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21 Bld Richard Lenoir
75011 Paris

Tel: 33 1 45 20 77 94
E-mail: hq@eppo.int

Web: www.eppo.int
GD: gd.eppo.int

2022/001 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**

The Czech Republic is a protected zone for chestnut blight *Cryphonectria parasitica* (EPPO A2 List). In November 2021, the pathogen was detected in a sample of bark taken from one tree of *Castanea sativa* growing in an avenue along a forest stand in the municipality of Strašov (Pardubice region). Eradication measures will be applied (NPPO of the Czech Republic, 2021).
The pest status of *Cryphonectria parasitica* in the Czech Republic is officially declared as: **Present, under eradication**.

Euwallacea fornicatus (Coleoptera: Curculionidae: Scolytinae – EPPO A2 List as part of *E. fornicatus sensu lato*) is first reported from Australia. In August 2021, *E. fornicatus* was detected at a residential premises in Perth, Western Australia, infesting a box-elder maple tree (*Acer negundo*). Further delimiting surveillance has detected the pest in the surrounding suburban area on multiple hosts including *Acer saccharum, Delonix regia, Erythrina* sp., *Mangifera indica,* and *Sapindus* sp. A Quarantine Area has been established to restrict movement, contain the pest, and delimiting surveillance is ongoing (IPPC, 2021).
The pest status of *Euwallacea fornicatus* in Australia is officially declared as: **Present: not widely distributed and under official control**.

In Paraguay, *Leptoglossus occidentalis* (Hemiptera: Coreidae) was first observed in June 2020. A male specimen was collected in Ayolas (Misiones) on the wall of a house (Garcete-Barrett *et al.*, 2021).

Tomato mottle mosaic virus (*Tobamovirus*, ToMMV – EPPO Alert List) is first reported from Mauritius where it was found on tomato *(Solanum lycopersicum)*. In February 2021, unusual symptoms comprising leaf and shoot chlorosis, uneven ripening, necrotic spots on fruits and leaves, as well as leaf distortion, were observed on about 10% of tomato plants in a shade house in the central region of Mauritius. The identity of the virus was confirmed by RT-PCR and sequencing (Maudarbaccus *et al.*, 2021).

- **Detailed records**

In Tunisia tomato leaf curl New Delhi virus (*Begomovirus*, ToLCNDV – EPPO Alert List) is first reported from *Capsicum annuum* grown in open fields and in protected cultivation from Haouaria and Bizerte regions (Mnari-Hattab *et al.*, 2022).

In France, *Pochazia shantungensis* (Hemiptera: Ricaniidae - EPPO Alert List) was first observed by an amateur naturalist in a private garden in Cagnes-sur-Mer in 2018 and 2019 (EPPO RS 2021/129). In 2021, the regional plant protection service installed traps in this garden and in October 2021 one specimen was caught and officially identified by the French official laboratory. No damage was observed on plants in the garden (NPPO of France, 2021).
The pest status of *Pochazia shantungensis* in France is officially declared as: **Present, only in some parts of the Member State concerned**.

Xanthomonas fragariae (EPPO A2 List) caused crown infection on strawberry (*Fragaria* × *ananassa*) plants in Liaoning province, China in autumn 2017 (Feng *et al.*, 2021).

In Spain, *Xylotrechus chinensis* (Coleoptera: Cerambycidae – EPPO Alert List) was first found in 2018 in Catalonia, although it is suspected that this pest of *Morus* trees had been present there since 2012. A recent study has shown that the infestation spread from 4 towns and 44.1 km² in 2018 to 12 towns and 378.1 km² in 2020. In one studied location (town of Barberà del Vallès), it was observed that the proportion of infested trees rose from 16.2% in February 2016 to 59.3% in December 2018. These studies also demonstrated that females prefer to lay eggs on larger trees, on the crown base or higher part of the trunk, and preferably on the side of the trunk facing the warmer southwest. Experiments also showed that trunk injections with abamectin could reduce the number of new infestations (Sarto i Monteys *et al.*, 2021).

- **Eradication**

In Germany, *Phytophthora ilicis* was first recorded in a nursery on plants for planting of *Ilex aquifolium* in December 2015 (EPPO RS 2016/121). The infected plants had been destroyed and the grower was recommended not to replant *Ilex* spp. for the next 3 years. No further infection with *P. ilicis* could be detected at the concerned location in the following years and therefore the outbreak is now considered eradicated (NPPO of Germany, 2022).
The pest status of *Phytophthora ilicis* in Germany is officially declared as: **Absent, pest eradicated**.

- **Absence**

The NPPO of South Africa recently informed the EPPO Secretariat of the absence of *Cacoecimorpha pronubana* (Lepidoptera: Tortricidae – EPPO A2 List) from its territory. In the literature, there was a record (Vári *et al.*, 2002) which has not been confirmed in any other publications. In the most recent list of Lepidoptera of South Africa, based on a review of type specimens of Tortricidae in the Natural History Museums in Pretoria and Cape Town (Krüger, 2020), *C. pronubana* is considered to be absent. In addition, there are no records of the pest in reference guides about insect pests of South Africa. The NPPO of South Africa therefore considers that the pest is absent from its territory.
The pest status of *Cacoecimorpha pronubana* in South Africa is officially declared as: **Absent**.

- **Host plants**

Potato spindle tuber viroid (*Pospiviroid*, PSTVd - EPPO A2 List) has been detected in commercial seed lots of *Solanum sisymbriifolium* (Fowkes *et al.*, 2021). *S. sisymbriifolium* is used as a trap crop for the management of potato cyst nematode (*Globodera pallida* and *G. rostochiensis,* both EPPO A2 List) in rotation with potato crops. The authors underlined the need to investigate the role of this crop as a host of PSTVd and the risk of seed transmission and transmission via roots.

In March 2021, *Scirtothrips dorsalis* (Thysanoptera: Thripidae – EPPO A2 List) was found on celery (*Apium graveolens*) plants grown under plastic tunnels in Karnataka, India. All stages of the pest could be observed on celery leaves, thus suggesting that *S. dorsalis* can breed on *A. graveolens*. Affected plants had discoloured and distorted leaves (Kumar *et al.*, 2021).

Xylosandrus crassiusculus (Coleoptera: Curculionidae – formerly EPPO Alert List) is reported for the first time on immature areca nuts (*Areca catechu*). The first areca nuts showing damage were collected in August 2021 in 2 different sites in Karnataka, India. Infested nuts showed galleries, starting from the exocarp, through the mesocarp and ending in the kernel. The presence of frass extruded from galleries could also be observed on infested nuts. All galleries were black stained due to the presence of *Ambrosiella roeperi*, a fungal symbiont

of *X. crassiusculus*, which also contributed to the decay of kernels. Further surveys conducted in Karnataka detected the pest in 9 areca nut plantations out of 30. All of them were young plantations (3 to 7 years-old). During surveys, damage was observed on immature nuts, but not on woody parts of the areca palm. The authors noted that this is the first time that *X. crassiusculus* is reported on seeds, and therefore further studies are needed to better understand this new characteristic (Thube *et al.*, 2022).

- **Epidemiology**

Studies conducted in China have shown that *Monochamus saltuarius* (Coleoptera: Cerambycidae) is a vector of *Bursaphelenchus xylophilus* (EPPO A2 List) in North-East China. It was observed that the transmission period of the nematode lasted up to 48 days after beetle emergence. In addition, experiments also showed that *M. saltuarius* could feed on the bark of conifers other than *Pinus*. In these experiments, the preferred species were *Pinus koraiensis, Picea pungens, Picea asperata, Abies fabri* and *Abies holophylla*. The insect was also able to feed on *Juniperus formosana, Juniperus chinensis (=Sabina chinensis), Larix gmelinii* var. *principis-ruprechtii (=Larix principis-ruprechtii)* and *L. gmelinii* var. *olgensis (=Larix olgensis)*. These species were considered to be new potential hosts of *M. saltuarius* in China (Li et *al.*, 2020).

- **New pests and taxonomy**

Sphaerulina vaccinii is described as a new species causing leaf spot and stem canker in lowbush blueberry *(Vaccinium angustifolium* and *V. myrtilloides)* in Canada and Maine (USA) (Ali *et al.*, 2021).

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

Computer codes: BURSXY, ENDOPA, EUWAWH, LEPLOC, MONCSL, PHYTIL, SCITDO, SPHNVA, TOLCND, TOMMV0, TORTPR, XANTFR, XYLBCR, XYLBFO, XYLOCH, AU, CN, CZ, DE, ES, IN, MU, TN, UY, ZA

2022/002 New and revised dynamic EPPO datasheets are available in the EPPO Global Database

The EPPO Secretariat is in the process of revising the EPPO datasheets on pests recommended for regulation and creating new datasheets. This project is also supported by an EU grant agreement. This revision provides the opportunity to create dynamic datasheets in the EPPO Global Database in which the sections on pest identity, host range and geographical distribution are automatically generated by the database. It is planned that these dynamic datasheets will progressively replace the PDF documents that are currently stored in the database. Since the previous report (EPPO RS 2021/258), the following new and revised EPPO datasheets have been published in the EPPO Global Database:

- *Apriona cinerea*. https://gd.eppo.int/taxon/APRICI/datasheet
- *Choristoneura occidentalis occidentalis*. https://gd.eppo.int/taxon/ARCHOC/datasheet
- *Neofusicoccum laricinum*. https://gd.eppo.int/taxon/GUIGLA/datasheet
- *Phymatotrichopsis omnivora*. https://gd.eppo.int/taxon/PHMPOM/datasheet
- *Prodiplosis longifila*. *https://gd.eppo.int/taxon/PRDILO/datasheet*
- *Puccinia pittieriana*. https://gd.eppo.int/taxon/PUCCPT/datasheet
- *Saperda candida*. https://gd.eppo.int/taxon/SAPECN/datasheet
- Tomato infectious chlorosis virus. https://gd.eppo.int/taxon/TICV00/datasheet

Source: EPPO Secretariat (2022-01).

Additional key words: publication

Computer codes: APRICI, ARCHOC, GUIGLA, PHMPOM, PRDILO, PUCCPT, SAPECN, TICV00

2022/003 EPPO Standards on efficacy evaluation of plant protection products

The EPPO Standards for the efficacy evaluation of plant protection products (PP1) describe the conduct of trials carried out to assess the efficacy of plant protection products against specific pests. They are addressed to all institutions, official registration authorities, public institutes or private firms carrying out such trials. The following new or revised Standards are now available.

General Standards

- PP 1/181 Conduct and reporting of efficacy evaluation trials, including good experimental practice (Revision)
- PP 1/248 Harmonized system for classification and coding of the uses of plant protection products (Revision)
  The classification can be viewed in the EPPO Global Database: https://gd.eppo.int/PPPUse/

Specific Standards

- PP 1/324 Aphids, including aphid vectors of viruses, in winter oilseed rape (New)
- PP 1/65 Downy mildews of vegetables (Revision)
- PP 1/78 Root, stem, foliar and pod diseases of oilseed rape (Revision)
- PP 1/103 Soil borne *Phytophthora* spp. on fruiting (solanaceous and cucurbitaceous) vegetable and legume vegetable crops (Revision)
- PP 1/303 Efficacy evaluation of products for the control of grapevine trunk diseases in vineyards (Revision)
- PP 1/313 *Halyomorpha halys* (Revision)
- PP 1/185 Regulation of growth in olive (except sucker control) (Revision)

The whole series of EPPO PP1 Standards (more than 300 Standards covering a wide range of crops and pests) is available in an online database. All Standards can be easily retrieved as PDF files by using a simple search tool. All general Standards (e.g. design, conduct, reporting and analysis of trials, phytotoxicity, effects on succeeding crops, analysis of resistance risk, minor uses) can be accessed free of charge. Access to specific Standards (e.g. aphids on potato, weeds in cereals) is provided for an annual fee. Subscriptions should be made directly online via the database. For more information on the detailed contents of the database and subscriptions, please consult our web page: https://www.eppo.int/RESOURCES/eppo_databases/pp1_database

Direct access to the database: http://pp1.eppo.int

Source: EPPO Secretariat (2021-12).

Additional key words: EPPO

2022/004 Recommendations from Euphresco projects

The following research project has recently been carried out in the framework of Euphresco (network for phytosanitary research coordination - hosted by EPPO). A report presenting the main objectives and results of this project, as well as recommendations made, can be viewed on the Euphresco website.

Role of weed hosts as pathogen reservoirs of insect vectored diseases

'*Candidatus* Liberibacter solanacearum' is a phloem-limited phytopathogenic bacterium vectored by psyllids. '*Ca.* L. solanacearum' has caused major damage in Solanaceous and Apiaceous crops worldwide. The Euphresco project aimed to:

a) improve the understanding of '*Ca.* L. solanacearum' diversity and presence in weed hosts including findings of the bacterium in previously unreported non-crop host plants,
b) improve the understanding of '*Ca.* L. solanacearum' diversity, including the characterization of new bacterial haplotypes, and their presence in psyllids,
c) identify '*Ca.* L. solanacearum' within non-psyllid plant-sucking insects, including the characterization of new bacterial haplotypes,
d) assess the potential for using DNA barcoding to identify food plants of psyllids and other plant-sucking insects.

The project results showed that '*Ca.* L. solanacearum' is widespread and associated with a range of natural host plants and psyllid species. New psyllids and host plants were found and genetic types of '*Ca.* L. solanacearum' that are new to science were identified.

The impact of these new psyllid species on cultivated crops is unknown and further research should include studies on the feeding behaviour and potential transmission of '*Ca.* L. solanacearum' by psyllids to important crop species. Newly discovered '*Ca.* L. solanacearum' haplotypes and psyllid vectors should be considered by policy makers and should be addressed in regulation once their impact on important host plants and '*Ca.* L. solanacearum' epidemiology is understood.

Duration of the project: 2018-10-01 to 2020-09-30.

Authors: Kenyon, David; Back, Emma; Sumner-Kalkun, Jason; Highet, Fiona; Lethmayer, Christa; Gottsberger, Richard; Beniusis, Arunas; Pupeliene, Silvija.

Link: https://zenodo.org/record/5846219#.YecAz3qZOUm

Source: Euphresco (2022-01).

Pictures: '*Candidatus* Liberibacter solanacearum'. https://gd.eppo.int/taxon/LIBEPS/photos

Additional key words: research **Computer codes:** LIBEPS

2022/005 MUCF is recruiting a Scientific-Technical Officer

The Minor Uses Coordination Facility (MUCF) is recruiting a Scientific-Technical Officer.

Interested candidates can apply at the latest by **28th February 2022** (12.00 Paris time). For more information, click here: https://minoruses.eu/jobs/scientific_technical_officer

MUCF (hosted by EPPO) works in cooperation with its Member Countries and stakeholders (growers' organizations, industry associations, research institutes, regulatory authorities, governmental experts) to contribute to sustainable European agriculture. The MUCF serves as an exchange platform to identify solutions for plant protection issues for speciality crops in an Integrated Pest Management (IPM) framework.

Source: MUCF (2022-01). https://minoruses.eu/

Additional key words: plant protection, minor uses

2022/006 EPPO report on notifications of non-compliance from the United Kingdom

The EPPO Secretariat has gathered below the notifications of non-compliance received from the United Kingdom and covering the period from November to the end of December 2021. 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
***Bemisia* sp.**	*Solanum pseudocapsicum*	Plants for planting	Netherlands	United Kingdom	1
Bemisia tabaci	*Alternanthera*	Aquatic plants	Indonesia	United Kingdom	1
	Capsicum annuum	Plants for planting	Netherlands	United Kingdom	1
	Capsicum annuum	Vegetables	Egypt	United Kingdom	2
	Clerodendrum	Plants for planting	Netherlands	United Kingdom	2
	Colocasia esculenta	Vegetables (leaves)	India	United Kingdom	1
	Corchorus olitorius	Vegetables	Sierra Leone	United Kingdom	1
	Corchorus olitorius	Vegetables	Vietnam	United Kingdom	1
	Eryngium	Vegetables (leaves)	Thailand	United Kingdom	1
	Eryngium foetidum	Vegetables (leaves)	Thailand	United Kingdom	2
	Eryngium foetidum, Limnophila aromatica	Vegetables (leaves)	Thailand	United Kingdom	1
	Eryngium foetidum, Piper sarmentosum	Vegetables (leaves)	Thailand	United Kingdom	1
	Eryngium, Limnophila aquatica	Vegetables (leaves)	Thailand	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Belgium	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Germany	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Netherlands	United Kingdom	19
	Fragaria	Fruit	Egypt	United Kingdom	1
	Hygrophila polysperma	Aquatic plants	Malaysia	United Kingdom	1
	Limnophila aromatica	Vegetables (leaves)	Thailand	United Kingdom	2
	Lisianthus alatus	Cut flowers	Netherlands	United Kingdom	1
	Manihot esculenta	Vegetables (leaves)	Thailand	United Kingdom	1
	Manihot esculenta, Ocimum tenuiflorum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Colombia	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Israel	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	United Kingdom	2
	Persicaria	Vegetables (leaves)	Thailand	United Kingdom	1
	Piper sarmentosum	Vegetables (leaves)	Thailand	United Kingdom	1
	Solanum pseudocapsicum	Plants for planting	Netherlands	United Kingdom	22
	Vernonia amygdalina	Vegetables (leaves)	Nigeria	United Kingdom	4
Helicoverpa armigera	*Capsicum frutescens*	Vegetables	Uganda	United Kingdom	1
***Helicoverpa* sp.**	*Capsicum frutescens*	Vegetables	Kenya	United Kingdom	1
	Pisum sativum	Vegetables	Kenya	United Kingdom	1
	Rosa	Cut flowers	India	United Kingdom	1
	Solanum torvum	Vegetables	Ghana	United Kingdom	1
	Zea mays	Vegetables	Morocco	United Kingdom	3
	Zea mays	Vegetables	Senegal	United Kingdom	3
Liriomyza huidobrensis	*Beta vulgaris*	Vegetables	South Africa	United Kingdom	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
***Liriomyza* sp.**	*Amaranthus viridis*	Vegetables (leaves)	Sri Lanka	United Kingdom	1
	Chrysanthemum	Cut flowers	Colombia	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Kenya	United Kingdom	1
Potato spindle tuber viroid	*Capsicum annuum*	Seeds	China	United Kingdom	4
	Capsicum annuum	Seeds	USA	United Kingdom	1
	Capsicum frutescens	Seeds	Italy	United Kingdom	1
	Solanum lycopersicum	Seeds	China	United Kingdom	1
Spodoptera frugiperda	*Zea mays*	Vegetables	Senegal	United Kingdom	1
Thaumatotibia leucotreta	*Capsicum annuum*	Vegetables	Kenya	United Kingdom	1
	Capsicum annuum	Vegetables	Tanzania	United Kingdom	2
	Zea mays	Vegetables	Uganda	United Kingdom	1
Thripidae	*Solanum aethiopicum*	Vegetables	Ghana	United Kingdom	2
	Solanum melongena	Vegetables	Dominican Republic	United Kingdom	1
	Solanum melongena	Vegetables	Ghana	United Kingdom	1
Thrips palmi	*Momordica*	Vegetables	Pakistan	United Kingdom	1
Tomato mottle mosaic virus	*Capsicum annuum, Solanum lycopersicum*	Seeds	India	United Kingdom	1
	Solanum lycopersicum	Seeds	China	United Kingdom	1
	Solanum lycopersicum	Seeds	India	United Kingdom	1
	Solanum lycopersicum	Seeds	Netherlands	United Kingdom	1
Xanthomonas arboricola* pv. *pruni	*Prunus laurocerasus*	Plants for planting	Belgium	United Kingdom	1
	Prunus laurocerasus	Plants for planting	Italy	United Kingdom	1
	Prunus laurocerasus	Plants for planting	Netherlands	United Kingdom	1
Xanthomonas euvesicatoria	*Capsicum annuum*	Seeds	India	United Kingdom	1
	Solanum lycopersicum	Seeds	India	United Kingdom	1
Xanthomonas hortorum	*Hydrangea quercifolia*	Plants for planting	Italy	United Kingdom	1
	Hydrangea quercifolia	Plants for planting	Netherlands	United Kingdom	1

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
***Dacus* sp.**	*Momordica charantia*	Uganda	United Kingdom	1
Tephritidae	*Momordica charantia*	Sri Lanka	United Kingdom	1
***Zeugodacus* sp.**	*Trichosanthes*	Bangladesh	United Kingdom	1
	Trichosanthes cucumerina	Sri Lanka	United Kingdom	1

Source: NPPO of the United Kingdom (2022-01).

2022/007 Eradication of *Ripersiella hibisci* in Italy

The root mealybug *Ripersiella hibisci* (Hemiptera: Pseudococcidae – EPPO A1 List) was detected for the first time in Italy in April 2021 in a nursery in the Province of Catania, Sicily (EPPO RS 2021/081), and in other production sites in the same province (RS 2021/124) on various ornamental plants. Eradication measures have been applied in all sites. Official inspections were conducted regularly and, as of December 2021, the pest is considered to be eradicated in all production sites.

The pest status of *Ripersiella hibisci in Italy* is officially declared as: **Absent, pest eradicated.**

Source: NPPO of Italy (2021-08, 2021-12, 2022-01).

Pictures: *Ripersiella hibisci*. https://gd.eppo.int/taxon/RHIOHI/photos

Additional key words: eradication, absence- **Computer codes:** RHIOHI, IT

2022/008 First report of *Ripersiella hibisci* in Spain

The NPPO of Spain recently informed the EPPO Secretariat of the first findings of the root mealybug *Ripersiella hibisci* (Hemiptera: Pseudococcidae – EPPO A1 List) on its territory. In November 2021, *R. hibisci* was first detected in *Callistemon* sp. plants from a commercial operator located in the municipality of Moncada, Valencia province, in the Autonomous Region of Comunidad Valenciana following trace-back investigations related to a finding on *Callistemon* plants imported from Spain to another EU Member State. This operator is only a trader and does not produce any plants. All *Callistemon* plants in the premises were inspected and *R. hibisci* was detected on four plants. The identity of the pest was confirmed by the National Reference Laboratory in December 2021. The pest was not detected in other host plant species present in the premises. All the *Callistemon* plants immobilised have been destroyed and all the material and machinery that may have been in contact with the affected plants have been disinfected. This outbreak is considered eradicated.

Trace-back investigations showed that plants came from several nurseries in different parts of Spain. These nurseries were inspected and *R. hibisci* was found:

- in a nursery located in Cambrils, Tarragona province, in the Autonomous Region of Cataluña in *Callistemon laevis* (syn. *Melaleuca citrina*). Other host plants (*Nerium oleander* and *Hibiscus* sp.) were also sampled but the results of the laboratory tests are not yet available.
- in a nursery located in Cuevas del Almanzora, Almeria province, in the Autonomous Region of Andalucía in *Callistemon* sp.
- in a nursery located in Vera, Almeria province, in the Autonomous Region of Andalucía in *Callistemon* sp.

Eradication measures are applied in the different outbreak sites and include the destruction of the infested plants, and the disinfection of the tools and machinery.

The pest status of *Ripersiella hibisci in Spain* is officially declared as: **Present, under eradication, only in some parts of the Member State concerned.**

Source: NPPO of Spain (2022-01).

Pictures: *Ripersiella hibisci*. https://gd.eppo.int/taxon/RHIOHI/photos

Additional key words: new record, eradication- **Computer codes:** RHIOHI, ES

2022/009 First report of *Rhagoletis cingulata* in Slovakia

The NPPO of Slovakia recently informed the EPPO Secretariat of the first report of *Rhagoletis cingulata* (Diptera: Tephritidae – EPPO A2 List) on its territory. In July 2021, the pest was caught on a yellow sticky trap installed in a private garden on a cherry tree (*Prunus avium*) in the municipality of Veselé (Western Slovakia). This monitoring was conducted in the framework of a survey for *Rhagoletis fausta* (Diptera: Tephritidae – EPPO A1 List).

The pest status of *Rhagoletis cingulata* in Slovakia is officially declared as: **Present, only in some parts of the Member State concerned, at low prevalence.**

Source: NPPO of Slovakia (2021-12).

Pictures: *Rhagoletis cingulata*. https://gd.eppo.int/taxon/RHAGCI/photos

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

2022/010 First finding of *Popillia japonica* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first finding of *Popillia japonica* (Coleoptera: Rutelidae – EPPO A2 List) on its territory. A single male beetle was caught at the end of the survey season (November 2021) in a trap close to a railway track in Baden-Wuerttemberg. There is currently no indication of an established population at this location. The beetle is presumed to have come from outbreak areas in other EU Member States by train as a hitchhiker. No demarcated area has been established. An intensified survey will be carried out in 2022.

The pest status of *Popillia japonica* in Germany is officially declared as: **Absent, only one specimen was caught in a trap close to a railroad line and there is no indication for an established population.**

Source: NPPO of Germany (2021-11).

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

Additional key words: incursion **Computer codes:** POPIJA, DE

2022/011 First finding of *Pochazia shantungensis* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first finding of *Pochazia shantungensis* (Hemiptera: Ricaniidae, EPPO Alert List) on its territory. In August 2021, a private individual found a small number of adults of *Pochazia shantungensis* in a *Catalpa bungei* tree in a private garden in Baden-Württemberg. These adults were killed, and one was frozen and provided to the plant protection service for identification. The plant protection service could not detect oviposition on the infested *Catalpa bungei* in the private garden. The plant had been bought at a local tree nursery, that had imported *Catalpa* plants

from another EU Member State in May 2021. The regional plant protection service did not detect any *P. shantungensis* at that nursery. Considering the low temperatures in winter in that region, it is not expected that the pest could establish. The plant protection service considers that the pest is no longer present in Baden-Württemberg. However, the plant protection service of Baden-Württemberg will carry out a survey on this pest in 2022 to ensure that no overwintering of possibly undetected individuals of *P. shantungensis* has occurred.

The pest status of *Pochazia shantungensis* in Germany has not yet been determined.

Source: NPPO of Germany (2022-01).

JKI (2021) PRA for *Pochazia shantungensis*. 8 pp. Available at https://pflanzengesundheit.julius-kuehn.de/en/pest-risk-analyses.html

Pictures: *Pochazia shantungensis*. https://gd.eppo.int/taxon/POCZSH/photos

Additional key words: new record, incursion **Computer codes:** POCZSH, DE

2022/012 New outbreak of *Meloidogyne chitwoodi* in Switzerland

The NPPO of Switzerland recently informed the EPPO Secretariat of a new finding of the root knot nematode *Meloidogyne chitwoodi* (EPPO A2 List) on its territory. The nematode was detected once in 2002 in a glasshouse in Valais canton but was subsequently eradicated (EPPO RS 2011/151). *M. chitwoodi* was detected at the end of November 2021 in a carrot (*Daucus carota*) field in Bern canton. Eradication measures are applied and include the prohibition of movement of carrots from the infested field.

The pest status of *Meloidogyne chitwoodi* in Switzerland is officially declared as: **Present, under eradication.**

Source: NPPO of Switzerland (2021-12).

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

Additional key words: new record **Computer codes:** MELGCH, CH

2022/013 Update of the situation of *Xylella fastidiosa* in Israel

In Israel *Xylella fastidiosa* (EPPO A2 List) subsp. *fastidiosa* was first found in 2017-2018 on almond (*Prunus dulcis*) trees in the Hula Valley, north-eastern part of Israel (EPPO RS 2019/121). During the late summer of 2021, in the framework of official annual surveys, symptomatic grapevines *(Vitis vinifera*) were sampled and tested by real-time PCR. The presence of *X. fastidiosa* subsp. *fastidiosa* was confirmed in five commercial vineyards in the Eastern Upper Galilee area, which is adjacent to the Hula Valley, and near the border with Lebanon. Sequencing showed that the pathogen has the same sequence type that had been previously reported in almond in Israel (ST1). All infected grapevines will be destroyed. A delimiting survey is being conducted around the infected vineyards to define the infected area. Surveys are ongoing throughout the country to ensure freedom in other areas, in *Vitis vinifera* as well as other potential hosts. The disease in almond is under eradication in the Hula Valley and no new infection in almond has been discovered during 2021.
An awareness campaign has been carried out with representatives of grapevine growers and nurseries to encourage reporting of suspicious symptoms. Movement of plants for planting from the infected area is prohibited.

The pest status of *Xylella fastidiosa* subsp. *fastidiosa* in Israel is officially declared as: **Present: in one area only and under official control. Previously reported in Israel in *Prunus dulcis* (almond) in a limited area of distribution in the Hula Valley and currently reported in *Vitis vinifera* (grapevine) in a limited area of infestation in the Eastern Upper Galilee, adjacent to the previously reported area of infestation. Precise delimitation of the contained area of infestation is in process.**

Source: NPPO of Israel (2021-12).

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

Additional key words: detailed record **Computer codes:** XYLEFA, XYLEFF, IL

2022/014 First report of '*Candidatus* Phytoplasma pyri' in Israel

The NPPO of Israel recently informed the EPPO Secretariat of the first report of '*Candidatus* Phytoplasma pyri' (EPPO A2 List) on its territory. During 2020-2021, symptomatic trees of almond (*Prunus dulcis*), peach and nectarine (*Prunus persica*) and pear (*Pyrus communis*) were observed in Northern Israel (Golan Heights and Upper Galilee). Symptomatic leaf samples were collected and tested in the laboratory using molecular techniques (nested-PCR and sequencing of PCR products). Results confirmed the presence of '*Ca.* Phytoplasma pyri' subgroup 16SrX-C in commercial orchards of nectarine and pear in some areas in the Golan Heights and the Upper Galilee. The origin of the disease in Israel is unknown.
Surveys are ongoing in nurseries cultivating potential host plants of '*Ca.* Phytoplasma pyri' subgroup 16SrX-C within the areas that have been found to be infected. Potential vector species, namely *Cacopsylla* spp., are being surveyed and tested for their acquisition and transmission of the phytoplasma. Initial results have shown that *C. bidens*, which is present in Israel, can acquire the phytoplasma, however transmission by this species in Israel has not been proven yet. Awareness raising meetings have been carried out with growers and nursery workers who have been instructed to report any symptoms, and to avoid any movement of propagation material from the infested area in order to prevent unnecessary spread of the disease.

The pest status of '*Candidatus* Phytoplasma pyri' in Israel is officially declared as: **Present: limited distribution and under official control. Efforts are made to maintain propagation material that is free from the pest and to prevent further economic damage.**

Source: NPPO of Israel (2022-01).

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

Additional key words: new record **Computer codes:** PHYPPY, IL

2022/015 First report of Grapevine flavescence dorée phytoplasma in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first report of Grapevine flavescence dorée phytoplasma (EPPO A2 List) on its territory. The phytoplasma was detected as part of an official survey in the region of South Moravia. It was first detected in the municipality of Slup, close to the border with Austria. A sample was taken from one grapevine (*Vitis vinifera*) plant showing suspicious symptoms in a conventional vineyard in September 2021. This was the only symptomatic plant in the vineyard. The identity of the pathogen was confirmed by the Czech National Reference Laboratory and the EU Reference Laboratory for viruses, viroids and phytoplasmas. The plant tested positive for both Grapevine flavescence dorée phytoplasma and *Phytoplasma solani* (EPPO A2 List). The main vector of Grapevine flavescence dorée phytoplasma, *Scaphoideus titanus,* is known to occur in the area.
The pathogen was also found in one *Clematis vitalba* plant that was growing at the margin of a conventional vineyard in the municipality of Perná, as well as in one *C. vitalba* plant found close to a vineyard in the municipality of Bulhary. Five plants of *V. vinifera* growing in the vineyards were sampled at the same time. They showed symptoms such as lightening and/or distorted leaves, but all tested negative for Grapevine flavescence dorée phytoplasma.
Eradication measures are taken in the 3 sites where the phytoplasma was detected.

The pest status of Grapevine flavescence dorée phytoplasma in the Czech Republic is officially declared as: **Present, under eradication, only in some parts of the Member State concerned.**

Source: NPPO of the Czech Republic (2021-12).

Pictures: Grapevine flavescence dorée phytoplasma. https://gd.eppo.int/taxon/PHYP64/photos

Additional key words: new record **Computer codes:** PHYP64, PHYPSO,CZ

2022/016 Presence of Grapevine flavescence dorée phytoplasma in Romania

The NPPO of Romania recently informed the EPPO Secretariat of the detection of Grapevine flavescence dorée phytoplasma (EPPO A2 List) on its territory. The phytoplasma was detected in 2021 in a small vineyard (200 m^2) for personal production in the municipality of Bălușeni (Botoșani county, North-East region). The grapevine (*Vitis vinifera*) plants had been bought from the local market and planted 3 years before. The owner of the vineyard had sent samples to the NPPO in September 2021 and the identity of the pathogen was confirmed in October 2021. Phytosanitary measures are taken to eradicate the pathogen.

It may be noted that the Grapevine flavescence dorée phytoplasma had been previously only detected in an ampelographic collection at Iasi in 2010-2011 and infected plants destroyed.

The pest status of Grapevine flavescence dorée phytoplasma in Romania is officially declared as: **Present, only in some parts of the Member State concerned.**

Source: Irimia N, Ulea E, Lipsa FD (2012) Detection of Flavescence dorée phytoplasma in ampelographic collection at Iasi, Romania. *Indian Journal of Horticulture* **69**, 446-449.

NPPO of Romania (2021-11).

Pictures: Grapevine flavescence dorée phytoplasma. https://gd.eppo.int/taxon/PHYP64/photos

Additional key words: new record **Computer codes:** PHYP64, RO

2022/017 New finding of Grapevine flavescence dorée phytoplasma in Spain

In Spain, Grapevine flavescence dorée phytoplasma (EPPO A2 List) was first found in Cataluña in 1997 and subsequently eradicated (EPPO RS 1997/175, RS 2020/174). Grapevine flavescence dorée phytoplasma was detected again in December 2021 in a vineyard (*Vitis vinifera*) located in the municipality of Sant Martí Vell, Girona province, in the Autonomous Region of Cataluña. Several plants were symptomatic. A demarcated area of 4 km around the infected plot will be established and official eradication measures will be carried out. They include the destruction of the infected plants, intensive surveys and sampling, and insecticide treatment against the vector.
The origin of the outbreak is not known as the affected plants are 15 years old and had never previously been symptomatic, and the vineyard is quite isolated and far from the places where Grapevine flavescence dorée phytoplasma had been detected in the past.

The pest status of Grapevine flavescence dorée phytoplasma in Spain is officially declared as: **Present, in specific parts of the Member State where host crop(s) are grown, under eradication.**

Source: NPPO of the Spain (2021-12).

Pictures: Grapevine flavescence dorée phytoplasma. https://gd.eppo.int/taxon/PHYP64/photos

Additional key words: detailed record **Computer codes:** PHYP64, ES

2022/018 Eradication of tomato brown rugose fruit virus in the United Kingdom

In the United Kingdom, tomato brown rugose fruit virus (*Tobamovirus*, ToBRFV, EPPO A2 List) was first detected in July 2019 in a greenhouse producing tomato fruit (*Solanum lycopersicum*) in Kent (South-East England) (EPPO RS 2019/163) and in 2020 in four sites in the West Midlands, and one site in the East of England (RS 2020/078, RS 2020/123). Eradication measures were applied in all sites and included the destruction of the affected crop and the cleansing and disinfection of the affected glasshouses. Newly planted crops at these sites were inspected, sampled and tested for ToBRFV and none of the crop samples tested positive. The affected glasshouse at one site did not have a follow-on host crop and was left empty after cleansing and disinfection.

The pest status of *tomato brown rugose fruit virus* in the United Kingdom is officially declared as: **Absent, pest eradicated.**

Source: NPPO of the United Kingdom (2021-12).

Pictures: tomato brown rugose fruit virus. https://gd.eppo.int/taxon/TOBRFV/photos

Additional key words: eradication, absence **Computer codes:** TOBRFV, GB

2022/019 Eradication of *Fusarium circinatum* from Uruguay

In Uruguay, *Fusarium circinatum* (EPPO A2 List) was reported for the first time in 2009 (EPPO RS 2013/005) in *Pinus taeda* nurseries at low incidence levels (Alonso & Bettuci, 2009). Investigations carried out by the Ministry of Agriculture of Uruguay showed that this detection was linked to an infected seed lot imported from the USA. All pine seedlings and seeds belonging to this imported lot and still present in the nurseries were immediately destroyed. Specific surveys were carried across the country in all forest nurseries producing *Pinus* seedlings, as well as in selected forest stands, and did not detect *F. circinatum*. In 2019 and within the framework of a specific forestry project, surveys were carried out in nurseries across Uruguay and none of the samples collected from *P. taeda* and *P. elliottii* tested positive for *F. circinatum*. Finally, annual surveys are currently being conducted in forest nurseries and no symptoms resembling those caused by the fungus have been observed. Therefore, the Ministry of Agriculture considers that *F. circinatum* has successfully been eradicated from Uruguay.

The pest status of *Fusarium circinatum* in Uruguay is officially declared as: **Absent**.

Source: Alonso R, Bettucci L (2009) First report of the pitch canker fungus *Fusarium circinatum* affecting *Pinus taeda* seedlings in Uruguay. *Australasian Plant Disease Notes* **4**, 91–92.

Ministerio de Ganadería, Agricultura y Pesca. Dirección General de Servicios Agrícolas via European Commission (2021-12).

Pictures: *Fusarium circinatum*. https://gd.eppo.int/taxon/GIBBCI/photos

Additional key words: absence, eradication **Computer codes:** GIBBCI, UY

2022/020 First report of citrus tristeza virus in Malta

The NPPO of Malta recently informed the EPPO Secretariat of the first report of citrus tristeza virus (*Closterovirus*, CTV – EPPO A2 List) on its territory. The virus was detected in seven Citrus trees in a public garden in Mdina in November 2021. The infected trees were uprooted and incinerated. A demarcated area of 500 m around the infected trees has been established. It includes all of Mdina and parts of Rabat. In this demarcated area, citrus trees will be further tested to detect any possible presence of CTV. A communication campaign is also initiated to raise awareness of the public concerning CTV in this area.

The pest status of citrus tristeza virus in Malta is officially declared as: **Present.**

Source: NPPO of Malta (2021-11, 2021-12).

Plant Quarantine Act, 2001 (Chapter 433 of the Laws of Malta) Contingency Measures laid down on the Areas Rabat and Mdina for the control of Citrus Tristeza Virus (CTV) https://agrikoltura.gov.mt/en/phd/Documents/notices/Gov gazette CTV Mdina EN.pdf

Pictures: citrus tristeza virus. https://gd.eppo.int/taxon/CTV000/photos

Additional key words: new record **Computer codes:** CTV000, MT

2022/021 First report of *Elsinoë fawcettii* in the Azores (Portugal)

The NPPO of Portugal recently informed the EPPO Secretariat of the first finding of *Elsinoë fawcettii* (EU Annexes) on its territory.
During an official survey, samples of citrus fruits (*C. deliciosa*, *C. limon* and *C. reticulata*) were collected in the island of São Miguel, Azores in July 2021. The presence of *Elsinoë fawcettii* causing citrus scab was confirmed in December 2021 from fruits collected in 3 small orchards (1260-5500 m^2) in the counties of Lagoa, Ponta Delgada and São Vicente Ferreira. Further surveys are conducted to assess the presence of the fungus in the island, and the source of the outbreak. Eradication measures will be taken. The movement of citrus plants for planting, fruit and plant parts out of the infected orchard is forbidden. Awareness campaigns are being implemented to prevent movement of infected citrus out of the island.

The pest status of *Elsinoë fawcettii* in Portugal is officially declared as: **Present, under eradication, only in some parts of the Member State concerned**.

Source: NPPO of Portugal (2021-12).

Pictures: *Elsinoë fawcettii*. https://gd.eppo.int/taxon/ELSIFA/photos

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

2022/022 *Fusarium* taxonomy: a hot debate

Fusarium is fungal genus which includes many species that are important plant pathogens but whose delimitation has been subject to much debate among mycologists.

Fusarium or not *Fusarium*?

Within the context of the application of the new 'One fungus One name' rules, the question of conserving the anamorph name *Fusarium* over teleomorph names was discussed. In 2013 and in a letter to the editor of the journal *Phytopathology*, a large number of *Fusarium* specialists (Geiser *et al.*, 2013) supported the view that the name *Fusarium* should be kept and that teleomorph names should be abandoned.
However, while reviewing the family Nectriaceae, it was proposed in 2015 to split *Fusarium* into 7 genera: *Albonectria*, *Bisifusarium*, *Cyanonectria*, *Fusarium* (species belonging to the *Gibberella* clade), *Geejayessia*, *Neocosmospora* (including the agriculturally important *Fusarium solani* species complex), *Rectifusarium* (Lombard *et al.*, 2015). These changes were reflected in taxonomic databases (e.g. MycoBank).
In 2021, 166 scientists from 30 countries signed another letter to the editor of the journal Phytopathology (Geiser *et al.*, 2021) to voice their disagreement with this change. They considered that: 'although the generic concepts proposed by Lombard *et al.* (2015) are monophyletic and nomenclaturally valid, they fail on the practicality criterion because they

exclude species with a longstanding place in genus *Fusarium*'. In addition, they queried a number of scientific results used to substantiate the subdivision of *Fusarium*.
This opinion is contested by 127 scientists from 43 countries in Crous *et al*. (2021), arguing that: 'the generic treatment of *Fusarium* by Geiser *et al*. (2013, 2021), produced an ill-delimited genus without clear synapomorphies, as fusarium-like macroconidia are strongly polyphyletic within Nectriaceae and also occur outside their very broadly circumscribed *Fusarium* concept. We argue that a narrower concept of genera with a clear, unique combination of features is needed for the majority of fusarioid species.'.
Neocosmospora and other genera were also supported in a list produced by the International Subcommission for the Taxonomy of Phytopathogenic Fungi.

Case of Panama disease of banana
In 2019, it was proposed to consider *Fusarium oxysporum* f. sp. *cubense* Tropical race 4 (Foc TR4) as a distinct species called *Fusarium odoratissimum* (Maryani *et al*., 2019). However, this proposal has been questioned by Torres-Bedoya *et al*. (2021) who considered that this change was premature and not sufficiently substantiated. In addition, it was noted that *F. odoratissimum* is not a synonym of Foc TR4 as at least one isolate does not belong to *Fusarium oxysporum* f. sp. *cubense* (but to another forma specialis).

EPPO Secretariat note
In 2019, Summerell stated that 'it is critically important that *Fusarium* has a stable taxonomy with well-defined generic and species concepts that allow practitioners diagnosing diseases, identifying these fungi, and developing management strategies the confidence to make decisions about the identity of the species they are interested'. As expressed by Crous *et al*. (2021): '… all scientists working with *Fusarium* desire a stable taxonomic system, and all agree that taxonomic changes should be made with the aim of promoting stability'.
While recognizing the difficulties in delimiting taxon boundaries, being a user of taxonomy in all its Standards, documents and databases, the EPPO Secretariat would exceptionally take this opportunity to make a plea for a more stable and robust taxonomy that is essential to ensure correct communication and avoid confusion. This remark applies not only to *Fusarium* but to many other taxa that are of importance in plant health.
For example and in relation to the management of EPPO Codes and their associated scientific names in the EPPO Global Database, the EPPO Secretariat would like to emphasize that it thrives to: 1) assign a unique code to each taxon; 2) associate relevant scientific names to this unique code and select the preferred scientific name based on available taxonomic sources; and 3) when the preferred name is modified, make the necessary changes to the EPPO Global Database. For the moment, the proposal to transfer some *Fusarium* species to *Neocosmospora* and other genera has been followed in the EPPO Global Database. These species still have their *Fusarium* names as synonyms and have necessarily kept the same EPPO Code. The preferred names of individual species will be adjusted when the controversy is resolved.

Source: Crous *et al*. (2021) *Fusarium*: more than a node or a foot-shaped basal cell. *Studies in Mycology* **98**, 100116, 184 pp.
Geiser DM *et al*. (2013) Letter to the Editor. One Fungus, One Name: defining the genus *Fusarium* in a scientifically robust way that preserves longstanding use. *Phytopathology* **103**(5), 400-408.
Geiser DM *et al*. (2021) Letter to the Editor. Phylogenomic analysis of a 55.1-kb 19-gene dataset resolves a monophyletic *Fusarium* that includes the *Fusarium solani* species complex. *Phytopathology* **111**(7), 1064-1079. https://doi.org/10.1094/PHYTO-08-20-0330-LE
International Subcommission for the Taxonomy of Phytopathogenic Fungi. List of plant pathogenic fungi 18 January 2021. Available at https://www.fungaltaxonomy.org/subcommissions

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Maryani N, Lombard L, Poerba YS, Subandiyah S, Crous PW, Kema GHJ (2019) Phylogeny and genetic diversity of the banana Fusarium wilt pathogen *Fusarium oxysporum* f. sp. *cubense* in the Indonesian centre of origin. *Studies in Mycology* **92**, 155-194. https://doi.org/10.1016/j.simyco.2018.06.003

Summerell BA (2019) Resolving *Fusarium*: current status of the genus. *Annual Reviews* **57**, 15.1-15.17.

Torres Bedoya E, Bebber D, Studholme DJ (2021) Taxonomic revision of the banana Fusarium wilt TR4 pathogen is premature. *Phytopathology* **111**(12), 2141-2145. https://doi.org/10.1094/PHYTO-03-21-0089-LE

Additional key words: taxonomy **Computer codes:** 1FUSAG

2022/023 Invasive plants in Belarus

The introduction of alien species into the natural environment of Belarus has taken place at a rapid rate over the last few decades. The entry of new invasive plant species has intensified with increased transport (road, railway, river) and the movement of goods. A number of invasive alien plants have been introduced in Belarus via the trade of agricultural and ornamental species. An inventory of the alien flora of Belarus was undertaken between 2008–2020 throughout the territory of the country. Approximately, 300 taxa of non-native plants are currently classified as potentially invasive. 52 invasive plant species (Table 1) have been recorded in Belarus. These species threaten biodiversity, human health, and the economy. Further surveys are planned, and management action should be initiated against those species with the highest impact on plant health and the natural environment.

Table 1. 52 invasive alien plant species recorded in Belarus

Species	Family	EPPO Status
Acer negundo	Aceraceae	none
Acorus calamus	Araceae	none
Ambrosia artemisiifolia	Asteraceae	Invasive Alien Plant List
Amelanchier spicata	Rosaceae	Invasive Alien Plant List
Angelica archangelica	Apiaceae	none
Aronia mitschurinii	Rosaceae	none
Asclepias syriaca	Asclepiadaceae	Invasive Alien Plant List
Bidens connata	Asteraceae	none
Bidens frondosa	Asteraceae	Invasive Alien Plant List
Cytisus scoparius	Fabaceae	none
Echinocystis lobata	Cucurbitaceae	none
Elodea canadensis	Hydrocharitaceae	none
Elodea nuttallii	Hydrocharitaceae	Invasive Alien Plant List
Epilobium ciliatum	Onagraceae	none
Erechtites hieraciifolius	Asteraceae	none
Erigeron annuus	Asteraceae	none
Fallopia ×bohemica	Polygonaceae	Invasive Alien Plant List
Fallopia japonica	Polygonaceae	Invasive Alien Plant List
Fallopia sachalinensis	Polygonaceae	Invasive Alien Plant List
Festuca trachyphylla	Poaceae	none
Galinsoga parviflora	Asteraceae	none
Galinsoga quadriradiata	Asteraceae	none
Geum macrophyllum	Rubiaceae	none
Helianthus tuberosus	Asteraceae	Invasive Alien Plant List
Heracleum mantegazzianum	Apiaceae	Invasive Alien Plant List
Heracleum sosnowskyi	Apiaceae	A2 List
Hippophae rhamnoides	Elaeagnaceae	none
Impatiens glandulifera	Balsaminaceae	Invasive Alien Plant List
Impatiens parviflora	Balsaminaceae	none
Iva xanthiifolia	Asteraceae	none
Lolium arundinaceum	Poaceae	none

Species	Family	EPPO Status
Lupinus polyphyllus	Fabaceae	Invasive Alien Plant List
Oenothera biennis	Onagraceae	none
Oenothera rubricaulis	Onagraceae	none
Parthenocissus inserta	Vitaceae	none
Petasites hybridus	Asteraceae	none
Phragmites altissimus	Poaceae	none
Populus alba	Salicaceae	none
Prunus serotina	Rosaceae	Invasive Alien Plant List
Quercus rubra	Fagaceae	none
Robinia pseudoacacia	Fabaceae	none
Rumex confertus	Polygonaceae	none
Sambucus nigra	Adoxaceae	none
Sambucus racemosa	Adoxaceae	none
Solidago canadensis	Asteraceae	Invasive Alien Plant List
Solidago gigantea	Asteraceae	Invasive Alien Plant List
Sorbaria sorbifolia	Rosaceae	none
Symphyotrichum ×versicolor	Asteraceae	none
Symphyotrichum novi-belgii	Asteraceae	none
Symphyotrichum salignum	Asteraceae	none
Xanthium albinum	Asteraceae	none
Zizania latifolia	Poaceae	none

Source: Dubovik DV, Sauchuk SS, Zavialove LV (2021) The current status of the plant invasions in Belarus. *Environmental and Socio-economic studies* **9** 14-22.

Additional key words: invasive alien plant

Computer codes: 1FOPG, 1PHRG, 1ZMYG, ABOMI, ACRNE, ACSCA, AMBEL, AMESP, ANKAR, ASCSY, ASTNB, BIDCN, BIDFR, ECNLO, ELDCA, ELDNU, EPICT, EREHI, ERIAN, FESAR, FESTR, GASCI, GASPA, GEUMA, HELTU, HERMZ, HERSO, HIORH, IPAGL, IPAPA, IVAXA, LUPPO, OEOBI, OEORU, PEDHY, POLCU, POPAL, PRNSO, PRTIN, QUERU, REYSA, ROBPS, RUMCF, SAMNI, SAMRA, SAOSC, SOISO, SOOCA, SOOGI, XANRI, ZIZLA, ZMYSA, BY

2022/024 Invasive plants in Romania

The economic impact of invasive alien species for Romania has been estimated to be about 1.6 billion USD (1.4 billion EUR). In addition to this economic impact, invasive alien species can have negative environmental impacts. The updated list of invasive alien species of EU concern (Regulation 1143/2014) includes 66 species of which 36 species are invasive alien plants. Nine of these species are recorded in Romania (Table 1). Under climate change scenarios for the 2070s, Romania is predicted to be suitable for an additional 7 invasive alien plants species of Union concern: *Acacia saligna, Baccharis halimifolia, Lespedeza cuneata, Ludwigia grandiflora, Lygodium japonicum, Lysichiton americanus,* and *Pueraria montana* var. *lobata*. In general, data on the impact of invasive alien plant species and their management in Romania are scattered or completely missing. Work is ongoing to assess the risk of invasive alien plants to the habitats they invade, and where required eradication efforts are underway. Coordinated efforts at a national and regional scale are needed to

increase the efficiency of the management of alien species. These include enhancing the legislation and the capacity of public institutions to manage invasive species, increasing the scientific research interest in this topic, and promoting efficient field management measures against alien plants.

Table 1. Nine invasive alien plants of EU concern (Regulation 1143/2014) recorded in Romania.

Species	Family	EPPO Status
Ailanthus altissima	Simaroubaceae	Invasive Alien Plant List
Asclepias syriaca	Apocynaceae	Invasive Alien Plant List
Cabomba caroliniana	Cabombaceae	Invasive Alien Plant List
Elodea nuttallii	Hydrocharitaceae	Invasive Alien Plant List
Heracleum sosnowskyi	Apiaceae	A2 List
Humulus scandens	Cannabaceae	A2 List
Impatiens glandulifera	Balsaminaceae	Invasive Alien Plant List
Ludwigia peploides	Onagraceae	A2 List
Myriophyllum aquaticum	Haloragaceae	Invasive Alien Plant List

Source: Sîrbu C, Anastasiu P, Urziceanu U, Camen-Comănescu P, Sîrbu I, Popa I, Ioja C, Gavrilidis A, Oprea A (2021) Invasive alien plant species in Romania of European Union concern. *Environmental and Socio-economic studies* **9**, 1-22.

Additional key words: invasive alien plant

Computer codes: ACASA, AILAL, ASCSY, BACHA, CABCA, ELDNU, HERSO, HUMJA, IPAGL, LESCU, LUDPE, LUDUR, LSYAM, LYFJA, MYPBR, PUELO, RO

2022/025 New records of non-native plants in Russian Lapland

Following surveys (2018-2020) in the Murmansk region (European Russia), fourteen species of non-native plants are reported (Table 1). The historical occurrence of alien plants in the region is largely a result of entry via contaminants of seed or forage (for example *Rorippa sylvestris* or *Senecio leucanthemifolius* subsp. *vernalis*). However, more recent introductions are likely to be linked to horticulture.

Table 1. New records of non-native plants in Russian Lapland.

Species	Family	Pathway
Anthemis ruthenica	Asteraceae	Seed contaminant
Aruncus dioicus	Rosaceae	Horticulture
Bromus commutatus	Poaceae	Seed contaminant
Chaerophyllum hirsutum	Apiaceae	Horticulture
Galega orientalis	Fabaceae	Agriculture
Geum aleppicum	Rosaceae	Contaminant of people and their luggage
Leonurus quinquelobatus	Lamiaceae	Traditional medicinal plant
Lepidium densiflorum	Brassicaceae	Stowaway - vehicles (car, train)
Levisticum officinale	Apiaceae	Agriculture
Myrrhis odorata	Apiaceae	Horticulture

Species	Family	Pathway
Phleum phleoides	Poaceae	Forage contaminant
Prunus armeniaca	Rosaceae	Food contaminant
Rorippa sylvestris	Brassicaceae	Forage contaminant
Senecio leucanthemifolius subsp. *vernalis*	Asteraceae	Forage contaminant

Sources: Kozhin M, Sennikov A (2022) New records in non-native vascular plants of Russian Lapland. *Biodiversity Data journal*, https://doi.org/10.3897/BDJ.10.e78166

Additional key words: invasive alien plant

Computer codes: ANTRU, AUNDI, BROCO, CHPHI, GAGOR, GEUAL, LECQU, LEPDE, LEWOF, MYHOD, PHLPH, PRNAR, RORSY, SENVE, RU

2022/026 Non-native Asteraceae in Tunisia

Sixteen new Asteraceae are recorded in the non-indigenous flora of Tunisia. Six species (*Dimorphotheca ecklonis*, *Gaillardia pulchella*, *Gazania linearis* var. *linearis*, *Guizotia abyssinica*, *Rudbeckia triloba* and *Tithonia diversifolia*) are recorded for the first time in North Africa. It is interesting to note the occurrence of *Ambrosia artemisiifolia* (EPPO List of Invasive Alien Plants) in Tabarka (Houamdia, North-Western Tunisia). The species has previously been recorded as naturalized in Egypt and as casual in Algeria and Morocco.

Table 1. New records of non-native Asteraceae in Tunisia.

Species	Form	Native range
Ambrosia artemisiifolia	Annual	North America
Argyranthemum frutescens	Perennial	Canary Islands
Artemisia absinthium	Perennial	Europe and North Africa
Bidens pilosa	Annual	Tropical America
Calendula officinalis	Perennial	Asia
Chrysanthemum morifolium	Perennial	Asia
Dimorphotheca ecklonis	Perennial	Southern Africa
Erigeron karvinskianus	Perennial	Central and South America
Gaillardia pulchella	Perennial or annual	Americas
Gaillardia × *grandiflora*	Perennial	North America
Gazania linearis	Perennial	South Africa
Guizotia abyssinica	Annual	East Africa
Helianthus annuus	Annual	North America
Rudbeckia triloba	Biennial or perennial	North America
Tagetes erecta	Annual	Americas
Tithonia diversifolia	Annual	Americas

Source: El Mokni R, Iamonico D, Véla E, Verloove F, Domina G (2022) New records of Asteraceae for the non-native flora of Tunisia and north Africa with some nomenclatural remarks. *Mediterranean Botany* **43**, e73688. https://doi.org/10.5209/mbot.73688

Additional key words: new record, invasive alien plant

Computer codes: AMBEL, ARTAB, BIDPI, CHYFR, CHYHO, CLDOF, ERIKA, GAIGR, GAIPU, GAZLI, GUIAB, HELAN, OSPEK, RUDTR, TAGER, TITDI, TN

2022/027 Negative impacts of *Acacia saligna* in Italy

Acacia saligna (Fabaceae: EPPO List of Invasive Alien Plants) is native to Australia and has been recorded as an invasive species in a number of regions including the EPPO region (e.g. Cyprus, Portugal, Israel, Italy (including Sardinia)), South Africa and South America. The ecological impacts of *A. saligna* on the vegetation composition and structure of two coastal dunes habitats (woody habitats coastal dunes with *Juniperus* spp. and dunes with sclerophyllous vegetation) was assessed along 50 km of the Adriatic coast in Southern Italy (Molise and North Puglia Regions). The vegetation was sampled in 20 paired plots per habitat where a paired plot consisted of invaded (*A. saligna* cover > 70%) and non-invaded vegetation. The results showed that the invaded dunes with sclerophyllous vegetation had a decline in species richness and cover of native species, and an increase in cover of ruderal species. *A. saligna* can form a thick litter layer with allelopathic substances that inhibit the germination and establishment of other plants. It can also directly outcompete native species and hinders the growth of evergreen Mediterranean shrubs. The invaded dunes with *Juniperus* species maintained the species composition but had variations in vegetation structure. *A. saligna* can transform the structure by forming a dense tree layer that can lead to the decrease of the shrub layer. Over time, this can lead to habitat transformation. It is essential to ensure a platform for monitoring of invasive alien plants in vulnerable habitats and to identify preventive measures and effective strategies for its control and eradication.

Sources: Tozzi FP, Carranza ML, Frate L, Stanisci A (2021) The impact of *Acacia saligna* on the composition and structure of the Mediterranean maquis. *Biodiversity*, https://doi.org/10.1080/14888386.2021.1936640

Photos: *Acacia saligna*. https://gd.eppo.int/taxon/ACASA/photos

Additional key words: invasive alien plant

Computer codes: ACASA, IT