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2018/090 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 routine surveys on pests and diseases of roses carried out in 2017, *Ceratitis rosa* (Diptera: Tephritidae – EPPO A1 List) was found for the first time Syria. Larvae of *C. rosa* were found among petals of flowers of *Rosa damascena* in Damascus. Adults were reared from these larvae and identified as *C. rosa* (Kawas and Basheer, 2018). **Present, only in some areas (Damascus)**.

In the Netherlands, *Monilia polystroma* was reported for the first time in November 2017. The fungus was detected in 4 discarded fruits of *Pyrus* sp. in a waste bin at a packing station (NPPO, 2017). **Present, incidental finding.**

During spring 2016, *Myzus mumecola* (Hemiptera: Aphididae) was detected for the first time in Italy. The aphid was found on apricot (*Prunus armeniaca*) orchards in Emilia-Romagna. Infested apricot trees showed leaf curling and deformations. *M. mumecola* originates from Asia where it is known to occur in China, India, Japan, Russia (East Siberia) and Taiwan. It is noted that transmission studies carried out in a Japanese laboratory have concluded that *M. mumecola* could transmit *Plum pox virus* with an efficiency similar to that of *M. persicae* (Panini *et al.*, 2017). **Present, only in some areas.**

In Côte d'Ivoire, a lethal yellowing-type of disease has been observed on coconut (*Cocos nucifera*) in Grand-Lahou (along the Southern coast). In 2013, the presence of a phytoplasma was found in association with the disease. It is estimated that this disease has decimated more than 400 ha of coconut plantations and continues to spread into more villages of the municipality of Grand-Lahou. Molecular studies have shown that the phytoplasma associated with yellowing coconut palms in Grand-Lahou can be distinguished from the phytoplasmas associated with Cape St Paul wilt disease in Ghana and with lethal yellowing in Mozambique (Rosete *et al.*, 2017). **Present, only in some areas.**

- **Detailed records**

In 2017, official surveys on *Bemisia tabaci* (Hemiptera: Aleyrodidae – EPPO A2 List) were conducted in Finland. In total, 645 inspections were conducted in 320 greenhouses and in 72 other premises (market inspections). During these inspections, 293 samples were collected. *B. tabaci* was found in 54 greenhouses producing ornamental plants (approximately 28 % of the outbreaks were on *Mandevilla,* 34 % on *Euphorbia pulcherrima* (poinsettias), 31 % on *Glechoma,* 7 % on various other species). During market inspections, 8 infestations were found. It is noted that in Finland, there are no local producers of poinsettia or bedding plant cuttings, but these are imported from abroad. In all cases, insecticide treatments, destruction of infested plants, and other appropriate measures were taken to eradicate the pest (NPPO of Finland, 2018).

In Turkey, during a study conducted on 198 bean (*Phaseolus vulgaris*) seed samples from 12 provinces of central Anatolia region, *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* (EPPO A2 List) was detected in 0.5% of the samples (Bastas and Sahin, 2017).

In Turkey, during a study conducted in onion (*Allium cepa*) fields in 2016, *Ditylenchus dipsaci* (EPPO A2 List) was detected in the following regions (and provinces): Aegean region (Bursa), Central Anatolia region (Akzaray, Ankara, Eskisehir, Karaman), Mediterranean region (Adana, Hatay), and Trace region (Tekirdag). The identity of the nematode was confirmed by morphological and molecular methods (Yavuzaslanoglu *et al.,* 2018).

In Finland, official surveys on *Globodera pallida* (EPPO A2 List) were conducted in 2017. In total 964 soil samples (covering 2474 ha) were tested for the presence of the nematode: 315 samples (1640 ha) were collected from fields used for seed potato production, 638 samples (834 ha) from fields used for potato production other than seed potatoes, and 11 samples from other fields. In 2017, *G. pallida* was found in 3 new potato production places (potatoes other than seed potatoes). In all these farms, both species, *G. pallida* and *G. rostochiensis,* were found. Because eradication measures are applied for at least 6-9 years, altogether 13 farms were still considered to be infested in 2017 (NPPO of Finland, 2018).

- **Diagnostics**

A new real-time PCR assay has been developed in the United Kingdom for the specific detection of *Cryphonectria parasitica* (EPPO A2 List). This test can detect both virulent and hypovirulent strains of *C. parasitica* (Rubio *et al*., 2017).

A new LAMP test has been developed in China for the specific detection of *Meloidogyne mali* (EPPO A2 List). It is considered that this method would be useful in the routine monitoring of *M. mali* (Zhou *et al*., 2017).

A new LAMP test has been developed for the specific detection of *Xanthomonas fragariae* (EPPO A2 List) (Tétaz *et al.*, 2017).

- **Epidemiology**

During studies conducted in Washington and Idaho (US), '*Candidatus* Liberibacter solanacearum' (potato haplotypes are listed in the EPPO A1 List) was detected in *Bactericera maculipennis* (Hemiptera: Triozidae). Molecular studies showed that that the haplotype of '*Ca*. L. solanacearum' from *B. maculipennis* was closely related to haplotype B from *B. cockerelli* (also collected during this study). During transmission trials, infected *B. maculipennis* could not transmit '*Ca*. L. solanacearum' to potato (*Solanum tuberosum*) plants. It is supposed that potato is probably not a suitable host for this psyllid which is mainly associated with Convolvulaceae (Borges *et al*., 2017).

- **New pests and taxonomy**

A new geminivirus tentatively called Grapevine geminivirus A (GGVA) has recently been described. This new virus was detected by high throughput sequencing (HTS) in 2 table grape (*Vitis vinifera* cvs. Black Beet, Nagano Purple) accessions from South Korea which had been received in 2013 in the USA as dormant cuttings for inclusion in a grapevine germplasm collection in California (Al Rwahnih *et al.*, 2017).

A new root-knot nematode species, *Meloidogyne daklakensis* n. sp., has recently been described. This nematode was discovered on roots of Robusta coffee (*Coffea canephora*) in the Dak Lak province in Vietnam (Trinh *et al*., 2018).

Phytophthora caryae sp. nov. is a new *Phytophthora* species which has been recovered from streams and rivers in Massachusetts and North Carolina, USA. Sapling inoculations done under greenhouse conditions suggest that *P. caryae* could be pathogenic to *Carya ovata* (Juglandaceae, shagbark hickory), but not to *Juglans nigra* (Juglandaceae, black walnut) (Brazee *et al*., 2017).

A new nematode species, *Xiphinema tica* n. sp., has recently been described. This nematode was first found in the rhizosphere of grapevine (*Vitis vinifera*) at Chirraca (San Ignacio de Acosta, San José province) in Costa Rica. *X. tica* was then also detected in the rhizosphere of other wild and cultivated plant species (i.e. *Annona, Citrus, Coffea, Cynodon*) in other localities of Costa Rica (Peraza-Padilla *et al*., 2018).

Sources:

Al Rwahnih MA, Alabi OJ, Westrick NM, Golino D, Rowhani A (2017) Description of a novel monopartite geminivirus and its defective subviral genome in grapevine. *Phytopathology* **107**(2), 240-251.

Bastas KK, Sahin F (2017) Evaluation of seedborne bacterial pathogens on common bean cultivars grown in central Anatolia region, Turkey. *European Journal of Plant Pathology* **147**(2), 239-253.

Brazee NJ, Yang X, HongCS (2017) *Phytophthora caryae sp. nov*., a new species recovered from streams and rivers in the eastern United States. *Plant Pathology* **66**(5), 805-817.

Gétaz M, Bühlmann A, Schneeberger PHH, Van Melderghem C, Duffy B, Maes M, Pothier JF, Cottyn B (2017) A diagnostic tool for improved detection of *Xanthomonas fragariae* using a rapid and highly specific LAMP assay designed with comparative genomics. *Plant Pathology* **66**(7), 1094-1102.

Kawas H, Basheer A (2018) First record of Natal fruit fly *Ceratitis rosa Karsch*, 1887 (Insecta: Diptera: Tephritidae) on damask rose Rosa damascena Mill L., (Rosaceae) in Syria. *Arab and Near East Plant Protection Newsletter* no. 73, 6-7. http://www.asplantprotection.org/PDF/ANEPPN/ANEPPNL73En.pdf.

NPPO of Finland (2018-02).

NPPO of the Netherlands (2017-11).

Panini M, Cocuzza M, Dradi D, Chiesa O, Mazzoni E (2017) First report of *Myzus mumecola* (Matsumura, 1917) in Europe. *Bulletin OEPP/EPPO Bulletin* **47**(1), 107-110.

Peraza-Padilla W, Cantalapiedra-Navarrete C, Zamora-Araya T, Palomares-Rius JE, Castillo P, Archidona-Yuste A (2018) A new dagger nematode, *Xiphinema tica* n. sp. (Nematoda: Longidoridae), from Costa Rica with updating of the polytomous key of Loof and Luc (1990). *European Journal of Plant Pathology* **150**(1), 73-90.

Rosete YA, Diallo HA, Konan Konan JL, Yankey N, Saleh M, Pilet F, Contaldo N, Paltrinieri S, Bertaccini A, Scott J (2017) Detection and differentiation of the coconut lethal yellowing phytoplasma in coconut-growing villages of Grand-Lahou, Côte d'Ivoire. *Annals of Applied Biology* **170**(3), 33-347.

Rubio S, Barnes A, Webb K, Hodgetts J (2017) A real-time PCR assay for improved rapid, specific detection of *Cryphonectria parasitica*. *Annals of Applied Biology* **171**(1), 52-61.

Trinh Q, Le T, Nguyen T, Nguyen, H, Liebanas G, Nguyen T (2018). *Meloidogyne daklakensis n. sp*. (Nematoda: Meloidogynidae), a new root-knot nematode associated with Robusta coffee (*Coffea canephora* Pierre ex A. Froehner) in the Western Highlands, Vietnam. *Journal of Helminthology*, 1-13. doi:10.1017/S0022149X18000202 (abst.).

Yavuzaslanoglu E, Ates Sonmezoglu O, Genc N, Akar Z, Terzi B (2018) Molecular characterization of *Ditylenchus dipsaci* on onion in Turkey. *European Journal of Plant Pathology* **151**(1), 195-200.

Zhou QJ, Cai Y, Gu JF, Wang X, Che J (2017) Rapid and sensitive detection of *Meloidogyne mali* by loop-mediated isothermal amplification combined with a lateral flow dipstick. *European Journal of Plant Pathology* **148**(4), 755-769.

Additional key words: new record, detailed record, diagnostic, epidemiology, new pest, taxonomy

Computer codes: BEMITA, CERTRO, CORBFL, DITYDI, ENDOPA, GGVA00, MELGDK, MELGDK, MELGMA, MONIPO, MYZUMU, PHYP56, PHYTCY, XANTFR, XIPHTI, CI, CN, FI, IT, NL, SY, TR, US, VN

2018/091 First report of *Spodoptera eridania* in Africa (Benin, Cameroon, Gabon, Nigeria)

Following the introduction of *Spodoptera frugiperda* (Lepidoptera: Noctuidae – EPPO A1 List) in Africa which has led to a severe phytosanitary crisis, another species *Spodoptera eridania* (EPPO A1 List) has recently been detected. The first specimens of *S. eridania* were collected from cassava (*Manihot esculenta*) fields in Southeastern Nigeria in December 2016. Farmers had observed an outbreak of caterpillars causing severe defoliation in a cassava field (450 ha) near Ubiaja. The identity of the collected caterpillars has now been confirmed by molecular methods (DNA barcode analysis). In Benin, similar observations were made in early 2017 in cassava fields near Dasso in the Southern part of the country. Finally, adult specimens were collected from tomato (*Solanum lycopersicum*) fields in Yaoundé (Cameroon) as well as from Gabon. Morphological and molecular analysis confirmed the presence of *S. eridania* in these countries. Preliminary observations have shown that *S. eridania* is present in at least four African countries on cassava, tomato, maize (*Zea mays*) and amaranth (*Amaranthus* sp.).
S. eridania is a polyphagous pest native to the Americas, occurring from Southern USA to Argentina. In Africa, it is not known for how long *S. eridania* has been present, and its possible pathways of introduction into this continent remain unclear. At present, no massive scale outbreaks of *S. eridania* comparable to those caused by *S. frugiperda* have been observed.

Source: INTERNET
IITA (2018-05-21) New pest identified in West and Central Africa!
http://www.iita.org/news-item/new-pest-identified-west-central-africa/

Pictures: *Spodoptera eridania*. https://gd.eppo.int/taxon/PRODER/photos

Additional key words: new record **Computer codes:** PRODER, BJ, CM, GA, NG

2018/092 *Popillia japonica* found in Vancouver (British Columbia, Canada)

In Canada, during official surveys conducted in 2017, *Popillia japonica* (Coleoptera: Rutelidae – EPPO A2 List) was found in the City of Vancouver, in the area of False Creek (British Columbia). Phytosanitary measures are being implemented to eradicate the pest and include restrictions on the movements of soil, rooted plants with soil and other plant material that is infested or likely to be infested out of the regulated area. A surveillance programme will be carried out and 1500 traps (floral lure and pheromones) will be placed in Vancouver. During spring and summer 2018, larvicide treatments will also be applied in public lands with turf grass in the infested area.
The Canadian Food Inspection Agency recalls that *P. japonica* was first recorded in Canada in 1939. The first beetle was found in a tourist's car at Yarmouth, arriving in Nova Scotia by ferry from Maine (US). As of March 2016, the pest was reported in the following Canadian provinces: New Brunswick, Nova Scotia, Ontario, Prince Edward Island and Quebec. All detected infestations are subject to official control programmes to eradicate the pest or limit its further spread.
The situation of *Popillia japonica* in Canada can be described as follows: **Present, only in some areas (British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island and Quebec), under official control.**

Source: INTERNET
Canadian Food Inspection Agency (CFIA).
- Appendix 1: Regulatory status of areas in Canada and the United States for Japanese beetle (*Popillia japonica*). http://www.inspection.gc.ca/plants/plant-pests-invasive-species/directives/horticulture/d-96-15/appendix-1/eng/1346826626609/1346826990603
- D-96-15: Phytosanitary requirements to prevent the spread of Japanese beetle, in Canada and the United States. http://www.inspection.gc.ca/plants/plant-pests-invasive-species/directives/horticulture/d-96-15/eng/1323854808025/1323854908041
- *Popillia japonica* (Japanese Beetle) - Fact Sheet. http://www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/japanese-beetle/fact-sheet/eng/1328165101975/1328165185309

Pictures: *Popillia japonica*. https://gd.eppo.int/taxon/POPIJA/photos

Additional key words: detailed record **Computer codes:** POPIJA, CA

2018/093 First report of *Halyomorpha halys* in Croatia

In 2017, *Halyomorpha halys* (Hemiptera: Pentatomidae – formerly EPPO Alert List) was observed for the first time in Croatia. The first specimen (1 female) was incidentally found on 2017-01-15 in a flat in the city of Rijeka (major seaport in Croatia). In the same flat, a male specimen was found on 2017-02-25. In May 2017, more *H. halys* specimens (1 female, 3 males) were collected using a sweep net on *Ailanthus altissima* trees growing near the building concerned in Rijeka. A genetic analysis has shown that the Croatian specimens belonged to a haplotype that is found within nearby Italian and Hungarian populations of *H. halys*.

Source: Šapina I, Šerić Jelaska L (2018) First report of invasive brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) in Croatia. *Bulletin OEPP/EPPO Bulletin* **48**(1), 138-143.

Pictures: *Halyomorpha halys*. https://gd.eppo.int/taxon/HALYHA/photos

Additional key words: new record **Computer codes:** HALYHA, HR

2018/094 First report of *Thrips setosus* in Croatia

In December 2017, the NPPO of Croatia recently reported an outbreak of *Thrips setosus* (Thysanoptera: Thripidae – EPPO Alert List) on its territory. During an official survey, the pest was found in 1 plant of *Hydrangea* sp. in the greenhouse of a garden centre located in the municipality of Metkovic. As *T. setosus* was confirmed only on one plant, the extent of infestation is not known but it can be assumed that more plants were probably infested. It is suspected that *T. setosus* was introduced with ornamental *Hydrangea* plants for planting originating from other EU Member States. Phytosanitary measures were taken to contain the pest. The pest status of *Thrips setosus* in Croatia is officially declared as: **Present.**

Source: NPPO of Croatia (2017-12).

Pictures: *Thrips setosus*. https://gd.eppo.int/taxon/THRISE/photos

Additional key words: new record **Computer codes:** THRISE, HR

2018/095 Update on the situation of *Thrips setosus* in Germany

In Germany, *Thrips setosus* (Thysanoptera: Thripidae – EPPO Alert List) was first found in 2015 on *Hydrangea* plants grown for cut flower production near Hamburg. In 2016, further findings were made in Baden-Württemberg. In 2017, an outbreak was reported on *Hydrangea* pot plants in the greenhouse of a nursery in North Rhine Westphalia (EPPO RS 2017/012 and 2017/157). In 2017, other outbreaks have been reported in the following landers.

- **Schleswig-Holstein**

In June 2017, *T. setosus* was caught in sticky traps placed in 4 nurseries producing *Hydrangea* pot plants (greenhouses of 270 m ², 480 m², 800 m² and 4000 m²). Plants did not show any symptoms and were sold to final customers. Further surveys did not detect the pest.

- **Brandenburg**

In October 2017, *T. setosus* was found in a greenhouse of a garden centre on 10 plants of *Hydrangea* sp. These plants had been purchased 10 days before from a large trading company. In November 2017, *T. setosus* was also found outdoors on 10 plants of *Hydrangea* sp. in a garden centre located in Rangsdorf.

- **Saxony**

During the national survey, 2 specimens of *T. setosus* were caught in yellow and blue traps placed in the greenhouse of a nursery in November 2017. During summer, cyclamens had been grown in this greenhouse, followed by the cultivation of *Hydrangea* sp. from the beginning of November.

The pest status of *Thrips setosus* in Germany is officially declared as: **Present.**

Source: NPPO of Germany (2017-10, 2017-11, 2018-01).

Pictures: *Thrips setosus*. https://gd.eppo.int/taxon/THRISE/photos

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

2018/096 Studies on the flight capabilities of *Anoplophora glabripennis*

Laboratory studies using computerized flight mills have been conducted in the USA to assess the flight capabilities of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 List). In total, 162 adult beetles were used in computerized flight mills for a 24 h trial period to collect information on total distance flown, flight times and velocities, as well as the number and duration of flight periods. Results showed that on average adult beetles flew 2 300 m within a 24-h period, but were able to fly up to 13 667 m. In addition, the impact of parameters such as: nutrition (starved/fed), mating status (virgin/mated), age (young/old)

and body size was also studied. It was found that nutrition and age had the greatest impacts on flight. Adult beetles more than 5 days old and which had been fed had the greater overall flight performance. However, mating status, sex and body size had a minimal effect on flight performance. It is noted that these results revealed higher dispersal capabilities than those which had been previously recorded.

Source: Lopez VM, Hoddle MS, Francese JA, Lance DR, Ray AM (2017) Assessing flight potential of the invasive Asian longhorned beetle (Coleoptera: Cerambycidae) with computerized flight mills. *Journal of Economic Entomology* **110**(3), 1070-1077.

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

Additional key words: biology **Computer codes:** ANOLGL

2018/097 Studies on the flight capabilities of *Pityophthorus juglandis*

Pityophthorus juglandis (Coleoptera: Scolytidae) and its associated fungus *Geosmithia morbida* together cause thousand cankers disease (EPPO A2 List) on walnut (*Juglans* spp.) and wingnut (*Pterocarya* spp.). Laboratory studies using flight mills have been conducted in the USA to assess the flight capabilities of *P. juglandis*. In total, 654 *P. juglandis* were placed on the flight mills for a 24 h trial period. Results showed that the mean flight distance was 372 m (median distance 158 m), with a maximum flight distance of 3.6 km. During the 24 h trial period, beetles flew on average for 34 min. It was also observed that male and female flight capacities were similar, even though males are larger than females. The age after emergence had no effect on flight distance, flight time, or mean flight velocity. However, the propensity to fly decreased with age. Extrapolations were made (Monte Carlo simulation) and it was estimated that over 5 days (without mortality) only 1% of the insects would fly > 2 km, and that 1/3 of the insects would fly < 100 m. These results suggest that without anthropogenic transport or wind-aided dispersal, the capacity of *P. juglandis* for natural spread is limited. However, it is stressed that caution should be taken when relating laboratory-based flight potential to natural dispersal.

Source: Kees AM, Hefty A, Venette RC, Seybold SJ, Aukema BH (2017) Flight capacity of the walnut twig beetle (Coleoptera: Scolytidae) on a laboratory flight mill. *Environmental Entomology* **46**(3), 633-641.

Pictures: *Pityophthorus juglandis.* https://gd.eppo.int/taxon/PITOJU/photos

Additional key words: biology **Computer codes:** PITOJU

2018/098 Studies on the flight capabilities of *Xyleborus glabratus*

Xyleborus glabratus (Coleoptera: Scolytidae) and its fungal symbiont *Raffaelea lauricola* (both EPPO Alert List) cause laurel wilt disease in Southeastern USA. Laboratory studies using flight mills have been conducted in the USA to assess the flight capabilities of *X. glabratus.* In this study, flight capabilities of *X. glabratus* (an introduced species of Asian origin) were also compared with those of a North American ambrosia beetle *Monarthrum mali*. Over a 24 h trial period, the average flight distance of *X. glabratus* was 21 m with a maximum flight distance of 28 m. It was observed that, during the same period, *M. mali* flew longer distances than *X. glabratus*. These results suggest that without anthropogenic transport or wind-aided

dispersal, the capacity of *X. glabratus* for natural spread is limited. It was roughly estimated that *X. glabratus* might be able to spread up to 250 m within forests during a period of 2 weeks and that flights of more than 10 m per day would probably be rare. However, it is noted that field studies are necessary to prove the validity of these estimates.

Source: Seo M, Martini X, Rivera MJ, Stelinski LL (2017) Flight capacities and diurnal flight patterns of the Ambrosia beetles, *Xyleborus glabratus* and *Monarthrum mali* (Coleoptera: Curculionidae). *Environmental Entomology* **46**(3), 729-734.

Additional key words: biology **Computer codes:** XYLBGR

2018/099 First report of *Heterodera mani* in Italy

In Italy, *Heterodera mani* was found in August 2017 in a golf course in the municipality of Monza, Lombardia region. This cyst nematode can be a pest of Poaceae (e.g. *Dactylis glomerata, Festuca, Lolium, Poa*). *H. mani* was initially described from Northern Ireland on grasses and has been recorded from several other European countries. *H. mani* belongs to the *H. avenae* species-group but presents some morphological differences and does not attack cereals.
The pest status of *Heterodera mani* in Italy is officially declared as: **Present, only in some parts of the Member State concerned.**

Source: NPPO of Italy (2017-10).

Additional key words: new record **Computer codes:** HETDMN, IT

2018/100 First report and eradication of *Pomacea* sp. in Switzerland

In Switzerland, at the end of March 2017, more than 40 individuals of *Pomacea* sp. (Ampullariidae, apple snails - EU emergency measures) were found in an artificial pond in a public educational nature reserve in the municipality of Ettiswil (canton of Lucerne). It is suspected that the apple snails had been released into the pond by a private individual shortly before. Eradication measures were immediately taken and consisted of capturing the apple snails, removing water and sediments from the artificial pond (which had a concrete bottom) and installing barriers to prevent spread of potentially undetected apple snails. An intensive surveillance of the area has been carried out. It is noted that this finding was made in a region where no rice or any other host plants of *Pomacea* spp. of agricultural importance are produced. As no further specimens of *Pomacea* sp. could be found, eradication was considered to be successful.
The pest status of *Pomacea* sp. in Switzerland is officially declared as: **Absent, pest eradicated.**

Source: NPPO of Switzerland (2017-07).

Pictures: *Pomacea* sp. https://gd.eppo.int/taxon/POMASP/photos

Additional key words: new record, absence, eradication **Computer codes:** POMASP, CH

2018/101 *Xanthomonas citri* subsp. *citri* found again in Australia

In Australia, citrus canker (*Xanthomonas citri* subsp. *citri* – EPPO A1 List) had previously been detected in the Northern Territory (Darwin in 1912, 1991 and 1993) and Queensland (Thursday Island in 1984 and Emerald in 2004) with successful eradication of each occurrence. In April 2018, citrus canker was found again in Australia, in the Northern Territory. The bacterium was detected in 2 retail nurseries on *Citrus aurantiifolia* (West Indian lime) near Darwin. The variety of lime affected is a potted patio plant that is not used in commercial citrus production. In addition, the detection was made in a peri-urban area that is more than 2 500 kilometres away from key citrus producing areas (i.e. South Australia, Victoria and Queensland). Tracing studies are underway. Eradication measures were immediately implemented, and restrictions on the movements of plants have been imposed. The pest status of *Xanthomonas citri* subsp. *citri* in Australia is officially declared as: **Present: under eradication.**

Note: Following this initial report of *X. citri* subsp. *citri* in Northern Territory, citrus canker was also detected in Western Australia in 3 properties in May 2018. These detections are linked to imports of plants from the Northern Territory. Test results have confirmed the bacterium in citrus plants which were traced to 2 retail companies in Kununurra, and in a citrus plant in Wyndham. All infected plants have been destroyed.

Sources: INTERNET

Northern Territory

Australian Government. Media statement: Detection of citrus canker in the Northern Territory. http://www.agriculture.gov.au/about/media-centre/media-releases/citrus-canker-nt

IPPC website. Official Pest Reports – Australia (AUS-89/1 of 2018-04-19) *Xanthomonas citri* subsp *citri* (Citrus canker) in Northern Territory. https://www.ippc.int/en/countries/australia/pestreports/2018/04/xanthomonas-citri-subsp-citri-citrus-canker-in-northern-territory/

Northern Territory Government. Citrus canker. https://dpir.nt.gov.au/citrus-canker

Queensland Government. Industry alert – Citrus canker (*Xanthomonas citri* pv. *citri*). https://www.daf.qld.gov.au/business-priorities/plants/health-pests-diseases/industry-alert-citrus-canker

South Australia

Government of Western Australia (2018-05-18) Effort underway to stop citrus canker in Kununurra and Wyndham. https://www.agric.wa.gov.au/news/media-releases/effort-underway-stop-citrus-canker-kununurra-and-wyndham

Pictures: *Xanthomonas citri* subsp. *citri*. https://gd.eppo.int/taxon/XANTCI/photos

Additional key words: new record **Computer codes:** XANTCI, AU

2018/102 First report of *Xanthomonas oryzae* pv. *oryzicola* in Kenya

In Kenya, during a survey conducted in the rice-growing area of Ahero (Kisumu county) in September 2016, leaf symptoms characteriezed by water-soaked translucent lesions and yellow-brown streaks were observed in three rice cultivars (*Oryza sativa* cvs. Pishori, BW96, and Komboka). In the affected fields, the disease incidence reached 30 to 50%. Six symptomatic rice leaf samples were collected and tested (molecular and pathogenicity tests). Results confirmed the presence of *Xanthomonas oryzae* pv. *oryzicola* (EPPO A1 List) in diseased samples. This is the first time that *X. oryzae* pv. *oryzicola* is reported from Kenya.

It is noted that further investigations are needed to better understand the genotypic and geographic distribution of the bacterium in Kenya.
The situation of *Xanthomonas oryzae* pv. *oryzicola* in Kenya can be described as follows: **Present, only in some areas (first found in 2016 in Kisumu county).**

Source: Onaga G, Murori R, Habarugira G, Nyongesa O, Bigirimana J, Oliva R, Vera Cruz C, Onyango G, Andaku J, Ongom J (2018) First report of *Xanthomonas oryzae* pv. *oryzicola* causing bacterial leaf streak of rice in Kenya. *Plant Disease* **102**(5), p 1025.

Pictures: *Xanthomonas oryzae* pv. *oryzicola*. https://gd.eppo.int/taxon/XANTTO/photos

Additional key words: new record **Computer codes:** XANTTO, KE

2018/103 *Erwinia amylovora* occurs in Portugal

In Portugal, the first incursion of *Erwinia amylovora* (EPPO A2 List) was observed in 2005 and subsequently eradicated. However, new outbreaks were reported in 2010/2011 in apple (*Malus domestica*) orchards in the municipalities of Alcobaça, Bombarral, Torres Vedras, Caldas da Rainha, Guarda, Viseu (all in Centro region), as well as in Ferreira do Alentejo and Alandroal (both in Alentejo region). Since then, official phytosanitary measures including intensive surveys and destruction of infected plants have been implemented to eradicate fireblight. In 2017, several outbreaks were detected in the areas listed below; in all cases infected plants have been destroyed:

- Mafra near Lisboa in an abandoned pear (*Pyrus communis*) orchard of 2 ha.
- County of Penafiel (Norte region) in a nursery on pear plants (*P. communis* cv. Rocha).
- County of Viana do Castelo (Norte region) in a nursery on *Rubus fruticosus* (cv. Ouachita).
- County of Figueira Castelo do Rodrigo (Centro region) in 2 quince (*Cydonia oblonga*) orchards (1 ha).
- County of Montemor-o-Novo (Alentejo region) on trees of *Cydonia, Malus* and *Pyrus* growing along a 1500 m long strip.
- County of Tavira (Algarve region) on 2 apple (*M. domestica*) trees.
- County of Monchique (Algarve region) in 4 quince (*C. oblonga*) trees.

The pest status of *Erwinia amylovora* in Portugal is officially declared as: **Present, under eradication.**

Source: NPPO of Portugal (2017-08, 2017-10).

INTERNET
Instituto Nacional de Investigação Agrária e Veterinária (INIAV) Fogo bacteriano – *Erwinia amylovora* by L. Cruz (2010)
http://www.iniav.pt/fotos/editor2/erwinia_amylovora__fogo_bacteriano.pdf
Ministério da Agricultura, Mar, Ambiente e Ordenamento do Territorio. Fogo bacteriano – Nota de esclarecimento (2012-01-27).
http://www.drapn.mamaot.pt/drapn/conteudos/fito/Nota%20de%20esclarecimento.pdf

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

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

2018/104 First report of *Brenneria goodwinii, Gibbsiella quercinecans* and *Rahnella victoriana* in Switzerland

In Switzerland, *Brenneria goodwinii, Gibbsiella quercinecans* and *Rahnella victoriana* were detected for the first time in 2017 in the municipality of Muttenz (Basel-Stadt canton) on 3 sessile oaks (*Quercus petraea*) exhibiting stem bleeding symptoms. These bacteria have been associated with acute oak decline, a syndrome which was first observed in the United Kingdom. The oak trees were 15-20 years-old and had been imported from Germany in March 2017. On these trees, signs of infestation by *Agrilus biguttatus* (two spotted oak buprestid) were also observed. Affected trees will be felled, and plant material will be destroyed. Monitoring of surrounding forests will also be carried out.
The pest status of *Brenneria goodwinii, Gibbsiella quercinecans* and *Rahnella victoriana* is officially declared as: **Present, only in some parts of the Member State concerned**

Source: NPPO of Switzerland (2018-02).

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

2018/105 Studies on *Dothistroma pini* and *D. septosporum* in Georgia and the Ukraine

During spring-summer 2015, studies have been conducted in Western Ukraine and in Georgia to better understand the distribution of dothistroma needle blight, a disease of *Pinus* spp. associated with *Dothistroma pini* and *D. septosporum* (EU Annexes). Symptomatic and asymptomatic needles from 11 hosts (10 *Pinus* spp. and 1 *Picea abies*) were collected in 4 locations in the Ukraine (2 forest areas, 1 commercial garden centre and 1 botanical garden) and 4 locations in Georgia (all in forest areas). Laboratory analysis (molecular tests) confirmed the occurrence of both *D. pini* and *D. septosporum* in Georgia and the Ukraine.

Georgia
- *D. pini*: detected in *P. nigra* (forest area in Racha-Lechkhumi region).
- *D. septosporum*: detected in *P. sylvestris* var. *hamata* (forest area in Samtskhe-Javakheti region) and in *P. ponderosa* (forest area in Kvareli region).

Ukraine
- *D. pini*: detected in *P. nigra* var. *mollet* (commercial garden centre in Lviv region – plants had been imported from the Netherlands).
- *D. septosporum*: detected in *P. nigra* var. *australica* (commercial garden centre in Lviv region – plants had been imported from the Netherlands) and in *P. strobus* (botanical garden in Lviv region).

Source: Matsiakh I, Doğmuş-Lehtijärvi HT, Kramarets V, Oskay F, Drenkhan R (2018) *Dothistroma* spp. in Western Ukraine and Georgia. *Forest Pathology*, e12409. https://doi.org/10.1111/efp.12409

Pictures: *Dothistroma septosporum*. https://gd.eppo.int/taxon/SCIRPI/photos

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

2018/106 Incursion and eradication of *Fusarium oxysporum* f. sp. *cubense* tropical race 4 from Israel

During July 2016, leaf-yellowing and wilting symptoms, accompanied by internal vascular discolorations of rhizomes and pseudostems were observed in mature Cavendish banana plants (*Musa x paradisiaca* cv. Grand Naine) by farmers from Shfeya (Carmel coastal plain). Two months later, similar symptoms were also observed by farmers from Kibbutz Ein Gev, along the eastern shores of Lake Galilee. Samples were collected from symptomatic banana plants and brought to the Plant Protection and Inspection Services of the Ministry of Agriculture for diagnosis. As a result, *Fusarium oxysporum* f. sp. *cubense* was isolated from symptomatic banana tissue and identified by specific PCR in July 2016. The presence of the tropical race 4 (TR4) was confirmed by sequencing different regions of the genome (28S ribosomal RNA, a putative pathogenicity protein gene, and TR4 marker genomic sequence). It is supposed that the fungus originated from Jordan, a neighbouring country where its presence has been confirmed since 2013. This was the first time that *F. oxysporum* f. sp. *cubense* TR4 affecting Cavendish banana was reported in Israel. The two isolated outbreak areas were confined and placed under strict supervision and surveillance by the Israeli NPPO. The area was fenced and cordoned off to avoid entry of humans and stray animals. All affected plants were destroyed, and irrigation terminated. Results of intensive surveys which have been conducted since 2016 have now confirmed that the pathogen has not spread to adjacent plots and that no new incursions have been reported. The NPPO therefore concluded that the *F. oxysporum* f. sp. *cubense* TR4 has been successfully eradicated.
The pest status of *Fusarium oxysporum* f. sp. *cubense* TR4 in Israel is officially declared as: **Absent: pest eradicated.**

Source: NPPO of Israel (2018-05).

Additional key words: incursion, eradication, absence **Computer codes:** FUSACB, IL

2018/107 PPV-CV: a new strain of *Plum pox virus* described from sour cherry in Russia

Based on biological, serological and molecular properties, the following strains of *Plum pox virus* (*Potyvirus* – EPPO A2 list) have been described:
- PPV-D (Dideron)
- PPV-M (Marcus)
- PPV-Rec (recombinant between PPV-D and PPV-M)
- PPV-C (Cherry)
- PPV-CR (Cherry Russia)
- PPV-W (Winona)
- PPV-EA (El Amar)
- PPV-T (Turkey)
- PPV-An (Ancestor*)

Recent studies have showed that PPV isolates naturally infecting sour cherry trees (*Prunus cerasus*) in the Republic of Tatarstan, Middle Volga region of Russia corresponded to a new type of strain which was called PPV-CV (PPV Cherry Volga).

* According to Palmisano *et al*. (2012): an Albanian isolate which could be the ancestor of PPV-M.

Source: Chirkov S, Sheveleva A, Ivanov P, Zakubanskiy A (2018) Analysis of genetic diversity of Russian sour cherry Plum pox virus isolates provides evidence of a new strain. *Plant Disease* **102**(3), 569-575.
Palmisano F, Boscia D, Minafra A, Myrta A, Candresse T (2012) An atypical Albanian isolate of Plum pox virus could be the progenitor of the Marcus strain. Proceedings of the 22nd International Conference on Virus and Other Transmissible Diseases of Fruit Crops" (ICVF) (Rome, 2012-06-03/08).

Pictures: *Plum pox virus.* https://gd.eppo.int/taxon/PPV000/photos

Additional key words: detailed record **Computer codes:** PPV000, RU

2018/108 Interception of *Pepper chat fruit viroid* in the Netherlands

In the Netherlands, following the interception of *Potato spindle tuber viroid* (*Pospiviroid* – EPPO A2 List) in seeds of *Solanum sisymbriifolium* imported from Asia by a breeding company (EPPO RS 2017/200), the presence of another viroid was detected. At this breeding company, 24 seed lots of *S. sisymbriifolium* were tested and 1 lot was found to be infected by *Pepper chat fruit viroid* (*Pospiviroid*). This infected seed lot also originated from Asia. As a precautionary measure, the breeding company will destroy all its seed lots originating from Asia, irrespective of the test results.
The pest status of *Pepper chat fruit viroid* in the Netherlands is officially declared as: **Absent, intercepted only.**

Source: NPPO of the Netherlands (2017-12).

Pictures: https://gd.eppo.int/taxon/PCFVD0/photos

Additional key words: interception **Computer codes:** PCFVD0, NL

2018/109 New record of *Cylindropuntia rosea* in Saudi Arabia

Cylindropuntia rosea (Cactaceae) is a species of cactus native to Mexico. In Saudi Arabia, *C. rosea* was found in 2017 distributed near Jebel Hizna in the Baljurashi region of the country at 2034 m above sea level. The population consists of approximately 60 plants scattered between rocks on a sloping site. It is unclear how the species entered the area but it is most likely that *C. rosea* entered Saudi Arabia through the horticultural trade. Within the EPPO region, *C. rosea* has been recorded in the wild in France and Spain where in the case of the former, an eradication campaign was undertaken along the shoreline of Salagou lake in 2012. In Saudi Arabia, the population should be controlled and eradicated. *C. rosea* has the potential to invade grazing areas where it can cause injuries to livestock. The species can be spread by animals, humans and vehicles.

Source: Al-Robai SA, Howladar SM, Mohamed HA, Ahmed AA (2018) *Cylindropuntia rosea* (DC.) Backeb, (Cactaceae): a new generic alien record in the flora of Saudi Arabia. *Journal of Asia Pacific Biodiversity.* DOI*:* doi.org/10.1016/j.japb.2018.04.001.

Additional key words: invasive alien plants **Computer codes:** OPURS, SA

2018/110 Working with gardeners to identify invasive ornamental garden plants

The ornamental plant trade is one of main pathways for plant invasions globally. However, private gardens are often overlooked in any research programme as these gardens are often inaccessible to researchers. Gardeners work to achieve the best growing conditions for their cultivated plants and work to control and contain planted species that dominate flower beds. Using an online survey, gardeners in the United Kingdom were asked to report ornamental plants that were spreading and difficult to control in their gardens. In total, 56 respondents completed the questionnaire recording 120 spreading species in their gardens. Of these, 32 species were reported by more than one gardener and *Anemone scabiosa*, *Crocosmia* x *crocosmiiflora*, *Hyacinthoides hispanica* and *Lamium galeobdolon* subsp. *argentatum* were the most frequently reported. Eight species (*Anemone sylvestris, Arctotheca prostrata, Asclepias speciosa, Carex trifida, Geranium cinereum, Libertia peregrinans, Moraea huttonii* and *Tetrapanax papyrifer*) have not been recorded outside of cultivation in the UK. The results of this study show that gardeners' knowledge can help identify potentially problematic species in the early stage of the invasion process.

Source: Dehnen-Schmutz, Conroy J (2018) Working with gardeners to identify invasive ornamental garden plants: testing a citizen science approach. *Biological Invasions.* DOI*:* doi.org/10.1007/s10530-018-1759-3

Additional key words: invasive alien plants, new record **Computer codes:** ANMHJ, ANMSY, ARORE, ASCSP, CRXTD, GERCI, HCJHI, LAMAR, LBEPR, MRAHU, TTPPA, TTRCR, GB

2018/111 Understanding the influence of urbanization on the invasive species *Carpobrotus edulis*

Carpobrotus edulis (Aizoaceae: EPPO List of Invasive Alien Plants) is a succulent plant species native to South Africa. Within the EPPO region the species is invasive in Israel, France, Italy, Malta, Portugal, Spain and the United Kingdom. The species invades coastlines, in particular cliffs and dune systems, and is difficult to control due to the inaccessible areas it grows. The

species has a number of negative impacts including modifying the nutrient dynamics, and outcompeting and reducing the fitness of native plant species. It was previously unknown however, if the impacts of *C. edulis* are greater in areas of human disturbance (for example beaches frequently used for recreation) compared to natural areas. To assess this, six dune sites all invaded with *C. edulis* were selected in Galicia (Spain): three sites were in urban areas and three were natural sites. At each site, soil characteristics (pH, conductivity, water content, nutrients and enzymatic activities) were measured, and the fitness of native plant species and *C. edulis* (expressed as germination and early growth) were measured under controlled conditions. At the urban sites, human disturbance had a negative impact on the soil characteristics and the presence of *C. edulis* increased the negative impact. These changes in soil characteristics allow for the establishment of the native ruderal *Scolymus hispanicus*, and *C. edulis*. These results suggest that human disturbed coastal areas might be more easily invaded than natural areas.

Source: Lechuga-Lago Y, Novoa A, Le Roux JJ, González L (2017) Understanding the influence of urbanization on invisibility: *Carpobrotus edulis* as an exemplar. *Biological Invasions*, DOI: 10.1007/s10530-017-1593-z.

Pictures: *Carpobrotus edulis*. https://gd.eppo.int/taxon/CBSED/photos

Additional key words: invasive alien plants **Computer codes:** CBSED, ES

2018/112 Effects of human infrastructure on the abundance of alien plant species in protected areas of the Anaga Rural Park in Tenerife (Canary Islands, ES)

Island ecosystems are particularly vulnerable to invasions by alien species, due often to the fragility of their ecosystems and high levels of endemicity in both species and ecosystems. This is particularly relevant to the Canary Islands which is regarded as a biodiversity hotspot with high levels of endemic plants. In the current study, surveys were conducted throughout the Anaga Rural Park in Tenerife (Canary Islands, Spain) to record the alien plant species present in areas with different levels of human impact. In total, 216 alien plant species were identified belonging to 53 families and 141 genera – representing 14.7 % of the total vascular plants recorded for Tenerife. Of these 216 species, 51.9 % have been introduced into the Canary Islands unintentionally, 20.4 % as weeds associated with farming and the rest introduced for use in gardening (20.8 %) and agriculture (6.9%). The surveys showed that human infrastructure and human activities favour the presence and diversity of alien plant species. The largest diversity of alien plant species was concentrated near roads and human settlements. The village with the highest number of alien plant species with invasive behaviour was also the most populated village.

Source: Exposito AB, Siverio A, Bermejo LA, Sobrino-Vesperinas E (2018) Checklist of alien plant species in a natural protected area: Anaga Rural park (Tenerife, Canary Islands); effect of human infrastructure on their abundance. *Plant Ecology and Evolution* **151**, 142-152.

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

2018/113 International Conference: Non-native tree species for European forests (2018-09-12/14, Vienna)

An international conference entitled 'Non-native tree species for European forests' will take place between 12th – 14th September in Vienna. The management of tree species non-native to European geographical regions has a long tradition within forestry management practice. Their introduction to Europe (initially focussed on growing tree species) dates back to the 18th century when enormous demands were being made on natural resources to sustain the on-going industrialization of Europe. Today, issues of biomass production and carbon sequestration as well as the question of whether these species could increase the adaptive capacity of forests to long-term climate change patterns have fuelled a growing interest in non-native tree species in Europe.

Key dates:
Abstract submission: up until 1st June 2018
Acceptance notification: 30th June 2018
Early bird registration: up until 15th July 2018
Registration: up until 15th August 2018

Source: Conference website: http://www.cost.eu/events/final-conference-tree-species-European-forests

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