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2019/049 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 Pakistan, potato (*Solanum tuberosum*) plants showing blackleg symptoms were observed in January 2017 in the Okara district (Punjab). Laboratory studies confirmed the presence of *Dickeya dianthicola* (EPPO A2 List) in the collected stem samples (Sarfraz *et al.*, 2018). **Present, no details.**

In Ethiopia, *Glycaspis brimblecombei* (Hemiptera: Aphalaridae – formerly EPPO Alert List) was found for the first time in October 2018 in Ginchi and Ambo towns on *Eucalyptus camaldulensis*. Subsequently, another infestation was observed in Gedo on *E. camaldulensis*. During these studies, heavy infestations were observed along roadside plantations of *E. camaldulensis* (Yirgu and Anjulo, 2019).

In Slovenia, bleeding cankers were noticed in December 2016 on horse chestnut trees (*Aesculus hippocastanum*) planted along two streets in Ljubljana. Laboratory studies confirmed the presence of *Pseudomonas syringae* pv. *aesculi* (formerly EPPO Alert List) in diseased trees. The origin of this outbreak is unknown, but it is suspected that the bacterium was introduced with imported planting material. It is added that symptoms of the disease were first observed in 2014 on young trees in Ljubljana. Some trees later died and were cut down. In 2017, bleeding cankers were observed on old trees located in the vicinity of these young trees. To avoid any further spread of the disease, disinfection of tools and destruction of infected plant material were recommended (Pirc *et al.*, 2018).

In Greece, *Tomato leaf curl New Delhi virus* (ToLCNDV, EPPO Alert List) was found in one location in a cucurbit crop in October 2018 in the region of Elias. Official surveys are being carried out to determine the extent of the infestation (Rodiotakis and Pappi, 2018).

In Iran, *Tomato leaf curl New Delhi virus* (ToLCNDV, EPPO Alert List) was found during surveys performed in 2012-2014 in field-grown vegetables. ToLCNDV was found in a melon crop in Khuzestan province (South-West Iran). The authors report previous findings in solanaceous crops in South-East Iran (Yazdani-Khameneh *et al.*, 2016).

- **Detailed records**

In Karnataka (India), *Leucinodes orbonalis* (EPPO A1 List) has recently become a destructive pest of potato (*Solanum tuberosum*), causing heavy losses. Up to now it was mainly recorded as a pest of eggplant (*Solanum melongena*) (Natikar and Balikai, 2018).

In the USA, *Meloidogyne enterolobii* (EPPO A2 List) was first reported in Florida and more recently in North Carolina infecting root-knot nematode resistant varieties of cotton (*Gossypium* spp.) and soybean (*Glycine max*). During a survey for root-knot nematodes conducted in South Carolina, *M. enterolobii* was detected in a soil sample which had been collected in February 2018 from a field in Darlington county. This field had been grown with soybean and sweet potato (in rotation) for several years. Further studies also detected *M. enterolobii* in symptomatic roots of a sweet potato cultivar resistant to root-knot nematodes

(*Ipomoea batatas* cv. Covington). Greenhouse tests confirmed that *M. enterolobii* was highly virulent on this sweet potato cultivar (Rutter *et al.*, 2019).

In the USA, symptoms of a phytoplasma disease were observed during autumn 2017 on ornamental palm trees (3 *Phoenix sylvestris* and 3 *Trachycarpus fortunei*) planted in a residential landscape in Baton Rouge, Louisiana. Laboratory analysis of trunk shavings collected from diseased palm trees revealed the presence of lethal yellowing-associated phytoplasma (subgroup 16SrIV-A) related strains. Affected *P. sylvestris* showed necrosis of fronds in the lower one-third of the canopy and *T. fortunei* had dead spear leaves with lower fronds drooping which went either chlorotic or necrotic. In the USA, this is the first time that palm lethal yellowing phytoplasma (EPPO A1 List) is reported outside Florida (Ferguson and Singh, 2018).

In Tunisia, *Tomato leaf curl New Delhi virus* (ToLCNDV, EPPO Alert List) was found in tomato crops in heated plastic tunnels in the South of Tunisia. It had been found in cucurbits in 2015 (Zammouri *et al.*, 2017).

- **Host plants**

In Ecuador, *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 List) is causing bacterial canker of naranjilla or lulo (common names for both *Solanum quitoense* and *Solanum pectinatum*). The disease was first identified in 2008 and can destroy naranjilla plants (Bolanos-Carriel *et al.*, 2018).

In Mexico, rust symptoms were observed on *Crataegus gracilior* (tejocote) orchards in the state of Puebla. Laboratory studies confirmed the presence of *Gymnosporangium globosum* (EPPO A1 List) in diseased samples. It is noted that *G. globosum* had previously been reported on *Crataegus mexicana* (also called tejocote) in Mexico (Alvarado-Rosales *et al.*, 2018).

In USA, *Melampsora medusae* (EPPO A2 List) was detected for the first time on cultivated *Populus mexicana* subsp. *dimorpha* trees in Gainesville, Florida. It is noted that disease symptoms began in late summer and progressed from chlorotic leaf spots to necrotic leaf spots; rust pustules then formed and were followed by early defoliation. It is noted that *M. medusae* had been reported previously on *P. mexicana* in Mexico (Loyd and Smith, 2018).

In Lithuania, during a survey conducted in 2017 in the district of Kaunas, phytoplasma-like symptoms were observed in a private garden on *Forsythia suspensa* (leaf reddening), *Spiraea vanhouttei* (decline) and *Viburnum lantana* (witches' broom). Laboratory studies confirmed the presence of '*Candidatus Phytoplasma* mali' (EPPO A2 List) in these symptomatic plants. Further studies are needed to determine the possible role of these ornamental species in the epidemiology of apple proliferation disease (Abraitienė *et al.*, 2018).

- **Epidemiology**

In tomato production, bumblebees *Bombus terrestris* (Hymenoptera: Apidae) are used extensively for pollination purposes. A study conducted in Israel showed that *Tomato brown rugose fruit virus* (*Tobamovirus,* ToBRFV - EPPO Alert List) can be carried by bumblebees and transmitted to healthy plants during pollination (mechanically). Placing a bumblebee hive collected from a ToBRFV contaminated greenhouse, in a glass- or net-house containing only uninfected healthy tomato plants, spreads ToBRFV disease. This should be considered when taking measures to prevent spread or to eradicate this virus (Levitzk *et al.*, 2019).

- **New pests and taxonomy**

Taxonomic studies have shown that *Botryosphaeria berengeriana* f. sp. *piricola* (EU Annexes) should be considered as a separate and distinct species called *Botryosphaeria kuwatsukai* sp. nov. During these studies, it was also stressed that the main causal agents for apple ring rot in China and Japan are *Botryosphaeria dothidea* and *B. kuwatsukai*. As *B. kuwatsukai* has been confused with *B. dothidea* over the years, this introduces uncertainty about the geographical distributions and host ranges of both species (Xu *et al.*, 2015).

Sources:

Abraitienë A, Bevilacqua A, Scarafoni A, Quaglino F (2018) First report of *Forsythia suspensa*, *Spiraea vanhouttei* and *Viburnum lantana* as new natural plant hosts of '*Candidatus* Phytoplasma mali' the causal agent of apple proliferation disease in Lithuania. *Plant Disease* **102**(10), p 2026.

Alvarado-Rosales D, Ayala-Escobar V, Téliz-Ortiz D, Nieto-López EH, Nieto-Angel R, Tovar-Pedraza JM (2018) First report of *Gymnosporangium globosum* on *Crataegus gracilior* in Mexico. *Plant Disease* **102**(10), p 2034.

Bolanos-Carriel C, Gallegos P, Ochoa JB, Insuasti M, Bonilla V & Evans MH, Alvarez J, Ramirez D, Leon-Reyes A (2019). Bacterial canker caused by *Clavibacter michiganensis* subsp. *michiganensis* in naranjilla. *Biotecnología Vegetal* **17**(4), 221-227.

Ferguson MH, Singh R (2018) First report of lethal yellowing associated with phytoplasma subgroup 16SrIV-A on silver date palm and Chinese windmill palm in Louisiana. *Plant Disease* **102**(10), p 2028.

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Rodiotakis E, Pappi P (2018) *Tomato leaf curl New Delhi virus*, ToLCNDV https://geotee.gr/lnkFiles/20181120133356_4.pdf (in Greek).

Levitzky N, Smith E, Lachman O, Luria N, Mizrahi Y, Bakelman H, Sela N, Laskar O, Milrot E, Dombravsky A (2019) The bumblebee *Bombus terrestris* carries a primary inoculum of *Tomato brown rugose fruit virus* contributing to disease spread in tomatoes. *PLoS ONE* **14**(1): e0210871. https://doi.org/10.1371/journal.pone.0210871.

Lloyd AL, Smith JA (2018) First report of poplar leaf rust caused by *Melampsora medusae on Populus mexicana* in the United States. *Plant Disease* **102**(10), 2031-2033.

Natikar PK & Balikai RA (2018) Status of insect pests of potato and their natural enemies **21**(2), 1163-1172.

Pirc M, Dreo T, Jurc D (2018) First report of *Pseudomonas syringae* pv. *aesculi* as the causal agent of bleeding canker of horse chestnut in Slovenia. *Plant Disease* **102**(10), p 2025.

Rutter WB, Skantar AM, Handoo ZA, Mueller JD, Aultman SP, Agudelo P (2019) *Meloidogyne enterolobii* found infecting root-knot nematode resistant sweetpotato in South Carolina, United States. *Plant Disease* (early view). https://doi.org/10.1094/PDIS-08-18-1388-PDN

Sarfraz S, Riaz K, Oulghazi S, Cigna J, Alam MW, Dessaux Y, Faure D (2018) First report of *Dickeya dianthicola* causing blackleg disease on potato plant in Pakistan. *Plant Disease* **102**(10), 2027-2028.

Xu C, Wang CS, Ju LL, Zhang R, Biggs AR, Tanaka E, Li BZ, Sun GY (2015) Multiple locus genealogies and phenotypic characters reappraise the causal agent of apple ring rot in China. *Fungal Diversity* **71**, 215-231.

Yazdani-Khameneh S, Aboutorabi S, Shoori M, Aghazadeh A, Jahanshahi P, Golnaraghi A, Maleki M (2016) Natural Occurrence of *Tomato leaf curl New Delhi virus* in Iranian Cucurbit Crops. *The Plant Pathology Journal* **32**(3), 201-208 http://dx.doi.org/10.5423/PPJ.OA.10.2015.0210

Yirgu A, Anjulo A (2019) First record of *Glycaspis brimblecombei* Moore (Hem.: Psyllidae) on *Eucalyptus camaldulensis* in Ethiopia. *Phytoparasitica* **47**(1), 67-70.

Zammouri S, Zaagueri T, Eddouzi J, Belkhadhi MS, Hajlaoui MR and Mnari-Hattab M (2017) First report of *Tomato leaf curl New Delhi virus* on tomato crop in Tunisia.

Journal of Plant Pathology **99**(3), 799-818.
http://dx.doi.org/10.4454/jpp.v99i3.3975

Additional key words: detailed record, epidemiology, new host plant, new record, taxonomy

Computer codes: CORBMI, ERWICD, GLYSBR, GYMNGL, LEUIOR, MELGMY, PHYOPI, PHYP56, PHYPMA, PSDMAX, TOBRFV, TOLCND, CH, EC, ET, GR, IN, IR, JP, LT, MX, PK, SI, TN, US, US

2019/050 Recent additions to the quarantine list of the Eurasian Economic Union (EAEU)

The quarantine list of the Eurasian Economic Union (EAEU) which is composed of Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia was first published in 2016-11-30 (EPPO RS 2017/146). In March 2018, it was revised by adding more pests to the 'A1 List of quarantine pests which are absent from the EAEU territory'. The 'A2 List of quarantine pests which are of limited distribution in the EAEU territory' was not amended.

Additions to the list of quarantine pests which are absent from the EAEU territory (A1)

Insects and mites
Aculops fuchsiae
Aleurocanthus spiniferus
Aleurocanthus woglumi
Anthonomus signatus
Aonidiella aurantii
Aromia bungii
Bactrocera dorsalis
*Caryedon serratus (*as *Caryedon gonagra)*
Choristoneura conflictana
Choristoneura rosaceana
Chrysomphalus dictyospermi
*Diabrotica undecimpunctata undecimpunctata (*as *Diabrotica undecimpunctata)*
Dinoderus bifoveolatus
Dryocosmus kuriphilus
Grapholita packardi
Grapholita prunivora
Maconellicoccus hirsutus
Malacosoma americanum
Malacosoma disstria
Melanotus communis
Oligonychus perditus
Opogona sacchari
Pissodes strobi
Pissodes terminalis
Rhagoletis cingulata
Rhynchophorus ferrugineus
Zabrotes subfasciatus

Nematodes
Heterodera glycines
Meloidogyne enterolobii
Nacobbus aberrans
Xiphinema rivesi

Fungi
Cronartium fusiforme
Cronartium harknessii
Cronartium quercuum
Gymnosporangium yamadae
Melampsora medusae
Mycodiella laricis-leptolepidis
Mycosphaerella gibsonii
Phialophora cinerescens
*Stagonosporopsis andigena (*as *Phoma andigena)*

Bacteria
Burkholderia caryophylli
'*Candidatus* Liberibacter solanacearum'
Xanthomonas hyacinthi
Xylella fastidiosa

Viruses and viroids
*Chrysanthemum stem necrosis virus (*as *Chrysanthemum stem necrosis tospovirus)*
*Chrysanthemum stunt viroid (*as *Chrysanthemum stunt pospiviroid)*
*Potato black ringspot virus (*as *Potato black ringspot nepovirus)*
Potato yellow dwarf nucleorhabdovirus
*Potato yellow vein virus (*as *Potato yellow vein crinivirus)*
*Raspberry ringspot virus (*as *Raspberry ringspot nepovirus)*

Weeds
Bidens bipinnata
Sicyos angulatus

This list has been updated in the EPPO Global Database.

Sources: EPPO Secretariat (2019-03)

Eurasian Economic Union Decision of the Council of the EEC of November 30, 2016, N°158. United list of quarantine objects of the Eurasian Economic Union as amended by the Decision of the Council of the EEC of March 30, 2018 No. 25. http://www.eurasiancommission.org/ru/act/texnreg/depsanmer/regulation/Documents/%D0%94%D0%BB%D1%8F%20%D0%A1%D0%B0%D0%B9%D1%82%D0%B0_%D0%95%D0%9F%D0%9A%D0%9E_%D0%B8%D0%B7.%20%E2%84%96%2025.pdf

Additional key words: EUAU, quarantine list

2019/051 Second European conference on *Xylella fastidiosa*: how research can support solutions (Ajaccio, Corsica, FR, 2019-10-29/30)

The 'Second European conference on *Xylella fastidiosa*: how research can support solutions' will take place in Ajaccio (Corsica, FR) from the 29th to the 30th of October 2019. The conference is being organised jointly by: EFSA, INRA, ANSES, the 'Office de l'Environnement de la Corse' and the 'Conservatoire Botanique National de Corse', POnTE, XF-ACTORS, CURE-XF, EuroXanth, and Euphresco.

The programme will focus on the most recent results of research on:

- Biology and pathogenicity.
- Detection and surveillance.
- Ecology, epidemiology and modelling.
- Insect vectors.
- Risk assessment and assessment of impacts (including environmental and socio-economic impact).
- Sustainable management strategies.

Deadline for registration and abstract submission is the 14th of April 2019.
Website: https://www.efsa.europa.eu/en/events/event/191029
Contact: xyella_conference@efsa.europa.eu

Source: EPPO Secretariat (2019-03).

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

2019/052 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance **for 2019** received since the previous report (EPPO RS 2019/028). Notifications have been sent via Europhyt for the EU countries and Switzerland. The EPPO Secretariat has selected notifications of non-compliance made because of the detection of pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anthonomus eugenii	*Capsicum*	Vegetables	Mexico	United Kingdom	1
Bemisia tabaci	*Begonia*	Cuttings	Brazil	Netherlands	1
	Capsicum	Vegetables	Egypt	Netherlands	1
	Capsicum	Vegetables	India	United Kingdom	1
	Capsicum annuum	Vegetables	Morocco	France	2
	Corchorus olitorius, Hibiscus sabdariffa, Solanum macrocarpon, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Corchorus olitorius, Hibiscus sabdariffa, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	2
	Corchorus olitorius, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Eryngium foetidum	Vegetables (leaves)	Cambodia	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Netherlands	United Kingdom	1
	Exacum	Plants for planting	Suriname*	Netherlands	2
	Fragaria	Fruits	Egypt	Belgium	1
	Fragaria	Fruits	Egypt	Czech Republic	1
	Fragaria	Fruits	Egypt	Netherlands	1
	Hibiscus	Vegetables (leaves)	Congo, Dem. Rep.	Belgium	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
***B. tabaci* (cont.)**	*Hibiscus*	Vegetables (leaves)	Togo	Belgium	1
	Hibiscus sabdariffa	Vegetables	Thailand	Ireland	1
	Hibiscus sabdariffa	Vegetables (leaves)	Togo	Belgium	1
	Hibiscus sabdariffa	Vegetables (leaves)	Togo	Germany	1
	Ipomoea batatas	Vegetables	Togo	Belgium	4
	Mentha	Vegetables (leaves)	Israel	Netherlands	1
	Ocimum	Vegetables (leaves)	Kenya	United Kingdom	2
	Ocimum basilicum	Vegetables (leaves)	Kenya	United Kingdom	5
	Ocimum basilicum	Vegetables (leaves)	Thailand	Netherlands	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	Sweden	3
	Ocimum tenuiflorum	Vegetables (leaves)	Cambodia	Netherlands	1
	Origanum	Vegetables (leaves)	Israel	Netherlands	2
	Persicaria	Cuttings	Uganda	Netherlands	1
	Persicaria odorata	Vegetables	Vietnam	United Kingdom	1
	Salvia officinalis	Vegetables (leaves)	Israel	Netherlands	1
	Solanum	Vegetables (leaves)	Togo	Belgium	1
	Solanum macrocarpon	Vegetables	Mexico	Netherlands	1
	Solanum macrocarpon	Vegetables	Suriname*	Netherlands	5
	Solanum macrocarpon, Talinum triangulare, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Solanum melongena, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Solanum, Talinum triangulare, Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Telfairia occidentalis	Vegetables (leaves)	Nigeria	United Kingdom	3
Bemisia tabaci, Aleyrodidae	*Manihot esculenta*	Vegetables	Thailand	Ireland	1
Chilo partellus	*Zea mays*	Vegetables	Sri Lanka	Switzerland	1
Clavibacter michiganensis* subsp. *michiganensis	*Solanum lycopersicum*	Seeds	China	Italy	1
Coccidae	*Citrus*	Fruits	Tunisia	Italy	1
	Laurus nobilis	Cut flowers	Tunisia	Italy	1
	Momordica charantia, Psidium guajava	Vegetables	Bangladesh	Italy	1
Curculio	*Quercus alba*	Seeds	USA	Germany	1
Diaspididae	*Ficus carica*	Plants for planting	Tunisia	Italy	1
***Dolichotetranychus floridanus, Dysmicoccus brevipes,* Nematoda, Pseudococcidae**	*Ananas comosus, Cocos nucifera*	Plants for planting	Sri Lanka	Italy	1
Fungi	*Piper betle*	Vegetables (leaves)	Bangladesh	Italy	1
Helicoverpa	*Capsicum*	Vegetables	Dominican Rep.	United Kingdom	1
	Capsicum	Vegetables	Sri Lanka	Italy	1
Helicoverpa armigera	*Mangifera indica*	Fruits	Angola	Portugal	1
Helicoverpa zea	*Zea mays* subsp. *saccharata*	Vegetables	Peru	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Insecta	*Persea americana, Saccharum officinarum*	Vegetables	Ghana	Italy	1
Lepidoptera, Thripidae	*Asparagus*	Vegetables	Peru	Spain	1
Leucinodes orbonalis	*Solanum aethiopicum*	Vegetables	Cameroon	France	1
	Solanum aethiopicum	Vegetables	Uganda	Belgium	2
Liriomyza	*Amaranthus viridis*	Vegetables (leaves)	Sri Lanka	United Kingdom	1
	Chrysanthemum	Cut flowers	Colombia	United Kingdom	1
	Dendranthema	Vegetables (leaves)	Colombia	United Kingdom	1
	Ocimum	Vegetables (leaves)	Ethiopia	United Kingdom	2
	Ocimum	Vegetables (leaves)	South Africa	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Ethiopia	United Kingdom	2
	Ocimum basilicum	Vegetables (leaves)	Kenya	United Kingdom	1
Liriomyza huidobrensis	*Chrysanthemum*	Cut flowers	Colombia	United Kingdom	1
	Eryngium	Cut flowers	Kenya	Netherlands	1
	Gypsophila	Cut flowers	Kenya	Switzerland	1
	Gypsophila	Cut flowers	Zimbabwe	Netherlands	1
	Gypsophila paniculata	Cut flowers	Kenya	Netherlands	1
Liriomyza sativae	*Apium graveolens*	Vegetables	Suriname*	Netherlands	4
Liriomyza sativae, Thrips palmi	*Momordica charantia*	Vegetables	Suriname*	Netherlands	1
Liriomyza trifolii	*Chrysanthemum*	Cut flowers	Colombia	Netherlands	1
	Gypsophila	Cut flowers	Zimbabwe	Netherlands	1
	Ocimum basilicum	Vegetables (leaves)	Morocco	France	2
Nematoda	*Daucus carota*	Vegetables	Tunisia	Italy	1
Phyllosticta citricarpa	*Citrus limon*	Fruits	Uganda	Netherlands	1
	Citrus maxima	Fruits	China	Italy	1
Potato spindle tuber viroid	*Capsicum annuum, Solanum lycopersicum, Solanum melongena*	Seeds	China	Romania	1
	Capsicum chinense	Seeds	Benin*	Italy	1
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Egypt	Poland	1
Spodoptera	*Zea mays*	Vegetables	Senegal	United Kingdom	1
Spodoptera eridania	*Apium graveolens*	Vegetables	Suriname	Netherlands	2
	Solanum macrocarpon	Vegetables	Suriname	Netherlands	1
Spodoptera eridania, Spodoptera frugiperda	*Solanum macrocarpon*	Vegetables	Suriname	Netherlands	1
Spodoptera frugiperda	*Asparagus*	Vegetables	Peru	Netherlands	1
	Asparagus officinalis	Vegetables	Peru	Netherlands	2
	Capsicum	Vegetables	Suriname	Netherlands	2
	Capsicum chinense	Vegetables	Suriname	Netherlands	1
	Solanum macrocarpon	Vegetables	Suriname	Netherlands	1
	Solanum melongena	Vegetables	Suriname	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
***S. frugiperda* (cont.)**	*Zea mays*	Vegetables	Senegal	Netherlands	1
	Zea mays	Vegetables	Senegal	United Kingdom	1
Spodoptera littoralis	*Aster*	Cut flowers	Zimbabwe	Netherlands	1
	Mentha	Vegetables (leaves)	Israel	Netherlands	1
Spodoptera littoralis, Thaumatotibia leucotreta	*Rosa*	Cut flowers	Uganda	Netherlands	1
Thaumatotibia leucotreta	*Annona muricata*	Fruits	Uganda	Belgium	3
	Capsicum	Vegetables	Kenya	United Kingdom	1
	Capsicum	Vegetables	Mozambique	Netherlands	2
	Capsicum	Vegetables	Mozambique	United Kingdom	1
	Capsicum	Vegetables	Tanzania	United Kingdom	1
	Capsicum	Vegetables	Uganda	United Kingdom	2
	Capsicum	Vegetables	Zimbabwe	Netherlands	1
	Capsicum annuum	Vegetables	Tanzania	United Kingdom	1
	Capsicum annuum	Vegetables	Uganda	United Kingdom	4
	Capsicum annuum	Vegetables	Zimbabwe	Ireland	1
	Capsicum chinense	Vegetables	Uganda	United Kingdom	1
	Citrus reticulata	Fruits	Israel	France	3
	Phyllanthus emblica	Fruits	(India)*	Germany	1
	Rosa	Cut flowers	Ethiopia	Netherlands	1
	Rosa	Cut flowers	Kenya	Netherlands	4
	Rosa	Cut flowers	Kenya	United Kingdom	2
	Rosa	Cut flowers	Tanzania	Germany	1
	Rosa	Cut flowers	Tanzania	Netherlands	1
	Rosa	Cut flowers	Tanzania	Sweden	1
	Rosa	Cut flowers	Uganda	Netherlands	2
	Rosa	Cut flowers	Zambia	Netherlands	1
***Thaumatotibia leucotreta* (suspected)**	*Citrus reticulata*	Fruits	Israel	Cyprus	1
Thripidae	*Momordica*	Vegetables	Cambodia	United Kingdom	1
	Momordica charantia	Vegetables	Dominican Rep.	United Kingdom	7
	Solanum melongena	Vegetables	Dominican Rep.	United Kingdom	2
	Solanum melongena	Vegetables	Ghana	United Kingdom	1
	Telfairia	Vegetables (leaves)	Nigeria	United Kingdom	1
	Telfairia occidentalis	Vegetables (leaves)	Nigeria	United Kingdom	1
Thrips palmi	*Capsicum annuum*	Vegetables	Japan	Netherlands	1
	Momordica charantia	Vegetables	Sri Lanka	France	1
	Momordica charantia	Vegetables	Suriname	Netherlands	1
	Solanum macrocarpon	Vegetables	Suriname	Netherlands	4
	Solanum melongena	Vegetables	Dominican Rep.	Switzerland	1
	Solanum melongena	Vegetables	Sri Lanka	Switzerland	1
	Solanum melongena	Vegetables	Suriname	Netherlands	5
***Thrips palmi, Helicoverpa,* Tephritidae**	*Capsicum, Solanum macrocarpon, Solanum melongena*	Vegetables	Mauritius	France	1
Xanthomonas citri* subsp. *citri	*Citrus reticulata*	Fruits	Pakistan	United Kingdom	1

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
Anastrepha	*Averrhoa carambola*	Peru	Netherlands	1
	Chrysophyllum cainito	Suriname	Netherlands	1
	Mangifera indica	Brazil	Portugal	1
	Mangifera indica	Peru	France	1
	Mangifera indica	Peru	Germany	1
	Mangifera indica	Peru	Netherlands	3
Anastrepha (A. fraterculus* or *obliqua)	*Mangifera indica*	Brazil	Portugal	2
Bactrocera	*Annona muricata*	Vietnam	Switzerland	1
	Averrhoa carambola	Malaysia	Netherlands	1
	Capsicum frutescens	Thailand	Netherlands	1
	Citrus maxima	China	Belgium	1
	Citrus maxima	China	Germany	7
	Citrus maxima	China	Netherlands	8
	Solanum melongena	Vietnam	Switzerland	1
Dacus	*Momordica charantia*	Uganda	Sweden	1
	Momordica charantia	Uganda	United Kingdom	1
Dacus ciliatus	*Momordica charantia*	Uganda	Sweden	3
***Tephritidae* (non-European)**	*Capsicum*	Rwanda	Netherlands	1
	Capsicum annuum	Uganda	Belgium	1
	Citrus maxima	China	Netherlands	1
	Eryngium	Kenya	Netherlands	1
	Mangifera indica	Dominican Rep.	France	2
	Mangifera indica	Peru	France	2
	Mangifera indica	South Africa	Netherlands	1
	Manilkara zapota	Vietnam	United Kingdom	1
	Momordica charantia	Sri Lanka	France	2
	Momordica charantia	Uganda	United Kingdom	1
	Psidium	India	United Kingdom	2
	Solanum aethiopicum	Cameroon	Belgium	1
Zeugodacus cucurbitae	*Cucurbita*	Bangladesh	Finland	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Aphelenchoides	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1
	Unspecified	Wood packaging material (pallet)	Belarus	Netherlands	1
Aphelenchoides, Diplogaster, Rhabditis	Unspecified	Wood packaging material (crate)	Belarus	Belgium	1
Aphelenchoides, Tylenchus	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1
Arhopalus rusticus, Bursaphelenchus mucronatus	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Arhopalus rusticus, Bursaphelenchus mucronatus, Rhabditis	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1
Bostrichidae	Unspecified	Wood packaging material	China	Germany	2
	Unspecified	Wood packaging material (pallet)	Malaysia	Germany	1
Bursaphelenchus	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1
Bursaphelenchus mucronatus	Unspecified	Wood packaging material (crate)	Belarus	Latvia	1
	Unspecified	Wood packaging material (pallet)	Belarus	Belgium	2
	Unspecified	Wood packaging material (pallet)	Belarus	Germany	3
Bursaphelenchus mucronatus, Tylenchus	Unspecified	Wood packaging material (crate)	Belarus	Germany	1
Bursaphelenchus xylophilus	Unspecified	Wood packaging material (crate)	China	Poland	1
Ditylenchus myceliophagus, Rhabditis	Unspecified	Wood packaging material (pallet)	Belarus	Denmark	1
Heterobostrychus	Unspecified	Wood packaging material (pallet)	China	Germany	1
Insecta	Unspecified	Wood packaging material	Indonesia	Switzerland	1
Larvae, grub holes	*Larix*	Wood and bark	Russia	Belgium	1
	Unspecified	Wood packaging material	Russia	Slovakia	1
Rhabditis	Unspecified	Wood packaging material (pallet)	Belarus	Germany	1
Rhabditis, Tylenchus	Unspecified	Wood packaging material (crate)	Belarus	Belgium	1
Sinoxylon	Unspecified	Dunnage	Brazil	Belgium	1
Trichoferus campestris	Unspecified	Wood packaging material (pallet)	China	Austria	1
Tylenchus	Unspecified	Wood packaging material (pallet)	Belarus	Netherlands	1
Xyleborinus	Unspecified	Wood packaging material (pallet)	China	Austria	1
Xyleborinus saxeseni	Unspecified	Wood packaging material (pallet)	China	Austria	1
***Xyleborinus saxeseni*, Curculionidae**	Unspecified	Wood packaging material (pallet)	China	Austria	1

Source: EPPO Secretariat (2019-03).

INTERNET
EUROPHYT. Annual and monthly reports of interceptions of harmful organisms in imported plants and other objects.
http://ec.europa.eu/food/plant/plant_health_biosecurity/europhyt/interceptions/index_en.htm

2019/053 *Spodoptera frugiperda* continues to spread in Asia

Soon after invading the African continent, *Spodoptera frugiperda* (Lepidoptera: Noctuidae – EPPO A1 List) was found in Asia, first in India (EPPO RS 2018/154) and then in China (Yunnan – EPPO RS 2019/029), Myanmar (EPPO RS 2019/005) and Thailand (EPPO RS 2019/006). More recently, records of the pest in new areas have been made on the Asian continent.

In India, *S. frugiperda* was first found in May 2018 in Karnataka. The pest then rapidly spread to other Indian states on crops of maize (*Zea mays*), sorghum (*Sorghum* spp.) and millet (*Eleusine coracana* - finger millet, *Panicum sumatrense* - little millet, *Pennisetum glaucum* - pearl millet, *Setaria italica* - foxtail millet). As of March 2019, the presence of *S. frugiperda* was confirmed in the following Indian states: Andhra Pradesh, Bihar*, Chhattisgarh*, Gujarat*, Karnataka, Maharashtra, Orissa*, Tamil Nadu, Telangana*, and West Bengal*.

Finally, outbreaks of *S. frugiperda* have recently been confirmed in Bangladesh and Sri Lanka.

* new detailed records.

Source: INTERNET

FAO. Briefing note on FAO actions on fall armyworm of 2019-03-05. http://www.fao.org/3/BS183E/bs183e.pdf

ICRISAT Happenings Newsletter. Global scientists join forces to battle fall armyworm in India. https://www.icrisat.org/global-scientists-join-forces-to-battle-fall-armyworm-in-india/

Padhee AK, Prasanna BM (2019) The emerging threat of fall armyworm in India. *Indian Farming* **69**(1), 51-54.

Sarfaraz A, Masoor Z, Masroor MD (2018) First record of the fall armyworm, Spodoptera frugiperda (J. E. Smith, 1797) (Lepidoptera: Noctuidae), an evil attack on paddy in Magadh, Bihar (India). *Journal of Emerging Technologies and Innovative Research (JETIR)* **5**(12), 546-549.

Sisodiya DB, Raghunandan BL, Bhatt NA, Verma HS, Shewale CP, Timbadiya BG, Borad PK (2018) The fall armyworm, *Spodoptera frugiperda* (J.E. Smith) (Lepidoptera: Noctuidae); first report of new invasive pest in maize fields of Gujarat, India. *Journal of Entomology and Zoology Studies* **6**(5), 2089-2091.

Sonali D, Nandita P (2018) First report of fall armyworm, *Spodoptera frugiperda* (J.E. Smith), their nature of damage and biology on maize crop at Raipur, Chhattisgarh. *Journal of Entomology and Zoology Studies* **6**(6), 219-221.

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

Additional key words: detailed record, new record **Computer codes:** LAPHFR, BD, IN, LK

2019/054 First report of *Dacus ciliatus* in Iraq

During surveys conducted from September to December 2017 in 3 governorates (Duhok, Erbil, and Sulaimaniyah) in the Kurdistan region of Iraq, *Dacus ciliatus* (Diptera: Tephritidae – EPPO A2 List) was detected for the first time. In several villages of the 3 governorates studied, numerous specimens were collected from cucurbit fields or reared from affected fruits.
The situation of *Dacus ciliatus* in Iraq can be described as follows: **Present, first found in 2017 in the governorates of Duhok, Erbil, and Sulaimaniyah.**

Source: Al-Muffti SA, Al-Maronsy GH (2018) Record a new species of cucurbit fly *Dacus ciliatus*, Loew (Diptera: Tephritidae) in Kurdistan Region, Iraq. *International Conference on Materials Engineering and Science. IOP Conf. Series: Materials Science and Engineering* **454**. DOI:10.1088/1757-899X/454/1/012168 (via PestLens).

Pictures: *Dacus ciliatus*. https://gd.eppo.int/taxon/DACUCI/photos

Additional key words: new record **Computer codes:** DACUCI, IQ

2019/055 *Ceratitis rosa sensu lato* is part of a species complex and has been separated into two distinct species *C. rosa* and *C. quilicii*

The genus *Ceratitis* (Diptera: Tephritidae) includes approximately 100 species mainly found in Sub-Saharan Africa and islands of the Western Indian Ocean, some of the *Ceratitis* species being of regulatory importance. In the EPPO region, both *Ceratitis capitata* (EPPO A2 List - Mediterranean fruit fly) and *C. rosa* (EPPO A1 List - Natal fruit fly) are regulated pests. Recent taxonomic studies have shown that *C. rosa* was part of a species complex, called the '*Ceratitis* FAR complex'. This group initially comprised three polyphagous and morphologically similar species: *C. fasciventris, C. anonae* and *C. rosa,* but subsequent studies added another species, *Ceratitis quilicii* sp. nov. In addition, the existence of 2 distinct populations within *C. fasciventris* is still being explored. *C. quilicii* is morphologically very similar to *C. rosa*. Only the males can be distinguished by minor difference of the mid-tibia (females cannot be morphologically differentiated). In previous literature, *C. rosa* has often been referred to as R1, the hot type or lowland type, whereas *C. quilicii* has been referred to as R2, the cold type or highland type.

All four currently accepted species are polyphagous pests with a wide range of wild and cultivated plants (including more than 25 plant families). Their respective host ranges overlap to a great extent, but also include some unique host plants for each fruit fly species. Concerning their geographical range, it is now generally considered that:
1) *C. fasciventris* is found mainly in Eastern and Western Africa, sympatrically with *C. anonae*, and
2) *C. rosa* and *C. quilicii* occur in Eastern and Southern Africa, overlapping with each other, and partially with *C. fasciventris* in Kenya and Tanzania.
These taxonomic changes imply that many geographical and host plant records attributed to *C. rosa* prior to 2016 are now invalid, as they may now correspond to either *C. quilicii* or *C. fasciventris*, or to both of them. In addition, the regulatory status of individual members of this complex might need to be examined in the light of these new developments (for the moment, only *C. rosa* is included on the EPPO Lists). Recent studies have attempted to predict the distribution of *C. rosa* and *C. quilicii* using temperature-dependent phenology models. Results for Southern Europe showed that *C. quilicii* had a broader potential range of suitable areas (for its possible establishment) than *C. rosa*.

The geographical distributions and lists of host plants below have been extracted from the online database 'True Fruit Flies (Diptera: Tephritidae) of the Afrotropical Region', but work is ongoing to study the distribution and host range of all species belonging to the species complex.

Ceratitis anonae

- Host plants

Annona muricata, Annona senegalensis, Areca triandra, Citrus paradisi, Citrus sinensis, Coffea canephora, Eugenia uniflora, Mangifera indica, Murraya sp., *Nephelium lappaceum, Persea americana, Psidium guajava, Rollinia mucosa, Terminalia catappa, Theobroma cacao, Vitellaria paradoxa, Ziziphus jujuba,* as well as other wild fruiting species.

- Distribution

Africa: Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Congo, Congo (Democratic republic of the), Cote d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Kenya, Liberia, Mali, Nigeria, Sao Tome & Principe, Senegal, Sudan, Tanzania, Togo, Uganda.

Ceratitis fasciventris

- Host plants

Annona senegalensis, Casimiroa edulis, Citrus limon, Citrus reticulata, Coffea arabica, Coffea canephora, Dovyalis caffra, Eriobotrya japonica, Ficus sp., *Harpephyllum caffrum, Mangifera indica, Passiflora* sp., *Persea Americana, Prunus persica, Psidium guajava, Syzygium jambos, Theobroma cacao, Ziziphus jujube*, as well as other wild fruiting species.

- Distribution

Africa: Angola, Benin, Burkina Faso, Burundi, Cameroon, Congo, Congo (Democratic republic of the), Cote d'Ivoire, Ethiopia, Ghana, Guinea, Kenya, Malawi, Mali, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Zambia.

***Ceratitis quilicii* sp. nov.**

- Host plants

Acca sellowiana, Carica papaya, Carissa macrocarpa, Coffea arabica, Cydonia oblonga, Dovyalis caffra, Eriobotrya japonica, Ficus carica, Malus domestica, Persea americana, Prunus persica, Psidium cattleyanum, Psidium guajava, Pyrus communis, Rubus sp., *Strychnos spinosa, Syzygium jambos,* as well as other wild fruiting species.

- Distribution

Africa: Botswana, Kenya, Malawi, Mauritius, Mozambique, Reunion, South Africa, Swaziland, Tanzania, Zimbabwe.

Ceratitis rosa

- Host plants

Annona cherimola, Annona muricata, Annona senegalensis, Citrus sp., *Eriobotrya japonica, Gloriosa sp., Prunus persica, Psidium guajava,* as well as other wild fruiting species.

- Distribution

Africa: Kenya, Malawi, Mozambique, South Africa, Tanzania.

Sources: De Meyer M, Delatte H, Ekesi S, Jordaens K, Kalinová B, Manrakhan A, Mwatawala M, Steck G, Van Cann J, Vaníčková L, Břízová R, Virgilio M (2015) An integrative approach to unravel the *Ceratitis* FAR (Diptera, Tephritidae) cryptic species complex: a review. *ZooKeys* **540**, 405-427. https://doi.org/10.3897/zookeys.540.10046

De Meyer M, Mwatawala M, Copeland RS, Virgilio M (2016) Description of new *Ceratitis* species (Diptera: Tephritidae) from Africa, or how morphological and DNA data are complementary in discovering unknown species and matching sexes. *European Journal of Taxonomy* **233**, 1-23.
INTERNET
True Fruit Flies (Diptera: Tephritidae) of the Afrotropical Region.
- *Ceratitis anonae*. Specimens.
http://projects.bebif.be/fruitfly/taxoninfo.html?id=56
- *Ceratitis fasciventris*. Specimens.
http://projects.bebif.be/fruitfly/taxoninfo.html?id=63
- *Ceratitis quilicii*. Specimens.
http://projects.bebif.be/fruitfly/taxoninfo.html?id=434
- *Ceratitis rosa*. Specimens.
http://projects.bebif.be/fruitfly/taxoninfo.html?id=62
Tanga CM, Khamis FM, Tonnang HEZ, Rwomushana I, Mosomtai G, Mohamed SA, Ekesi S (2018) Risk assessment and spread of the potentially invasive *Ceratitis rosa* Karsch and *Ceratitis quilicii* De Meyer, Mwatawala & Virgilio sp. nov. using life-cycle simulation models: implications for phytosanitary measures and management. *PloS ONE* **13**(1), e0189138.
https://doi.org/10.1371/journal.pone.0189138
Personal communication with EFSA (2018-12).

Pictures: *Ceratitis rosa*. https://gd.eppo.int/taxon/CERTRO/photos

Additional key words: taxonomy, host plants, distribution **Computer codes:** CERTAN, CERTFA, CERTQI, CERTRO

2019/056 *Dryocoetes himalayensis*, a bark beetle spreading in Europe

Dryocoetes himalayensis (Coleoptera: Curculionidae: Scolytinae) is a bark beetle native to the Himalayan region. In Europe, it was first recorded from France and Switzerland in 1975 and 1980 respectively. In 2009, it was first recorded in the Czech Republic (South Moravia). It is considered established in these 3 countries. More recently, it was found in traps in Austria (2016), Germany (2016), and Slovakia (2017). In Europe, all records of this species were incidental, originating from sweeping of vegetation, beating of trees or shrubs, or from various traps.
In its region of origin, *D. himalayensis* is reported to breed in walnut (*Juglans regia*) and *Sorbus lanata*. Recent observations in the Czech Republic showed that *D. himalayensis* developed in declining black walnut trees (*Juglans nigra)*. The galleries were in trunks of various diameters (7–45 cm) and were accompanied by dark necrotic areas and noticeable outflow of black fluid from beetle entrance holes. Further studies are necessary to clarify its potential status as a pest of walnut trees. *D. himalayensis* was hypothesized to be possibly also associated with oaks because it was always collected in or near oak stands in its European localities.

Source:
Foit J, Kašák J, Májek T, Knížek M, Hoch G & Steyder G (2017) First observations on the breeding ecology of invasive *Dryocoetes himalayensis* Strohmeyer, 1908 (Coleoptera: Curculionidae: Scolytinae) in its introduced range in Europe. *Journal of Forest Science* **63**(6), 290–292.
Procházka J, Stejskal R, Čížek L, Hauck D & Knížek M (2018) *Dryocoetes himalayensis* (Coleoptera: Curculionidae: Scolytinae), a new bark beetle species for Slovakia and Austria, and its occurrence in the Czech Republic. *Klapalekiana* **54**, 117–121

Additional key words: detailed record **Computer codes:** DRYOHI, AT, CH ,CZ, DE, FR, SK

2019/057 First report of *Ips typographus* in the United Kingdom

The NPPO of the United Kingdom recently informed the EPPO Secretariat of the first record of *Ips typographus* (EU Annexes) on its territory. In November 2018, several beetles were caught in a *Pinus sylvestris* billet trap, located in a forestry site in Kent (South-eastern England). This trap was part of a protected zone monitoring network. Maternal galleries and associated adults were subsequently found in *Picea abies* in the surrounding woodland. It is estimated that this infestation has been present for 2 to 3 years, and it is believed to be at low levels. Eradication measures are being taken, including the felling and sampling of suspected infested trees and local movement restrictions on *P. abies*. An intensive survey is being carried out around infested trees within a radius of 1 km, as well as an extensive survey within a 50 km radius.
The pest status of *Ips typographus* in the United Kingdom is officially declared as: **Transient, actionable, under eradication.**

Source: NPPO of the United Kingdom (2018-12).

Pictures: *Ips typographus*. https://gd.eppo.int/taxon/IPSXTY/photos

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

2019/058 First report of *Neonectria neomacrospora* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first record of *Neonectria neomacrospora* (EPPO Alert List) on its territory. The disease was probably first observed by scientists in autumn 2013, but at that time the identity of the fungus was not confirmed. In 2013, disease symptoms (resin flow, needle loss, crown dieback, tree mortality) were observed on *Abies concolor* in two forest stands (covering approximately 3 ha) in Seddiner See, near Potsdam (Brandenburg). In autumn 2016, similar symptoms were seen on *A. concolor* near Welzow (Brandenburg), on an area of approximately 1500 m^2. In 2018, samples were collected and tested (PCR, sequencing) by the NPPO, and the results confirmed the identity of the fungus. No official phytosanitary measures will be taken but it is planned to carry out surveys to better understand the distribution of *N. neomacrospora* in Germany.
The pest status of *Neonectria neomacrospora* in Germany is officially declared as: **Present, only in some parts of the Member State concerned.**

Source: NPPO of Germany (2018-11).

Heydeck P, Merkel R, Dahms C, Hielscher K (2018) [New damages on *Abies concolor* in the northeastern German lowlands]. *Julius-Kühn-Archiv*, **461** 115-116 (in German).

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

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

2019/059 Update on the situation of *Fusarium oxysporum* f. sp. *cubense* tropical race 4 in Israel

As reported in EPPO RS 2018/106, *Fusarium oxysporum* f. sp. *cubense* tropical race 4 was first found in Israel in 2016 at two separate locations and subsequently eradicated. Recent ongoing intensive surveillance operations have discovered a further outbreak at a number of sites in close proximity to one of these locations (in the eastern/southern Lake Galilee area). As before, the infected sites have been confined and placed under strict supervision by the NPPO of Israel. Infected banana mats (=stools), as well as a buffer of five mats radius, have been immediately fenced off and all plants destroyed *in-situ*. All plantations with infected sites have also been fenced off, access restricted and entry allowed only under strict quarantine conditions. Water ditches have been dug around the fenced areas to prevent spread of spores in rain water.
The pest status of *Fusarium oxysporum* f. sp. *cubense* TR4 in Israel is officially declared as: **Actionable, under eradication.**

Source: NPPO of Israel (2019-03).

Additional key words: detailed record **Computer codes:** FUSACB, FUSAC4, IL

2019/060 Dollar spot disease of amenity turfgrasses is associated with four fungal species belonging to a new genus called *Clarireedia*

Dollar spot is an economically important fungal disease of amenity turfgrasses. The causal agent of this disease was first described in 1937 as *Sclerotinia homoeocarpa*. The taxonomic placement of this fungus has been subject to ongoing debate for more than 70 years. Recent taxonomic studies have indicated that this fungus would better be placed in the family *Rutstroemiaceae* than in *Sclerotiniaceae*. It was also shown that the fungus did not belong to the genus *Sclerotinia* but to a new genus for which the name *Clarireedia* gen. nov. was proposed. Finally during these phylogenetic studies, it was discovered that dollar spot disease was in fact associated with four distinct fungal species: *Clarireedia homoeocarpa* comb. nov. (=*Slerotinia homoeocarpa*) and the following three new species: *Clarireedia bennettii* sp. nov., *Clarireedia jacksonii* sp. nov., and *Clarireedia monteithiana* sp. nov.

Source: Salgado-Salazar C, Beirn LA, Ismaeiel A, Boehm MJ, Cargone I, Putman AI, Tredway LP, Clarke BB, Crouch JA (2018) *Clarireedia*: a new fungal genus comprising four pathogenic species responsible for dollar spot disease of turfgrass. *Fungal Biology* **122**(8), 761-773.

Additional key words: etiology, taxonomy **Computer codes:** CLAEBE, CLAEJA, CLAEMO, SCLEHO

2019/061 Recent studies on *Grapevine red blotch virus*

Recent studies have brought new knowledge on the causative role of *Grapevine red blotch virus* (*Grablovirus*, GRBV – EPPO Alert List) in the red blotch disease of grapevine and on its geographical distribution.

- **Fulfilment of Koch's postulates**

The etiological role of GRBV in red blotch disease of grapevine (*Vitis vinifera*) was investigated in the USA. Inoculation experiments demonstrated the causative role of GRBV in red blotch disease and the Koch's postulates were fulfilled. In these studies, it is stressed that in North America, GRBV is causing severe losses. For example, its economic impact was estimated to range from 8 855 to 69 548 USD per hectare over a 25-year lifespan of a Cabernet Sauvignon vineyard in Napa Valley, California. In an infected vineyard in California, it was also observed that the disease incidence increased by 1 to 2% every year. It is finally noted that in the USA, some states are in the process of revising their certification programmes to include GRBV (Yepes *et al.*, 2018).

- **First detection in India**

In India, GRBV has been detected in symptomless grapevine plants (*Vitis vinifera*) growing in Jind, Punjab. This is the first time that this GRBV is detected in India (Marwal *et al.*, 2018).

- **Absence in Switzerland**

In Switzerland, surveys were conducted in the three major grape-growing regions (Valais, Vaud, Ticino) to determine the possible presence of GRBV. In total, 3062 plants were tested by PCR and all results were negative, thus suggesting that GRBV is absent from Swiss vineyards. Studies were also carried out in the grapevine virus collection at Nyon, which includes predominantly Swiss grapevine accessions but also international ones. Results showed that 6 accessions were infected by GRBV, all originating from the USA (some present

since the 1980s). The absence of spread of GRBV in the grapevine collection for more than 30 years indicated the lack of vector or contact transmission. As a precautionary measure, all accessions infected with GRBV were eliminated from the collection. During these studies, it was also observed that GRBV had clear detrimental effects on grapevine physiology (vine vigour, leaf chlorophyll content, gas exchange) and fruit quality. The authors concluded that GRBV should be included in certification or quarantine programmes to avoid its dissemination (Reynard *et al.*, 2018).

Sources: Marwal A, Kumar R, Khurana SMP, Gaur RK (2018) Complete nucleotide sequence of a new geminivirus isolated from *Vitis vinifera* in India: a symptomless host of *Grapevine red blotch virus*. *VirusDisease*. https://doi.org/10.1007/s13337-018-0477-x

Reynard JS, Brodard J, Dubuis N, Zufferey V, Schumpp O, Schaerer S, Gugerli P (2018) *Grapevine red blotch virus*: absence in Swiss vineyards and analysis of potential detrimental effect on viticultural performance. *Plant Disease* **102**(3), 651-655.

Yepes LM, Cieniewicz E, Krenz B, McLane H, Thompson JR, Perry KL, Fuchs M (2018) Causative role of grapevine red blotch virus in red blotch disease. *Phytopathology* **108**(7), 902-909.

Additional key words: absence, etiology, new record

Computer codes: GRBAV0, CH, IN, US

2019/062 *Alternanthera sessilis*: new addition to the EPPO Alert List

Why
Alternanthera sessilis (Amaranthaceae) is an invasive plant species that can grow in a variety of habitats. The species is native to Brazil. Throughout its non-native range it has been shown to grow within a number of crop systems and the species has the potential to block irrigation channels and drainage systems. The species is present in a number of EPPO countries, but the extent of these non-native populations is not clear.

Geographical distribution
EPPO Region: Algeria, Belgium, Israel, Italy, Jordan, Russia, Spain, Turkey.
Africa: Algeria, Botswana, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, Ghana, Guinea, Kenya, Mauritania, Mauritius, Mozambique, Nigeria, Senegal, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe.
Asia: Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Korea (DPR), Korea (Republic of), Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Turkey, Vietnam.
North America: Canada, USA (Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, South Carolina, Texas).
South America: Argentina, Brazil (native), Colombia, Equator, French Guiana, Guyana, Peru, Suriname, Venezuela.
Oceania: Australia, Papua New Guinea, Pitcairn.

Morphology
A. sessilis is a perennial herb with prostrate stems, often rooting at the nodes, 10 to 100 cm long. Leaves are obovate, occasionally linear-lanceolate, 1-15 cm long, 0.3-3 cm wide, and petioles are 1-5 mm long. Flowers in sessile spikes, 0.7-1.5 mm long. Fruits are utricles 1.8–3 mm long and 1.3–2 mm wide. Seeds are lenticular 0.9–1.5 mm long and 0.8–1 mm wide.

Biology and ecology
A. sessilis prefers areas with constant or periodically high humidity, but can tolerate extremely dry conditions. It often grows in mixed association with several other aquatic species. The plant spreads by seeds, which are wind-and water-dispersed, and by rooting at stem nodes. Seedlings appear in April, and fruits appear during August-October in the Northern Hemisphere.

Habitats
A. sessilis typically grows in disturbed wetland habitats, riparian zones, estuarine habitats, open fields and plantations. The species can also grow in dry conditions and can grow along roadsides, pathways and fallow ground. In Africa and Asia, the species has been recorded as growing within fields of a number of cultivated crops (e.g. rice, maize, cotton).

Pathways for movement
A. sessilis is occasionally traded as an ornamental plant for aquariums or as a water plant for outside ponds. The species does not perform well when submersed and is more adapted to a paludarium application. The species has also been traded as a food or medicinal plant. Furthermore, it is a common contaminant in potted plants from Asia and Central America.

Impacts
In aquatic systems, *A. sessilis* can block irrigation pipes and water channels. In Africa and Asia, the species has been recorded to cause negative impacts in agricultural systems where it can reduce yields in crops such as maize, rice, soybeans and vegetables. There is potential for the species to have negative impacts on native biodiversity.

Control
There is little information on control measures for *A. sessilis*. Plants can be dug up or hand pulled but the whole tap root should be removed to avoid resprouting. Chemical control in or around waterbodies is often not feasible due to national regulations.

Source: INTERNET
Weeds in imported potplants in Europe.
http://keys.lucidcentral.org/keys/v3/bonsai/

Güzel Y (2017) Türkiye için yeni bir istilacı yabancı bitki kaydı: *Alternanthera sessilis* (Amaranthaceae) *Bitki Koruma Bülteni* **57**, 65-72.

Sanz-Elorza M, González Bernardo F, Gavilán Iglesias LP, (2008) The alien flora of Castilia and León (Spain). *Botanica Complutensis* **32**, 117-137.

Additional key words: Alert List **Computer codes:** ALRSE

2019/063 The introduction and spread of *Ipomoea triloba* in Turkey

Ipomoea triloba (Convolvulaceae) is an annual climbing vine with long stems of up to 5 m and numerous pinkish flowers. This plant is native to Central America and has been introduced into East and South-Eastern United States (Arizona, California, Florida and North Carolina), Mexico, Ecuador, Peru, Indonesia, Thailand, Hawaii and Australia. In the invaded range the species occurs in a variety of habitats including arable fields, orchards, coastal areas and ruderal habitats. Within the EPPO region, the species has previously been recorded in Spain near Sevilla (Andalucía) where the population covered more than 1 km in length of a water course. In addition, the species has been recorded in Israel where it has been recorded growing in cotton plantations. In 2014, in Turkey, *I. triloba* was first recorded from two different sites in Serik and Aksu districts of Antalya Province near the Mediterranean coast. In these regions, the species is thought to spread by seed through irrigation channels which are located throughout the agricultural area. Spread via this mechanism can be increased by flooding events which can occur annually in the Serik and Aksu districts. At present there are no ecological or socio-economic impact studies of the species in Turkey. However, observations suggest that it can block irrigation channels, and as the species grows within crops such as maize and cotton it has the potential to reduce yields and increase harvesting costs. The authors suggest a that Pest Risk Analysis (PRA) should be conducted for *I. triloba* and the spread of the species should be monitored and managed within Turkey.

Source: Yazlik A, Űremiş, Uludağ A, Uzan K, Şenol SG (2018) *Ipomoea triloba*: an alien plant threatening many habitats in Turkey. *EPPO Bulletin* **48**, 589-594.

Pictures: *Ipomoea triloba*. https://gd.eppo.int/taxon/IPOTR/photos

Additional key words: invasive alien plant **Computer codes:** IPOTR, TR

2019/064 Roads support the spread of invasive *Asclepias syriaca* in Austria

Asclepias syriaca (Asclepiadaceae, common milkweed) is a fast-growing perennial species native to North America. The species has invaded extensive areas within the EPPO region resulting in dense stands that can outcompete native plant species. In the European Union, the species is listed as an invasive alien species of Union concern. In Austria, *A. syriaca* is sporadically found growing in crop fields, vineyards or orchards, as well as along roadsides. The distribution of the species in Austria was evaluated by assessing occurrence records from several databases which contained records from 1990 until 2018. In addition, a detailed survey was undertaken along roadsides in the Marchfield region (Lower Austria) in Eastern Austria to assess abundance and distribution. In total, 82 records of *A. syriaca* were obtained for Austria. The species occurs primary in the east of the country (Vienna, Lower Austria). In western Austria records of the species were rare and restricted to a few isolated populations. In the Marchfield region, 78 populations of *A. syriaca* were recorded, where they were reasonably evenly distributed throughout the region. Populations were found along all road types and varied in size from individual plants to small populations of 25 plants. The probability of recording *A. syriaca* along local unpaved roads was significantly higher compared to regional paved or unpaved roads. In addition, there was a higher chance of finding *A. syriaca* along roads that had adjoining forest or grassland habitats compared to roads that bordered urban settlements. The results indicate that road networks can contribute to the spread of *A. syriaca* in the study area. In Austria, *A. syriaca* is considered in its early stages of invasion and it is predicted that the species will become more widespread in the future. Measures to mitigate the spread of the species should include roadside management including mowing regimes and the control of individuals in adjacent habitats.

The global distribution of *A. syriaca* has recently been updated in the EPPO Global database https://gd.eppo.int/taxon/ASCSY/distribution

Source: Follak S, Schleicher C, Schwarz M (2018) Roads support the spread of invasive *Asclepias syriaca* in Austria. *Journal of Land Management, Food and Environment* **69**, 257-265.

Additional key words: invasive alien plant **Computer codes:** ASCSY, AT

2019/065 The impact of *Humulus scandens* on native plant communities

Humulus scandens (Cannabaceae: EPPO A2 List) is native to Asia and in the EPPO region the species is present in Austria, Belgium, the Czech Republic, France, Germany, Italy, Hungary, Romania, Serbia, Slovakia, Slovenia, Switzerland and the Ukraine. The species thrives along riversides, particularly on the loose, bare surfaces of alluvial bars formed by river and streamsides by temporary floods. The plant can also invade ruderal areas under climates with no dry seasons. In Hungary and France, *H. scandens* has been shown to have a negative impact on native plant communities by reducing species richness and modifying species composition. To evaluate the impact of *H. scandens* on plant communities, a study was established that

measured impact by comparing invaded plots, non-invaded plots and plots where *H. scandens* seedlings were removed along the river Gardon in Southern France. Plots were sampled 7 times over a two-year period. Sampling consisted of measuring seven plant traits such as, life form (e.g. annual, perennial), time of flower onset, flowering duration, plant height, seed mass, specific leaf area and leaf dry weight. In addition, species richness, functional richness (the amount of niche space occupied by a species), abundance and cover were measured at each site. Results showed that *H. scandens* had a strong negative impact on species and functional richness. Plant species that flowered before *H. scandens* reached a high cover, and species that had a short flowering duration were less affected than those that did not. Plant species that had a high seed production rate and species that grew taller were more likely to be successful in invaded stands. These results showed that invasion by *H. scandens* can change the structure of a plant community where some native plant species with certain traits can coexist more successfully than others.

Source: Fried G, Carboni M, Mahaut L, Violle C (2019) Functional traits modulate plant community responses to alien plant invasion. *Perspectives in Plant Ecology, Evolution and Systematics* **37**, 53-63.

Pictures: *Humulus scandens*. https://gd.eppo.int/taxon/HUMJA/photos

Additional key words: invasive alien plant **Computer codes:** HUMJA, FR

2019/066 *Fallopia japonica* and *Impatiens glandulifera* have a negative impact on terrestrial invertebrates

River banks are complex, dynamic habitats which form the interface between aquatic and terrestrial habitats and can harbour a high diversity of terrestrial invertebrate species. These habitats are prone to invasion by non-native plant species which can use riparian systems as corridors for spread. *Fallopia japonica* (Polygonaceae) and *Impatiens glandulifera* (Balsaminaceae) are both on the EPPO List of Invasive Alien Plants and are two species which are associated with riparian systems in the EPPO region. To evaluate the impact of these two invasive plant species, terrestrial invertebrates were sampled next to small narrow rivers in southern Scotland (United Kingdom). For each river, control sites (uninvaded) were located upstream from a pair of invaded sites containing either *I. glandulifera* or *F. japonica*. Invertebrates were collected at each site using 12 pitfall traps in June and August 2016 and total invertebrate abundance was recorded for each site at each sampling date along with diversity measurements based on morphospecies identification. Land-use was recorded at each site along with soil properties, percentage cover of the alien plant species and overall plant species richness. The results showed that with a greater percentage cover of either *F. japonica* or *I. glandulifera* invertebrate abundance and morphospecies diversity was lower, and that the two invasive plants affected abundance and morphospecies diversity more than environmental conditions. The results support managing invasive plant species along rivers to restore terrestrial diversity.

Source: Seeney A, Eastwood S, Pattison Z, Willby NJ, Bull CD (2019) All change at the water's edge: invasivion by non-native riparian plants negatively impacts terrestrial invertebrates. *Biological Invasions*. https://doi.org/10.1007/s10530-019-01947-5.

Pictures: *Fallopia japonica*. https://gd.eppo.int/taxon/POLCU/photos
Impatiens glandulifera. https://gd.eppo.int/taxon/IPAGL/photos

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

2019/067 Allergenicity of ragweed species which have been recorded in Israel

Ragweed species (*Ambrosia* spp.: Asteraceae) include a number of species which are known invasive alien plants in some regions of the world. In Israel six alien *Ambrosia* species have been reported over the last 30 years. These include *A. confertiflora* (EPPO A2 List with a restricted distribution in Israel), *A. grayi* (currently under eradication in Israel), *A. psilostachya* (absent in Israel since 2017), *A tenuifolia* (a rare non-native species in Israel), *A. artemisiifolia* (a transient species in Israel) and *A. trifida* (previously transient, absent in Israel since 2015). Ragweed pollen is known to cause allergic reactions in humans, e.g. pollinosis (hay fever). To test the effect of pollen from four *Ambrosia* species on people already suffering from allergies, pollen was collected from *A. confertiflora* and *A. tenuifolia* and extracts were prepared, and pollen extracts were purchased for *A. artemisiifolia* and *A. trifida*. Allergy tests (skin prick allergy tests) were conducted between 2012-2013 on 163 participants aged between 16 and 60 years. Participants in the experiment were tested for reaction to pollen extracts from the four *Ambrosia* species plus a water control. Sensitivity to *Ambrosia* extracts was recorded in 22.7 % of the studied population. Patients reaction to *A. confertiflora* was three times stronger compared to the three other *Ambrosia* species. *A. trifida* had the lowest reaction in patients.

Source: Yair Y, Sibony M, Confino-Cohen R, Rubin, Shahar E (2019) Ragweed species (*Ambrosia* spp.) in Israel: distribution and allergenicity. *Aerobiologia* **35**, 85-95.

Pictures: *Ambrosia artemisiifolia*. https://gd.eppo.int/taxon/AMBEL/photos
Ambrosia confertiflora. https://gd.eppo.int/taxon/FRSCO/photos
Ambrosia trifida. https://gd.eppo.int/taxon/AMBTR/photos

Additional key words: invasive alien plants **Computer codes:** AMBEL, AMBPS, AMBGR, AMBTE, AMVTR, FRSCO, IL