. laurocerasus* was introduced into central Europe approximately 400 years ago and has since colonised forests and has become invasive, especially in the understory of deciduous forests in Switzerland. To evaluate the impact of the species on native plants, four plots were established in patches of *P. laurocerasus* and in adjacent uninvaded areas in twelve forest areas in Switzerland. Native species richness, diversity and species composition of the ground vegetation and shrub layer were assessed in each plot. Furthermore, in each plot physical and chemical characteristics of the soil were

measured. The maximum age of *P. laurocerasus* in each plot was determined using tree ring analysis, indicating the time of establishment. Species richness of native plants was lower in both ground vegetation and the shrub layer compared to plots invaded by *P. laurocerasus*. Species composition of the ground vegetation was also affected by the presence of *P. laurocerasus*. However, the diversity of native plants was largely unaffected by the presence of *P. laurocerasus*. Plots invaded by *P. laurocerasus* had a lower soil moisture content than uninvaded plots. The study showed that the effects of *P. laurocerasus* became more pronounced with the age of establishment suggesting that early intervention and removal of the species was critical in mitigating the negative impacts of the species.

Source: Rusterholz HP, Schneuwly J, Baur B (2018) Invasion of the alien shrub *Prunus laurocerasus* in suburban deciduous forests: Effects on native vegetation and soil properties. *Acta Oecologica* **92**, 44-51.

Pictures: *Prunus laurocerasus*. https://gd.eppo.int/taxon/PRNLR/photos

Additional key words: invasive alien plants **Computer codes:** PRNLR, CH

2018/207 Estimating the economic benefits of the biocontrol agent *Ophraella communa* for *Ambrosia artemisiifolia*

Ambrosia artemisiifolia (Asteraceae: EPPO List of Invasive Alien Plants) is native to North America and is a widespread invasive alien plant in the EPPO region. *A. artemisiifolia* is an annual weed which competes strongly with crop plants for water and nutrients. It is a very prolific seed producer (a plant typically produces 30,000 - 40,000 seeds per year and can be up to 100,000) and seeds can remain viable for 5-14 years. It can have negative impacts on agricultural production by reducing yields of cereals and other field crops (e.g. sunflower). Its presence can reduce fodder quality of meadows and pastures (*A. artemisiifolia* is not palatable to livestock), and taints diary products if cattle do feed on it. In addition, its pollen is strongly allergenic to humans (hay fever) and can cause contact dermatitis. In China, a North America beetle (*Ophraella communa*: Coleoptera, Chrysomelidae) has been utilised against *A. artemisiifolia* as a classical biological control agent. In 2013, the same beetle species was found to have accidently established in Northern Italy and Southern Switzerland where it has been shown to inflict significant damage on *A. artemisiifolia* populations, and in particular, ragweed pollen concentrations in Northern Italy have been shown to decrease with the presence of the biocontrol agent. In the current study, the authors set out to estimate the potential economic benefits of the establishment of *O. communa* in the Rhône-Alpes region in south-eastern France, where detailed data on the economic impact of *A. artemisiifolia* are available. By extrapolating the change in airborne ragweed pollen concentrations in Italy to that in the South of France, the authors estimated that establishment of *O. communa* in the Rhône-Alpes region could reduce the number of days with ragweed pollen concentrations at which sensitive people express symptoms by 50% thus reducing medical costs by 5.2–6.8 million Euros annually.

Source: Mouttet R, Augustinus B, Bonini M, Chauvel B, Desneux N, Gachet E, le Bourgeois T, Müller-Schärer H, Thibaudon M, Schaffner U (2018) Estimating economic benefits of biological control of *Ambrosia artemisiifolia* by *Ophraella communa* in southeastern France. *Basic and Applied Ecology* https://doi.org/10.1016/j.baae.2018.08.002

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

Additional key words: invasive alien plants **Computer codes:** AMBEL, OPHLCO, CH, FR, IT

2018/208 *Ambrosia artemisiifolia* seed movement along roadsides

Transportation corridors can provide suitable habitats to facilitate the spread of invasive alien plants. In addition, vehicles can act as dispersal vectors for the spread of invasive alien plant propagules, as seeds can become attached to vehicles and vehicle movement can initiate increased airflow that aid seed movement. Both of these scenarios can act to move plant propagules over large distances. To evaluate the role of primary dispersal of invasive alien plants along a roadside corridor and the secondary dispersal by vehicle movement, two experiments were undertaken using *Ambrosia artemisiifolia* (Asteraceae: EPPO List of Invasive Alien Plants) as the study species. *A. artemisiifolia* is commonly found along roadsides within Europe. The study site was the federal state of Brandenburg (DE) which has harboured large populations of *A. artemisiifolia* in the mid-1800s. Primary dispersal was evaluated by planting three individual plants close to maturity within an arable field and surrounding vegetation was removed. Seeds were captured on adhesive material placed on the ground and the distance from the parent plant was measured. Secondary seed dispersal was measured with a mark and recapture experiment along three road corridors with different volumes of traffic. At each road corridor, 100 seeds tagged with UV markers were placed on the asphalt surface (30-40 cm from the edge to ensure proximity to passing traffic). After two days, searches for the seeds were conducted using LED-UV lamps up to 500 m in the driving direction and 50 m against the driving direction. The mean dispersal of seeds from the planted specimens was 0.39 metres, whereas secondary dispersal by vehicles was up to 53.2 metres on roads with the highest volume of traffic. It is interesting to note that almost all of the seeds recaptured were found on the road verges rather than the road surface. These results can be transferred to the management of the species along roads as they indicate that mowing before seed set can reduce the potential of spread.

Source: Lemke A, Kowarik I, von der Lippe M (2018) How traffic facilitates population expansion of invasive species along roads: the case of common ragweed in Germany. *Journal of Applied Ecology* DOI: 10.1111/1365-2664.13287.

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

Additional key words: invasive alien plants **Computer codes:** AMBEL, DE