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2023/175 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 8.

• New records

Cucumber vein yellowing virus (*Ipomovirus*, CVYV - EPPO A2 List) is reported for the first time from Iraq. During the 2022 growing season, courgette (*Cucurbita pepo* var giromontiina) plants with extensive leaf vein yellowing symptoms, associated with whitefly infestation, were observed near-Yusufiyah, Baghdad Province. In affected fields, disease incidence reached 40-50%. Laboratory analysis confirmed the presence of CVYV in symptomatic leaf samples. Other viruses were also detected, including Squash leaf curl virus (*Begomovirus* - EPPO A2 List) and Tomato leaf curl Palampur virus (*Begomovirus*) (Mohammed & Lahuf, 2023). **Present, not widely distributed**.

Spodoptera frugiperda (Lepidoptera: Noctuidae - EPPO A2 List) occurs in Equatorial Guinea. Its presence was officially confirmed in May 2021. Larvae and damage were observed in several localities in the provinces of Bioko Sur (Moka) and Bioko Norte (El Gorriaga, Malabo), mainly on maize (*Zea mays*), and to a lesser extent on sugarcane (*Saccharum* spp.) and leek (*Allium porrum*). The identity of the pest was confirmed by morphological characteristics of adult specimens (Rovesti & Mane, 2021). **Present, not widely distributed**.

Thaumastocoris peregrinus (Hemiptera: Thaumastocoridae - formerly EPPO Alert List) is reported for the first time from Syria. In October 2022, several specimens were collected from *Eucalyptus camaldulensis* trees near Latakia (Zeity *et al.*, 2023).

Xyleborus bispinatus (Coleoptera: Curculionidae, Scolytinae) is reported for the first time from Spain. It was trapped in the provinces of Alicante, Murcia, and Valencia during studies conducted from 2009 to 2018. No infestations in woody plants were detected near the trapping sites. Stable populations have been detected in a wide area of the central Valencian province, strongly suggesting that *X. bispinatus* is established there. However, as no recent captures were made in Alicante and Murcia provinces, the insect is probably not established in these areas. It is noted that further studies are needed to identify the host plants of *X. bispinatus* in Spain, and to better understand its distribution and potential impacts (Gallego *et al.*, 2022).

• Detailed records

In Russia, *Agrilus planipennis* (Coleoptera: Buprestidae -EPPO A2 list) has been recorded in Krasnodar krai (Southern European Russia). In 2022, the insect was found in 65 localities from 7 municipalities mainly on *Fraxinus pennsylvanica* (Shchurov & Zamotajlov, 2022).

In Russia, *Gremmeniella abietina* (EU Annexes) has been recorded on *Picea jezoensis* in Khabarovsk (Far East) and on *Pinus sylvestris* in Krasnoyarsk (Eastern Siberia) (Bogacheva *et al.*, 2020; Sheller *et al.*, 2020).

In Hainan (China), *Pantoea stewartii* subsp. *stewartii* (EPPO A2 List) is reported for the first time on *Artocarpus heterophyllus* causing jackfruit bronzing disease. On jackfruit, the disease is characterized by yellow-orange to reddish discoloration of the fruit pulp. It is noted that in recent years, the disease has been found in 11 cities and counties of the island.

The presence of the bacterium has been confirmed by molecular tests and Koch's postulates have been completed (Zhao *et al.*, 2023).

In Northern Ireland (United Kingdom), wilt symptoms were observed during summer 2022 on lettuce (*Lactuca sativa* cv. Amica) grown under a greenhouse in county Armagh. Affected plants initially showed stunting, followed by wilting and yellowing of lower leaves. Orangebrown discoloration of vascular tissue in the tap root of affected plants was also observed. Molecular (PCR, sequencing) and pathogenicity tests confirmed the presence of *Fusarium oxysporum* f. sp. *lactucae* (formerly EPPO Alert List) Race 1 in symptomatic samples (van Amsterdam *et al.*, 2023).

• Host plants

During surveys conducted in 2017-2018 in Istanbul (Türkiye), virus symptoms (mosaic, mottling, chlorotic ringspots and deformations) were observed on leaves of *Tilia* spp. Symptomatic and asymptomatic samples were collected and laboratory tests (ELISA, RT-PCR, sequencing) confirmed the presence of plum pox virus (*Potyvirus* - EPPO A2 List) in symptomatic samples. This is the first time that a natural infection of PPV is reported on *Tilia* sp. It is noted that further studies will be conducted to obtain the full genome sequence of the *Tilia* isolate and understand its phylogenetic relationship with other published PPV sequences (Çıtır *et al.*, 2021).

Studies conducted in Mexico have confirmed that *Physalis virginiana* (Solanaceae) is a wild host plant of both '*Candidatus* Liberibacter solanacearum' (Solanaceae haplotypes are listed in the EPPO A1 List) and its psyllid vector, *Bactericera cockerelli* (Hemiptera: Triozidae - EPPO A1 List) (Delgado-Luna *et al.*, 2023).

• New pests and taxonomy

A new fungal species, *Microstrobilinia castrans* sp. nov. (Sclerotiniaceae) has recently been found infecting pollen cones of three spruce species (*Picea abies, P. omorika* and *P. smithiana*) in Germany, Italy, and Switzerland. Based on metabarcode sequences deposited in a database (GlobalFungi), *M. castrans* has also been detected in France. It is still unclear whether this new species originates from Europe or not, however, it would be surprising that this conspicuous fungus could have been overlooked over the last centuries. Affected cones show brown discolorations and deformations, and do not release pollen. Apothecia of the fungus then develop on the cones. For the moment, no serious damage has been reported, as only a few pollen cones per tree are affected (Beenken *et al.*, 2023).

Sources: Beenken L, Stroheker S, Dubach V, Schlegel M, Queloz V, Gross A (2023) *Microstrobilinia castrans*, a new genus and species of the Sclerotiniaceae parasitizing pollen cones of *Picea* spp. *Mycological Progress* 22(2), 14. https://doi.org/10.1007/s11557-023-01865-w

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Additional key words: detailed records, host plant, new pests, new records, taxonomy

Computer codes: AGRLPL, CVYV00, ERWIST, GREMAB, LAPHFR, LIBEPS, MSTBCA, PARZCO, PPV000, SLCV00, THMCPE, TLCPAV, XYLBBI, CN, ES, GQ, IQ, MX, RU, SY

2023/176 New EU regulation for Popillia japonica

The European Union (EU) has established measures to prevent the establishment and spread of *Popillia japonica* (Coleoptera: Scarabaeidae - EPPO A2 List) and measures for the eradication and containment of that pest within certain demarcated areas of the Union territory. The regulation defines the size of the infested area and associated buffer zone, as well as the eradication and containment measures to be applied. It lists the current areas where containment measures are applied for this pest in Italy. It also includes requirements for official surveys.

Source: EU (2023) Commission Implementing Regulation (EU) 2023/1584 of 1.8.2023 on measures to prevent the establishment and spread of *Popillia japonica* Newman and on measures for the eradication and containment of that pest within certain demarcated areas of the Union territory. OJL 194, p. 17-38. http://data.europa.eu/eli/reg_impl/2023/1584/oj

Pictures Popillia japonica. <u>https://gd.eppo.int/taxon/POPIJA/photos</u>

Additional key words: regulation

Computer codes: POPIJA, EU

2023/177 Binomial nomenclature for virus species (continued)

For many years, proposals to use binomial names to name virus species have been debated among the virology community. In 2021, the International Committee on Taxonomy of Viruses (ICTV) approved a uniform system of formal virus names which follows the binomial 'genus-species' format with or without Latinized species epithets. For example, the virus species which is causing rose rosette is now called emaravirus rosae. This new rule is being implemented and new names are gradually being proposed by ICTV.

As a user of taxonomy, the EPPO Secretariat has started to implement these changes for virus names (mainly plant viruses) in the EPPO Global Database. In October 2022, the first changes were made for a number of genera (EPPO RS 2022/207). In August 2023, changes were made in the EPPO Global Database for species belonging to the following genera:

Genus	EPPO Code	Family
Amalgavirus	1AMALG	Amalgaviridae
Temfrudevirus	1TEMVG	Amesuviridae
Badnavirus	1BADNG	Caulimoviridae
Caulimovirus	1CAULG	Caulimoviridae
Cavemovirus	1CAVVG	Caulimoviridae
Petuvirus	1PETUG	Caulimoviridae
Rosadnavirus	1ROSDG	Caulimoviridae
Ruflodivirus	1RUFVG	Caulimoviridae
Solendovirus	1SOLDG	Caulimoviridae
Soymovirus	1SOYMG	Caulimoviridae
Tungrovirus	1TUNVG	Caulimoviridae
Vaccinivirus	1VACVG	Caulimoviridae
Blunervirus	1BLUVG	Kitaviridae
Higrevirus	1HIGVG	Kitaviridae
Coguvirus	1COGUG	Phenuiviridae
Rubodvirus	1RUBVG	Phenuiviridae
Tenuivirus	1TENVG	Phenuiviridae
Cheravirus	1CHEVG	Secoviridae
Comovirus	1COMOG	Secoviridae
Fabavirus	1FABAG	Secoviridae
Nepovirus	1NEPOG	Secoviridae
Sadwavirus	1SADWG	Secoviridae
Sequivirus	1SEQUG	Secoviridae
Stralarivirus	1STRVG	Secoviridae
Torradovirus	1TORVG	Secoviridae
Waikavirus	1WAIKG	Secoviridae
Alphacarmovirus	1ACAVG	Tombusviridae
Alphanecrovirus	1ANCVG	Tombusviridae
Aureusvirus	1AURVG	Tombusviridae
Avenavirus	1AVEVG	Tombusviridae
Betacarmovirus	1BCAVG	Tombusviridae
Betanecrovirus	1BNCVG	Tombusviridae
Dianthovirus	1DIANG	Tombusviridae
Gallantivirus	1GALVG	Tombusviridae

Genus	EPPO Code	Family
Gammacarmovirus	1GCAVG	Tombusviridae
Luteovirus	1LUTEG	Tombusviridae
Macanavirus	1MANVG	Tombusviridae
Machlomovirus	1MCHLG	Tombusviridae
Panicovirus	1PANVG	Tombusviridae
Pelarspovirus	1PELVG	Tombusviridae
Tombusvirus	1TOMBG	Tombusviridae
Umbravirus	1UMBRG	Tombusviridae
Zeavirus	1ZEAVG	Tombusviridae
Marafivirus	1MARFG	Tymoviridae
Tymovirus	1TYMOG	Tymoviridae

Source:

ICTV website (last consulted 2023-07). The master species list: <u>https://ictv.global/msl</u> Virus metadata resource: <u>https://ictv.global/vmr</u>

Useful papers

Kuhn JH 2021) Virus Taxonomy. *Encyclopedia of Virology*, 28-37. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7157452/pdf/main.pdf

Siddell SG, Walker PJ, Lefkowitz EJ *et al.* (2020) Binomial nomenclature for virus species: a consultation. *Archives of Virology* **165**, 519-525. https://doi.org/10.1007/s00705-019-04477-6

Walker PJ et al. (2022) Changes to virus taxonomy and to the International Code of Virus Classification and Nomenclature ratified by the International Committee on Taxonomy of Viruses (2021). Archives of Virology 166, 2633-2648. <u>https://doi.org/10.1007/s00705-021-05156-1</u>

Walker PJ et al. (2022) Recent changes to virus taxonomy ratified by the International Committee on Taxonomy of Viruses. Archives of Virology 167, 2429-2440. <u>https://doi.org/10.1007/s00705-022-05516-5</u>

Additional key words: taxonomy

Computer codes: 1ACAVG, 1AMALG, 1ANCVG, 1AURVG, 1AVEVG, 1BADNG, 1BCAVG, 1BLUVG, 1BNCVG, 1CAULG, 1CAVVG, 1CHEVG, 1COGUG, 1COMOG, 1DIANG, 1FABAG, 1GALVG, 1GCAVG, 1HIGVG, 1LUTEG, 1MANVG, 1MARFG, 1MCHLG, 1NEPOG, 1PANVG, 1PELVG, 1PETUG, 1ROSDG, 1RUBVG, 1RUFVG, 1SADWG, 1SEQUG, 1SOLDG, 1SOYMG, 1STRVG, 1TEMVG, 1TENVG, 1TOMBG, 1TORVG, 1TUNVG, 1TYMOG, 1UMBRG, 1VACVG, 1WAIKG, 1ZEAVG

2023/178 First report of Diaphorina citri in Cyprus

The NPPO of Cyprus recently informed the EPPO Secretariat of the first report of *Diaphorina citri* (vector of '*Candidatus* Liberibacter asiaticus' - Hemiptera: Psyllidae, EPPO A1 List) on its territory.

The psyllid was found in the municipality of Asómatos in Limassol District by an operator in an orange (*Citrus sinensis*) orchard of 8.3 ha. The pest was identified as *D. citri* morphologically by the Cyprus National Reference Laboratory and by the EU Reference Laboratory using COI sequencing. Monitoring surveys are planned to delimit the extent of the outbreak. Official measures are being applied.

The pest status of *Diaphorina citri* in Cyprus is officially declared as: **Present**, **under eradication**.

Source: NPPO of Cyprus (2023-08).

Pictures Diaphorina citri. <u>https://gd.eppo.int/taxon/DIAACI/photos</u>

Additional key words: new record

Computer codes: DIAACI, CY

2023/179 Eradication of *Pochazia shantungensis* in Germany

In Germany, *Pochazia shantungensis* (Hemiptera: Ricaniidae, EPPO Alert List) was first found in a private garden in Baden-Württemberg in August 2021 (EPPO RS 2022/011). A small number of adults were found on a recently purchased *Catalpa bungei* tree. These adults were killed, and no other signs of the pest were found in the garden or in the nursery where the tree had been bought.

In 2022, visual inspections were carried out in the garden where *P. shantungensis* had been found and in the surroundings. In addition, sticky traps were used to detect the possible presence of the insect in the garden and in the relevant nursery. In 2023, visual inspections continued. No *P. shantungensis* were detected. It is presumed that the pest could not establish, and the outbreak is eradicated.

The pest status of *Pochazia shantungensis* in Germany is officially declared as: Absent, pest eradicated.

Source: NPPO of Germany (2023-08).

Pictures Pochazia shantungensis. <u>https://gd.eppo.int/taxon/POCZSH/photos</u>

Additional key words: eradication, absence

Computer codes: POCZSH, DE

2023/180 First report of Pochazia shantungensis in the Netherlands

The NPPO of the Netherlands recently informed the EPPO Secretariat of the first finding of *Pochazia shantungensis* (Hemiptera: Ricaniidae - EPPO Alert List) on its territory. In July 2023, two nymphs were captured by the owner of a garden located in the municipality of Hendrik-Ido-Ambacht and then collected by a phytosanitary inspector. More specimens (nymphs and exuviae) were collected from *Buddleia davidii*, *Trachelospermum jasminoides*

and *Viburnum* sp. plants. Nymphs were reared in the laboratory and the adults were identified as *Pochazia shantungensis*.

The origin of this finding is unknown, but probably linked to the recent purchase of one (or more) of the three woody plants (*B. davidii*, *T. jasminoides* and *Viburnum* sp.). These plants had been planted in the garden during the previous winter/spring. Tracing-back studies and monitoring of the garden will be carried out. No particular damage to plants was observed. Eradication is difficult in the absence of any suitable plant protection products for use in private gardens. It is also noted that the potential impact of this pest in Northern European countries is expected to be limited.

The pest status of *Pochazia shantungensis* in the Netherlands is officially declared as: **Transient, non actionable. Few specimens at one location, monitoring ongoing.**

Source: NPPO of the Netherlands (2023-07).

Pictures: Pochazia shantungensis. <u>https://gd.eppo.int/taxon/POCZSH/photos</u>

Additional key words: new record

Computer codes: POCZSH, NL

2023/181 Update on the situation of *Pochazia shantungensis* in Türkiye

In Türkiye, Pochazia shantungensis (Hemiptera: Ricaniidae - EPPO Alert List) was first reported in 2019 in the Marmara region, near Istanbul (EPPO RS 2021/129). It is now recorded from the provinces of Istanbul, Kocaeli and Yalova. A study was conducted between January 2019 and December 2020 in 5 districts of Istanbul (Kadıköy and Üsküdar on the-Asian side; Beşiktaş, Sarıyer, and Şişli on the European side) in parks and gardens where the pest occurs. It was observed that *P. shantungensis* has two generations per year. The main host plants were determined as Ligustrum lucidum and Olea europaea. The pest was observed on 57 plant species belonging to 31 families, including 38 new host plants compared to existing literature records. The new host species are: Acca sellowiana, Acer negundo, Berberis aquifolium, Calycanthus floridus, Carpinus betulus, Catalpa bignonioides, Cercis siliquastrum, Citrus japonica, Corylus avellana, Corylus maxima, Cotoneaster lacteus, Cydonia oblonga, Elaeagnus angustifolia, Elaeagnus pungens, Eriobotrya japonica, Euryops pectinatus, Fagus sylvatica, Gleditsia triacanthos, Hedera helix, Jasminum officinale, Liriodendron tulipifera, Lonicera japonica, Malus floribunda, Nerium oleander, Phormium tenax, Pittosporum tobira, Platanus acerifolia, Platanus orientalis, Prunus avium, Prunus laurocerasus, Prunus serrulata, Punica granatum, Pyracantha coccinea, Quercus robur, Rubus vestitus, Tilia tomentosa, Viburnum opulus, Vitex agnus-castus.

Zelus renardii (Hemiptera: Reduviidae) was observed as a predator of P. shantungensis.

The situation of *Pochazia shantungensis* in Türkiye can be described as: **Present, not widely distributed and not under official control.**

Source: Hızal E, Öztemiz S, Gjonov I (2023) Phenology and host preferences of the invasive *Pochazia shantungensis* (Chou & Lu, 1977) (Hemiptera: Ricaniidae), a risk for agriculture and forest areas in the West-Palaearctic Region. *Acta Zoologica Bulgarica* **75**(2), 251-258. <u>https://www.acta-zoologica-bulgarica.eu/2023/002673</u>

Pictures Pochazia shantungensis. <u>https://gd.eppo.int/taxon/POCZSH/photos</u>

Additional key words: detailed record

Computer codes: POCZSH, ZELURE, TR

2023/182 First report of Euwallacea fornicatus in Argentina

Euwallacea fornicatus sensu stricto (Coleoptera: Scolytinae, EPPO A2 List) is first reported from Argentina. An outbreak in the urban forest of the city of Buenos Aires was reported in March 2022, but the first specimens were observed in June 2021. The identity of the pest was confirmed by morphological and molecular methods. Considering the large number of trees attacked and the record of new reproductive host species, the authors consider that the beetle is established and widespread in this area. *E. fornicatus* was observed on 13 host plants, with a marked preference for *Acer* trees and six species are new host plants for this insect (*Acer japonicum, Platanus acerifolia, Populus deltoides, Schinus longifolia, Solanum granuloso-leprosum* as reproductive hosts, and *Inga uruguensis* as non-reproductive host).

The authors consider that this record is the first reliable record in South America as the previous records in Brazil were indirect and may be due to an erroneous synonymy of the superficially similar *Coptoborus tristiculus* (Wood, 1975) with *Xyleborus molestulus* Wood, 1975, which was recently synonymized with *Euwallacea perbrevis* (another member of the *Euwallacea fornicatus* species complex).

Source: Ceriani-Nakamurakare ES, Johnson AJ, Gomez DF (2023) Uncharted territories: first report of *Euwallacea fornicatus* (Eichhoff) in South America with new reproductive hosts records. *Zootaxa* 5325(2), 289-297.

Additional key words: new record

Computer codes: EUWAWH, XYLBFO, AR

2023/183 First report of Xylotrechus chinensis in Italy

In July 2023 the Plant Health Service of Lombardia (Italy) conducted a survey to verify some reports from researchers and citizens about the presence of *Xylotrechus chinensis* (Coleoptera: Cerambycidae - EPPO Alert List) in Brescia Province.

Visual inspections were carried out on 225 plants in 9 municipalities: Salò, Roè Volciano, Gavardo, Prevalle, Muscoline, Puegnago sul Garda, Manerba del Garda, San Felice del Benaco, Calvagese della Riviera. Only mulberry (*Morus* sp.) plants were found with signs of the presence of *X. chinensis* and these were observed in 7 out of those 9 municipalities (not in Manerba del Garda and in Calvagese della Riviera). In total 36 *Morus* trees were found to be infested. No plants belonging to the genera *Pyrus, Malus* and *Vitis* were found infested. On the 24th of July 2023 the Phytopathological laboratory of Lombardia confirmed the presence of *X. chinensis*. This is the first record of this pest in Italy. On the 25th of July 2023 5 traps were placed to verify lure attractiveness. A surveillance program has been activated via the website <u>www.fitosanitario.regione.lombardia.it</u> and the citizen-science app FitoDetective.

As the pest is already present in 7 municipalities and has a high capacity for natural spread, the NPPO considered that it is not possible to eradicate it.

The pest status of *Xylotrechus chinensis in* Italy is officially declared as: **Present, only in** some parts of the Member State concerned.

Source: NPPO of Italy (2023-08).

Pictures Xylotrechus chinensis. <u>https://gd.eppo.int/taxon/XYLOCH/photos</u>

Additional key words: new record

Computer codes: XYLOCH, IT

2023/184 Update of the situation of *Popillia japonica* in Switzerland

In Switzerland, *Popillia japonica* (Coleoptera: Scarabaeidae - EPPO A2 List) was found for the first time in June 2017 in Ticino, close to the outbreak area in Italy (EPPO RS 2017/160, RS 2019/157, RS 2020/167). In this canton, containment measures are being applied (RS 2021/104), and a country wide trapping network has been established to detect the possible presence of the beetle in other areas of Switzerland. In the canton of Ticino, the infested area has increased by about 10 km since 2021. Official phytosanitary measures include mass trapping, insecticide treatments, restrictions on the movement of soil (e.g. from construction sites), restrictions on the movement of rooted plants with soil, and of cut greenery, raising public awareness, intensive monitoring in the buffer zone.

As a result of the monitoring conducted in July and August 2023, two new outbreaks have been detected and official measures are being applied in the demarcated areas:

- in the canton of Valais, close to the Italian border;
- in Kloten, in the canton of Zürich close to the airport of Zürich. The population is considered very small and is concentrated in a residential area. This is the first report north of the Alps.

In addition, adult specimens were caught in pheromone traps in 3 cantons:

- One female in canton Graubünden (Eastern Switzerland).
- One male in canton Solothurn (Northern Switzerland, 2.3 km from a trap where one beetle had been caught in 2022).
- Two single beetles in Nordwestschweiz region (1.1 km from a trap where one beetle had been caught in 2021).

In all 3 cases, surveillance will be intensified in the areas concerned. It is assumed that these isolated beetles were transported there as hitch-hikers from the existing outbreaks.

The pest status of *Popillia japonica* in Switzerland is officially declared as: **Present, only in** some parts of the country, under containment in case eradication is impossible.

Source: NPPO of Switzerland (2023-08).

Anonymous (2023) Décision de portée générale sur les mesures d'urgence visant à prévenir la propagation de *Popillia japonica* Newman dans le canton du Tessin <u>https://www.fedlex.admin.ch/eli/fga/2023/220/fr</u>

Pictures Popillia japonica. <u>https://gd.eppo.int/taxon/POPIJA/photos</u>

Additional key words: detailed record

Computer codes: POPIJA, CH

2023/185 Update of the situation of Spodoptera frugiperda in Cyprus

In Cyprus the fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae - EPPO A2 List) was first caught in a light trap in January 2023 in Pissouri Village (Limassol district) (EPPO RS 2023/034). Official surveys were conducted and the NPPO of Cyprus reported that a larva has been found in a maize (*Zea mays*) crop in Larnaca district in June 2023, and multiple larvae in maize crops for animal feed in Nicosia district in July 2023. An infested area has been demarcated, as well as a buffer zone. Official measures are taken to eradicate the outbreaks.

The pest status of *Spodoptera frugiperda* in Cyprus is officially declared as: **Present**, at low prevalence, only in some parts of the Member State concerned, under eradication.

Source: NPPO of Cyprus (2023-08).

Pictures Spodoptera frugiperda. <u>https://gd.eppo.int/taxon/LAPHFR/photos</u>

Additional key words: new record

Computer codes: LAPHFR, CY

2023/186 First official report of *Meloidogyne chitwoodi* in Madeira (Portugal)

The NPPO of Portugal recently informed the EPPO Secretariat of the first official report of the root knot nematode *Meloidogyne chitwoodi* (EPPO A2 List) on its territory.

Within the framework of the official survey programme for *Meloidogyne* species implemented since 2019, the presence of *M. chitwoodi* was suspected in February 2023 and confirmed after root sampling in June 2023 in the municipality of Calheta on Madeira island. This is the first official confirmation of the presence of *M. chitwoodi* in Portugal. Records about the presence of the pest in Madeira island had been published but were never officially confirmed. The current detection occurred in a small plot (2000 m²) of ware potato (*Solanum tuberosum*). In the infested plot, a 3-year eradication program has been implemented: it includes black fallow in the first year and cultivation of non-host plants (to be harvested only at above ground parts) in the following two years, as well as a requirement to clean and disinfect the machinery and equipment used in the plot to prevent spread of the pest with soil residues. The specific survey in adjacent fields will be intensified and the infested plot will be sampled every year.

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

Source: NPPO of Portugal (2023-08).

Borges PAV, Abreu C, Aguiar AMF *et al.* (eds) (2008) A list of the terrestrial fungi, flora and fauna of Madeira and Selvagens archipelagos. Direccao Regional do Ambiente da Madeira, Angra do Heroismo, Madeira, Portugal, 440 pp. <u>http://www.azoresbioportal.angra.uac.pt/files/publicacoes_Listagem%20dMadeira%</u> 20e%20Selvagens.pdf

Pictures Meloidogyne chitwoodi. <u>https://gd.eppo.int/taxon/MELGCH/photos</u>

Additional key words: new record

Computer codes: MELGCH, PT

2023/187 Finding of Ralstonia pseudosolanacearum in Switzerland

The NPPO of Switzerland received a notification from an EU Member State that ginger plants (*Zingiber officinale*) that were probably infected with *Ralstonia pseudosolanacearum* ((EPPO A2 List) had been imported into Switzerland in March 2023. Trace forward activities showed that the ginger plants had been planted in a foil tunnel (400 m²) in the canton of Thurgau and showed signs of wilting. They were sampled and tested positive for *R. pseudosolanacearum*. Eradication measures have been taken and include the destruction of the plants, the disinfection and quarantine of the foil tunnel, as well as a cultivation break until April 2024, and the prohibition to grow host plants for at least 3 years. Surveys in the surroundings are planned.

Following this detection, further companies with the same supplier were sampled. As a result, at the end of August 2023, *R. pseudosolanacearum* has been detected in ginger plants in seven cantons (Bern, Luzern, Schwyz, St. Gallen, Thurgau, Zug, Zurich). Official measures have been taken. Further sampling and intensive monitoring of these areas are planned.

The pest status of *Ralstonia pseudosolanacearum in* Switzerland is officially declared as: **Present**, in specific parts of the country, where host crop(s) are grown, under eradication.

Source: NPPO of Switzerland (2023-08).

Pictures Ralstonia pseudosolanacearum. <u>https://gd.eppo.int/taxon/RALSPS/photos</u>

Additional key words: new record

Computer codes: RALSSO, RALSPS, CH

2023/188 First report of High Plains wheat mosaic virus (emaravirus tritici) in Iran

High Plains wheat mosaic virus (HPWMoV, now called emaravirus tritici - formerly EPPO Alert List) is reported for the first time from Iran. In 2021 and 2022, leaf samples were collected from different Poaceae plants showing chlorotic leaf streak symptoms in the Isfahan and Chaharmahal-o-Bakhtiari provinces (Central Iran). Molecular tests revealed the presence of HPWMoV in single or mixed infections with wheat streak mosaic virus (*Tritimovirus*, WSMV) in wheat (*Triticum aestivum*), barley (*Hordeum vulgare*), maize (*Zea mays*), oat (*Avena sativa*), millet (*Panicum miliaceum*) and Johnsongrass (*Sorghum halepense*). This is the first time that HPWMoV is reported from Iran, and from Asia.

Additional key words: new record

Computer codes: WHPV00, IR

EPPO note: HPWMoV was initially found in the USA on wheat and maize in the 1990s (EPPO RS 1999/134). It is transmitted by the mite *Aceria tosichella*. Seed transmission has been observed at a low rate in sweet maize (*Zea mays* subsp. *saccharata* - EPPO RS 2002/163). The virus was then reported from Argentina and Australia, and in 2018, it was reported for the first time in the EPPO region, in Ukraine (RS 2020/128).

Source: Nourbakhsh F, Massah A, Soorni A, Talaee L (2023) First report of High Plains wheat mosaic virus in Iran. *New Disease Reports* **47**, e12188. <u>https://doi.org/10.1002/ndr2.12188</u>

2023/189 Molecular studies confirmed the occurrence of Wisteria vein mosaic virus in Italy

Wisteria vein mosaic virus (*Potyvirus* - WVMV) is the causal agent of the Wisteria mosaic disease which can severely affect the following *Wisteria* species (Fabaceae): *Wisteria brachybotrys, W. floribunda, W. sinensis, W. venusta.* Although the disease was first observed in the USA in the 1940s, its viral etiology was elucidated only in the 1970s by studies conducted in the Netherlands. WVMV is thought to originate from Asia and has been reported in other continents, and in particular in several European countries (see below). WVMV causes mild mosaic, mottling, chlorotic spots, necrotic flecks, and distortion or twisting of the leaves, as well as reduced flowering, leading to a loss of the ornamental value of the plants. Severely affected plants are unmarketable. WVMV is primarily spread through vegetative propagation of infected plant material but can also be transmitted (non-persistently) by aphids (*Aphis craccivora* and *Myzus persicae*), as well as by grafting and mechanical inoculation to a range of indicators (e.g. *Chenopodium giganteum (=C. amaranticolor), Nicotiana clevelandii*).

In Italy, the presence of the virus was first detected by serology in Piemonte (Northern Italy) in the 1970s and recent molecular studies confirmed its occurrence on a *W. sinensis* plant showing severe symptoms in a garden in Puglia (Southern Italy). The authors consider that WVMV could present a serious threat to the nursery market, as wisterias are popular perennial plants that are widely planted for ornamental purposes in Europe. They consider that further efforts to monitor WVMV in wholesale and retail nurseries should be made to prevent the spread of this virus with infected plant material.

A tentative geographical distribution of WVMV has been included in the EPPO Global Database: <u>https://gd.eppo.int/taxon/WVMV00/distribution</u>

EPPO region: Czech Republic, Italy, Netherlands, Poland, United Kingdom (England). **Asia:** China (Beijing, Jiangsu, Jiangxi, Zhejiang), Iran. **North America:** USA (Maryland, Michigan, Mississippi, New York, Washington). **Oceania:** Australia (New South Wales), New Zealand.

Source: D'Attoma G, Minafra A, Saldarelli P, Morelli M (2023) Molecular evidence for the presence of Wisteria vein mosaic virus in Italy: Shedding light on genetic diversity and evolutionary dynamics of virus geographic populations. *Agriculture* **13**, 1090. https://doi.org/10.3390/agriculture13051090

Additional key words: detailed record

Computer codes: WVMV00, IT

2023/190 Salvinia molesta: first report for Türkiye

Salvinia molesta (Salviniaceae: EPPO A2 List) is an aquatic floating plant species native to South America. It can form dense mats that reduce access to the water for recreation, interfere with various engineering structures such as weirs, block drains and cause flooding. It can have negative impacts on biodiversity by preventing photosynthesis in the water below the mat which can impact aquatic invertebrates and plants. Cultural ecosystem services are negatively affected by the mat forming habit, reducing opportunities for swimming, fishing and boating. During field studies conducted in 2017 in Muğla-Köyceğiz/Toparlar (Western Türkiye), S. molesta was identified in water channels and drainage channels opened for field irrigation. It is likely that it has spread into the drainage channels from ornamental pools in the Palmiye Merkezi Botanical Garden. In this area, it is estimated that S. molesta occupies 1.38 hectares comprised of an estimated 550 000 individual plants. This population should be managed and controlled to avoid any spread to other locations and regions of Türkiye.

Source: Şenol SG, Bozyel D, Pelit NB (2023) A new record of an invasive aquatic fern from Türkiye; *Salvinia molesta. EPPO Bulletin* **53**, 411-415.

Pictures: Salvinia molesta. <u>https://gd.eppo.int/taxon/SAVMO/photos</u>

Additional key words: invasive alien plants, new record

Computer codes: SAVMO, TR

2023/191 Glyceria canadensis: first report for Switzerland

In 2020, an unknown species of *Glyceria* (Poaceae) was recorded very close to the Wachseldornmoos nature reserve which is a protected raised bog area in the central west of Switzerland. In Europe, there are nine native species of *Glyceria* and one widely distributed hybrid. Only four species are indigenous to Switzerland (G. declinata, G. fluitans, G. maxima and G. notata. The unknown species was subsequently identified as G. canadensis, native to North America, which has been previously recorded from Belgium, Finland, Germany and Great Britian. After a comprehensive survey, two populations of G. canadensis were found in the municipality of Wachseldorn, one inside the nature reserve and one just outside in a drainage ditch. It is estimated that the occurrence of G. canadensis covers a total area of 350 m^2 . The population inside the nature reserve consists of approximately 350 plantswhereas the population in the drainage ditch consists of 800 plants. The pathway for the introduction of the Swiss population is unclear. Previous introductions into the EPPO region may be via a contaminant of used machinery (e.g. military equipment from North America), and as a contaminant of seed. G. canadensis has the potential to compete with vulnerable native plant species and degrade natural habitats. The population in the nature reserve is being controlled.

Source: Verloove F, Bischoff W (2022) First record of a naturalized population of *Glyceria* canadensis (Poaceae), another potentially invasive New World grass species, in Switzerland. *Wulfenia* **29**, 28-34.

Additional key words: invasive alien plants, new record

Computer codes: GLYCA, CH

2023/192 Use of satellite images to monitor populations of invasive alien plants

Pontederia crassipes (Pontederiaceae: EPPO A2 List) and Hydrocotyle ranunculoides (Araliaceae: EPPO A2 List) are both listed as species of (European) Union concern (Regulation 1143/2014) and should be controlled and eradicated where they occur in European member states. Remote sensing can be utilised to record land cover of invasive alien plants and monitor spatial and temporal changes in invasive plant populations. Satellite imagery has become increasingly available for use in ecological surveys and software is available to interpret and compare imagery. In Italy, the eradication of P. crassipes and H. ranunculoides may be achievable as there are only a limited number of populations of both species. However, to achieve this, precise data on the occurrence of the populations, often in a large area is required. A study was conducted in Sardinia, in the Province of Oristano where both species occur in waterways. Imagery was used from the Copernicus Sentinel-2 satellites collected monthly between 2018 and 2021 to identify populations of the two species and the health and density of the populations were inferred by measuring the normalized difference vegetation index. Remote sensing proved useful in detecting populations of the invasive plant species and seasonal differences in the sizes of populations, and locations. Constraints included the presence of clouds in the downloaded images as in some images, the areas of concern could be totally hidden by clouds.

Source: Ghiani L, Lozano V, Brundu G, Mazzette A, Sassu A, Gambella F (2023) Monitoring *Pontederia crassipes* Mart. and *Hydrocotyle ranunculoides* L.f. invasion on a Mediterranean island using multi-temporal satellite images. *Management of Biological Invasions* 14(2), 221-238.

Additional key words: invasive alien plants

Computer codes: EICCR, HYDRA, IT

2023/193 New surveys of non-native taxa in the island of Madeira, Portugal

The flora of the archipelagos of Madeira and Selvagens comprises 1 268 taxa of vascular plants species or subspecies. Of these approximately 442 taxa are introduced. Surveys of the flora in the Island of Madeira (Portugal) between September 2021 and May 2022 have identified 32 non-native plant taxa with many reported on the island for the first time.

Table 1. Thirty-two non-native plant taxa from Madeira.

Species	Family	Origin	Status for Madeira
Aptenia × vascosilvae	Aizoaceae	-	First record
Calystegia sylvatica	Convolvulaceae	Europe	First record
Cardamine occulta	Brassicaceae	Asia	First record
Casuarina cunninghamiana	Casuarinaceae	Australia	First record
Casuarina glauca	Casuarinaceae	Australia	First record
Convolvulus farinosus	Convolvulaceae	East & South Africa	First record
Cotoneaster pannosus	Rosaceae	China	First record
Diplotaxis tenuifolia	Brassicaceae	Europe, West Asia, North Africa	-
Epilobium ciliatum	Onagraceae	Widespread	First record
Erigeron floribundus	Asteraceae	Americas	First record
Euphorbia hypericifolia	Euphorbiaceae	Americas	-
Euphorbia maculata	Euphorbiaceae	North America	First record

Species	Family	Origin	Status for Madeira
Euphorbia serpens	Euphorbiaceae	Americas	First record
Hedychium coronarium	Zingiberaceae	Asia	First record
Kalanchoe × houghtonii	Crassulaceae	-	First record
Lemna minuta	Araceae	Americas	First record
Lepidium oblongum	Brassicaceae	North and Central America	First record
Malephora purpurocrocea	Aizoaceae	South Africa	First record
Metrosideros excelsa	Myrtaceae	New Zealand	First record
Oenothera glazioviana	Onagraceae	-	First record
Oxalis dillenii	Oxalidaceae	North America	First record
Phytolacca icosandra	Phytolaccaceae	Americas	First record
Pistia stratiotes*	Araceae	South America	First record
Rumex palustris	Polygonaceae	Europe	First record
Schinus terebinthifolia	Anacardiaceae	South America	First record
Sisyrinchium micranthum	Iridaceae	North America	-
Soliva sessilis	Asteraceae	South America	First record
Sphagneticola trilobata	Asteraceae	Americas	First record
Tithonia diversifolia	Asteraceae	North and Central America	First record
Verbena incompta	Verbenaceae	South America	First record
Verbena litoralis	Verbenaceae	South America	First record
Youngia japonica	Asteraceae	Asia	-

* EPPO A2 List of pests recommended for regulation as quarantine pests.

Source: Verloove F, Goncalves Silva JJ (2022) New records of alien vascular plants from the island of Madeira (Portugal). *Boletim do Museu de História Natural do Funchal*. Art. 365, 27-54.

Additional key words: invasive alien plants, new record

Computer codes: CAROC, CSUCU, CSUGL, CONFA, CTTPA, DIPTE, EPICT, ERIFL, EPHHY, EPHMA, EPHSN, HEYCO, LEMMT, LEPOB, MTDEX, OEOER, OXADI, PHTIC, PIIST, RUMPL, SCITE, SISMI, SOVSE, WEDTR, TITDI, VEBLI, UOUJA, PT