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2024/234 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**

Ips typographus (Coleoptera: Curculionidae: Scolytinae - EU Annexes) is first reported from Armenia (Karagyan *et al.*, 2024). **Present.**

Tuta absoluta (Lepidoptera: Gelechiidae – EPPO A2 List) is first reported from South Korea. It was detected in April 2024 in Jeonbuk Province. Further surveys showed that it was also present in Gyeonggi Province, Gangwon Province, Chungcheong Province, and Jeonnam Province where it caused damage to commercial tomatoes, particularly in organic farms (Lee *et al.*, 2024). **Present**.

- **Detailed records**

In Mexico, *Anastrepha ludens* (Diptera: Tephritidae, EPPO A1 List) is reported as a pest in commercial apple orchards (*Malus domestica*) in Nuevo León and Hidalgo (Aluja *et al.*, 2024).

In October 2024, *Leptoglossus occidentalis* (Heteroptera: Coreidae) was observed for the first time in the Azores (PT). An adult specimen was found near Igreja do Capelo in the western part of Faial Island (van der Heyden, 2024).

In China, *Psacothea hilaris* (Coleoptera: Cerambycidae – formerly EPPO Alert List) was reported from 'Southern China'. A recent article reports that it is present in the following Chinese provinces: Anhui, Chongqing, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan, Zhejiang (Zhang *et al.*, 2024).

Xylella fastidiosa subsp. *sandyi* is first recorded from Hawaii (USA). In December 2022, it was detected in oleander (*Nerium oleander*) plants showing stunting and wilt in Kula (Lutgen *et al.*, 2024).

- **Eradication**

In Croatia *Thrips setosus* (Thysanoptera: Thripidae – formerly EPPO Alert List) was found in one *Hydrangea* potted plant in 2017 in a garden centre located in the municipality of Metkovic (EPPO RS 2018/094). This outbreak was eradicated.

- **Host plants**

In the EPPO RS 2024/227 it was noted that tobacco ringspot virus (*Nepovirus nicotianae,* TRSV - EPPO A2 List) had been detected in a number of new host plants. The list provided in this note was incorrect and should be as follows: *Coleus* sp.*, Pelargonium zonale, Salvia rosmarinus.*

- **New pests and taxonomy**

During field surveys conducted since 2021 in Sicilia (Italy), infestations of wood-boring insects associated with symptoms of stem blight and internal necrosis have been observed in bay laurel (*Laurus nobilis*) trees in urban environments (parks, gardens, city streets), as well as in nurseries. Investigations revealed the presence of the ambrosia beetle, *Xylosandrus compactus* (Coleoptera: Curculionidae: Scolytinae – formerly EPPO Alert List), and of a new fungal species, *Thyridium lauri* sp. nov. Inoculation tests fulfilling Koch's postulates confirmed that *T. lauri* is pathogenic to *L. nobilis*. Further studies are needed to understand the interactions between this new fungal species and *X. compactus* (Leonardi *et al.*, 2024).

Sources: Aluja M, Acosta E, Enciso-Ortiz E, Ortega-Casas R, Altúzar-Molina A, Camacho-Vázquez C, Monribot-Villanueva JL, Guerrero-Analco JA, Pascacio-Villafán C, Guillén L (2024) Expansion to new habitats and a new commercial host (*Malus domestica*) by *Anastrepha ludens* (Tephritidae) likely influenced by global warming. *Scientific Reports* **14**(1), 27729. https://doi.org/10.1038/s41598-024-78727-2

Karagyan G, Kalashian M, Ghrejyan T, Mazmanyan M, Petrov A (2024) Annotated checklist of Armenian Platypodinae and Scolytinae (Coleoptera: Curculionidae). *Zootaxa* **5514**(1), 41-65.

Leonardi GR, Aiello D, Di Pietro C, Gugliuzzo A, Tropea Garzia G, Polizzi G, Voglmayr H (2024) *Thyridium lauri* sp. nov. (Thyridiaceae, Thyridiales): a new pathogenic fungal species of bay laurel from Italy. *MycoKeys* **110**, 211–236. https://doi.org/10.3897/mycokeys.110.129228

Lee MH, Jeong D, Lee GS, Paik C (2024) First report of *Phthorimaea absoluta* (Lepidoptera: Gelechiidae) in Korea. *Journal of Integrated Pest Management* **15**(1), 36. https://doi.org/10.1093/jipm/pmae028

Lutgen H, Vowell T, Marquez J, Ho J, Matsunaga J, Melzer M (2024) First report of *Xylella fastidiosa* subsp. *sandyi* infecting oleander (*Nerium oleander*) in Hawaii, USA. *New Disease Reports* **50**(1). https://doi.org/10.1002/ndr2.12308

NPPO of Croatia (2024-10).

van der Heyden T (2024) First record of *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) from the Azores (Portugal). *Arquivos Entomolóxicos* **30**, 249-250.

Zhang L, Wang P, Xie G, Wang W (2024) Using ecological niches to determine potential habitat suitability for *Psacothea hilaris* (Coleoptera: Cerambycidae) and its natural enemies in China under future climates. *Journal of Economic Entomology*, toae203.

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

Computer codes: ANSTLU, GNORAB, IPSXTY, LEPLOC, PSACHI, THRISE, TRSV00, TYRDLA, XYLEFA, XYLEFS, AM, CN, HR, KR, MX, PT, US

2024/235 Documenting new EU quarantine pests in the EPPO Global Database

Since 2021, a large number of organisms have been added to the EU list of regulated pests (EPPO RS 2022/030). Many of them were not previously documented in the EPPO Global Database, and the EPPO Secretariat has prepared distribution and host plant lists for these species. Distribution and host plant lists are now available for the following pests, all are listed in the EU Annex II A (A1 Quarantine Pests):

Pest name	Type	Family	Link to GD
Buckland valley grapevine yellows phytoplasma	Bacteria	Acholeplasmataceae	https://gd.eppo.int/taxon/PHYP77
'*Candidatus* Phytoplasma hispanicum'	Bacteria	Acholeplasmataceae	https://gd.eppo.int/taxon/PHYP07

Pest name	Type	Family	Link to GD
'*Candidatus* Phytoplasma ziziphi''	Bacteria	Acholeplasmataceae	https://gd.eppo.int/taxon/PHYPZI
Clover yellow edge phytoplasma	Bacteria	Acholeplasmataceae	https://gd.eppo.int/taxon/PHYP19
Botryosphaeria kuwatsukai	Fungi	Botryosphaeriaceae	https://gd.eppo.int/taxon/PHYOPI
Neocosmospora ambrosia	Fungi	Nectriaceae	https://gd.eppo.int/taxon/FUSAAM
Lepyronia quadrangularis	Insecta	Aphrophoridae	https://gd.eppo.int/taxon/LEPOQU
Clastoptera achatina	Insecta	Cercopidae	https://gd.eppo.int/taxon/CLASAC
Clastoptera brunnea	Insecta	Cercopidae	https://gd.eppo.int/taxon/CLASBR
Poophilus costalis	Insecta	Cercopidae	https://gd.eppo.int/taxon/POOPCO
Acrogonia citrina	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ACRGCI
Acrogonia virescens	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ACRGVI
Bucephalogonia xanthophis	Insecta	Cicadellidae	https://gd.eppo.int/taxon/BUCLXA
Cuerna costalis	Insecta	Cicadellidae	https://gd.eppo.int/taxon/CUERCO
Cuerna occidentalis	Insecta	Cicadellidae	https://gd.eppo.int/taxon/CUEROC
Dechacona missionum	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ONCMMI
Dilobopterus costalimai	Insecta	Cicadellidae	https://gd.eppo.int/taxon/DLBPCO
Ferrariana trivittata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/FRRATR
Fingeriana dubia	Insecta	Cicadellidae	https://gd.eppo.int/taxon/FINGDU
Friscanus friscanus	Insecta	Cicadellidae	https://gd.eppo.int/taxon/FRISFR
Helochara delta	Insecta	Cicadellidae	https://gd.eppo.int/taxon/HELHDE
Homalodisca ignorata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/HOMLIG
Homalodisca insolita	Insecta	Cicadellidae	https://gd.eppo.int/taxon/HOMLIN
Macugonalia cavifrons	Insecta	Cicadellidae	https://gd.eppo.int/taxon/MAGOCA
Macugonalia leucomelas	Insecta	Cicadellidae	https://gd.eppo.int/taxon/MAGOLE
Molomea consolida	Insecta	Cicadellidae	https://gd.eppo.int/taxon/MOLMCO
Neokolla hieroglyphica	Insecta	Cicadellidae	https://gd.eppo.int/taxon/GRCPHI
Neokolla severini	Insecta	Cicadellidae	https://gd.eppo.int/taxon/NKOLSE
Oncometopia facialis	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ONCMFA
Oncometopia nigricans	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ONCMNI
Oncometopia orbona	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ONCMUN
Oragua discoidula	Insecta	Cicadellidae	https://gd.eppo.int/taxon/ORAGDI
Pagaronia confusa	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PGARCO
Pagaronia furcata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PGARFU
Pagaronia tredecimpunctata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PGARTR
Pagaronia triunata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PGARTN
Parathona gratiosa	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PTHOGR
Plesiommata corniculata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PLSOCO
Plesiommata mollicella	Insecta	Cicadellidae	https://gd.eppo.int/taxon/PLSOMO
Sibovia sagata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/SIBOSA
Sonesimia grossa	Insecta	Cicadellidae	https://gd.eppo.int/taxon/SONEGR
Tettigella ferruginea	Insecta	Cicadellidae	https://gd.eppo.int/taxon/TETTFE
Tapajosa rubromarginata	Insecta	Cicadellidae	https://gd.eppo.int/taxon/TAPARU
Cyphonia clavigera	Insecta	Membracidae	https://gd.eppo.int/taxon/CYPACG
Strawberry necrotic shock virus	Virus	Bromoviridae	https://gd.eppo.int/taxon/SNSV00

Pest name	Type	Family	Link to GD
Strawberry chlorotic fleck-associated virus (Closterovirus fragariae)	Virus	Closteroviridae	https://gd.eppo.int/taxon/SCFAV0
Strawberry leaf curl virus	Virus	Geminiviridae	https://gd.eppo.int/taxon/STWLCV
Tomato severe rugose virus (Begomovirus solanumseverugosi)	Virus	Geminiviridae	https://gd.eppo.int/taxon/TOSRV0
Squash vein yellowing virus (Ipomovirus cucurbitavenaflavi)	Virus	Potyviridae	https://gd.eppo.int/taxon/SQVYVX

Source: EPPO Secretariat (2024-11).

Additional key words: geographical distribution, host plants

Computer codes: ACRGCI, ACRGVI, BUCLXA, CLASAC, CLASBR, CUERCO, CUEROC, CYPACG, DLBPCO, FINGDU, FRISFR, FRRATR, FUSAAM, GRCPHI, HELHDE, HOMLIG, HOMLIN, LEPOQU, MAGOCA, MAGOLE, MOLMCO, NKOLSE, ONCMFA, ONCMMI, ONCMNI, ONCMUN, ORAGDI, PGARCO, PGARFU, PGARTN, PGARTR, PHYOPI, PHYP07, PHYP19, PHYP77, PHYPZI, PLSOCO, PLSOMO, POOPCO, PTHOGR, SCFAV0, SIBOSA, SNSV00, SONEGR, SQVYVX, STWLCV, TAPARU, TETTFE, TOSRV0

2024/236 New IPPC document: Climate-change impacts on plant pests: a technical resource to support national and regional plant protection organizations

As climate change is having an impact on ecosystems and agricultural production systems throughout the world, the IPPC Secretariat has recently published a document 'Climate-change impacts on plant pests: a technical resource to support national and regional plant protection organizations'.

The aim of this document is to provide technical and operational advice to NPPOs and RPPOs on how to effectively assess and manage the pest risk that is a consequence of climate change. It has been prepared by experts of the Commission on Phytosanitary Measures (CPM) Focus Group on Climate Change and Phytosanitary Issues, with oversight from the CPM Bureau, and it has also been opened to country consultation. The document includes the following chapters:

- Climate-change impacts on plants and plant pests
- Assessment of climate-change impacts on plant health
- Management of climate-change impacts on plant health
- Case studies

This technical resource is freely accessible from the FAO website: https://doi.org/10.4060/cd1615en

Source: EPPO Secretariat (2024-11).

Additional key words: publication, IPPC, climate change, PRA

2024/237 First report of *Scirtothrips dorsalis* in Portugal

The NPPO of Portugal recently informed the EPPO Secretariat of the first finding of *Scirtothrips dorsalis* (Thysanoptera: Thripidae – EPPO A2 List) on its territory.

As a result of the official survey program carried out in 2024, the presence of *S. dorsalis* was detected, and subsequently confirmed by laboratory analysis, in 6 locations (private gardens and public sites) throughout the Algarve region (municipalities of Alcoutim e Pereiro, Budens Guia, São Gonçalo de Lago, Vila Real de Santo António, and Vila do Bispo e Raposeira) in September 2024. The host species found to be infested were *Myoporum* sp.* and *Citrus x limon*.

Demarcated areas related to these findings have been established and official phytosanitary measures are taken in the demarcated areas in accordance with Regulation (EU) 2016/2031. They include phytosanitary treatments, destruction of the infested plant parts, prohibition of movement of plant material (except fruit and seeds) out of the infested zone, as well as intensive monitoring in the buffer zones.

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

* New host plant.

Source: NPPO of Portugal (2024-10).

Pictures *Scirtothrips dorsalis*. https://gd.eppo.int/taxon/SCITDO/photos

Additional key words: new report **Computer codes:** SCITDO, PT

2024/238 First report of an *Epitrix* species on potato in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the possible presence on its territory of an *Epitrix* species (Coleoptera: Chrysomelidae) damaging potato tubers (*Solanum tuberosum*). In October 2024, a professional operator in Emilia-Romagna region found several potato tubers presenting signs of infestation by an *Epitrix* sp. in refrigerated storage. Official samples were taken and an investigation into the possible pathway of introduction is ongoing. Official measures according to EU regulation 2012/270/EU are implemented. Four *Epitrix* species damaging potato tubers are listed by EPPO: *Epitrix tuberis* and *E. subcrinita* on EPPO A1 List, and *E. cucumeris* and *E. papa* on EPPO A2 List.

The pest status of *Epitrix* sp. in Italy is officially declared as: **Transient, actionable, under eradication.**

Source: NPPO of Italy (2024-10).

Commission Implementing Decision of 16 May 2012 as regards emergency measures to prevent the introduction into and the spread within the Union of *Epitrix cucumeris* (Harris), *Epitrix papa* sp. n., *Epitrix subcrinita* (Lec.) and *Epitrix tuberis* (Gentner) (2012/270/EU). http://data.europa.eu/eli/dec_impl/2012/270/2018-01-05

Pictures *Epitrix cucumeris*. https://gd.eppo.int/taxon/EPIXCU/photos

Epitrix papa. https://gd.eppo.int/taxon/EPIXPP/photos

Additional key words: new record **Computer codes:** 1EPIXG, EPIXSP, IT

2024/239 First report of *Hemadas nubilipennis* in the Netherlands

The NPPO of the Netherlands recently informed the EPPO Secretariat of the first record of *Hemadas nubilipennis* (Hymenoptera: Pteromalidae - blueberry stem gall wasp*) on its territory. Its presence was officially confirmed in September 2024 in *Vaccinium corymbosum* grown for fruit production. However, based on the observation of old galls and earlier unofficial records made in 2019, it is presumed that *H. nubilipennis* has been present in the Netherlands for a longer period. In a Pest Categorization conducted for the United Kingdom by a visiting scientist in Canada, it was concluded that an introduction of the pest in the United Kingdom would not cause significant damage because of the relatively short production cycle of blueberries and the use of varieties which are not highly susceptible in the United Kingdom (CFIA, 2023). The Dutch NPPO noted that this would also apply to its particular case and added that native wild *Vaccinium* species in the Netherlands are not known to be host plants. As a consequence, no measures have been taken against *H. nubilipennis*.

The pest status of *Hemadas nubilipennis* in the Netherlands is officially declared as: **Present**.

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* **EPPO note**: *Hemadas nubilipennis* occurs in Eastern Canada and the USA where it is an occasional pest of blueberries (*Vaccinium angustifolium, V. corymbosum* and *V. myrtilloides,*). Female wasps lay eggs in young shoots, resulting in the formation of reniform galls. The development of these galls on young shoots can reduce berry production (by approximately 3%). In addition, galls can contaminate the harvested blueberries.

Source: NPPO of the Netherlands (2024-11).

CFIA (2023) Pest categorization *Hemadas nubilipennis* (Ashmead) (Hymenoptera: Pteromalidae) Blueberry stem gall wasp. Canadian Food Inspection Agency. https://pra.eppo.int/pra/2a5f84bc-6796-49a1-b38a-f0401c005a81

Additional key words: new record **Computer codes:** HMDANU, NL

2024/240 *Oligonychus perditus* does not occur in Serbia

The mite *Oligonychus perditus* (Acari: Tetranychidae, EPPO A1 List) is native to China, Japan, the Korean Peninsula, and Taiwan. It has been intercepted in trade but never recorded as established outside of its native range. Merdjo *et al*. (2024) reported in a recent article that *O. perditus* had been first found during surveys conducted in 2020-2023 in Serbia in 32 locations: in 16 locations on plants of the genus *Juniperus* (Cupressaceae), and in 16 locations on plants of the genera *Prunus, Malus* and *Cydonia* (Rosaceae).

O. perditus is an A1 quarantine pest for Serbia. When the NPPO of Serbia became aware of this finding, they conducted a targeted survey in August and September 2024 in collaboration

with the authors, and took samples in the 32 sites listed in the article. The identification of collected mites was performed by the laboratory of the Department of Entomology and Agricultural Zoology of the University of Belgrade. As the NPPO noted that some coniferous plants had been misidentified, the identification of host plants was made by the Institute of Forestry in Belgrade. As a result of the survey, *O. perditus* was not identified in any of the samples taken. On coniferous plants, the only *Oligonychus* species found was *O. ununguis* (a cosmopolitan closely related species) as well as two non-indigenous species, *Eotetranychus libocedri* and *Eotetranychus thujae*. No significant damage was recorded on coniferous plants. On fruit trees (*Prunus*, *Malus* and *Cydonia)*, no *Oligonychus* species were recorded. The NPPO concluded that *O. perditus* is not present in Serbia.

The pest status of *Oligonychus perditus* in Serbia is officially declared as: **Absent, pest records invalid**.

Source: Medjo I, Marić I, Marčić D, Ueckermann EA (2024) First distribution records of the quarantine mite pest *Oligonychus perditus* (Acari: Tetranychidae) in Europe. *International Journal of Acarology* **50**(6), 498–502.

NPPO of Serbia (2024-10).

Pictures *Oligonychus perditus*. https://gd.eppo.int/taxon/OLIGPD/photos

Additional key words: denied record, absence **Computer codes:** OLIGPD, PARTUN, RS

2024/241 Update on the situation of *Xylotrechus chinensis* in Spain

Xylotrechus chinensis (Coleoptera: Cerambycidae, EPPO Alert List) was first reported in Spain in Catalonia in 2013 and in Comunidad Valenciana in 2018 (EPPO RS 2018/155, RS 2022/001).

Researchers conducted a study to assess the spread of the pest in Catalonia between 2020 and 2023, and identify potential control methods. The presence of the beetle was known from 12 municipalities in 2020. As of December 2023 *X. chinensis* had further spread in Catalonia to a total of 65 municipalities, covering 1134 km^2. The municipalities are located in 2 provinces (56 in Barcelona province and 9 in Tarragona province).

It is also noted that the beetles can emerge between mid-May and the end of September (whereas it was previously recorded to emerge from mid-June to mid-August). This may be linked to increased temperatures associated with climate change. It should be taken into account when applying insecticide treatment to infested trees.

Source: Sarto i Monteys V, Savin I, Tutusaus GT, Balsach MB (2024) New evidence on the spread in Catalonia of the invasive longhorn beetle, *Xylotrechus chinensis*, and the efficacy of abamectin control. *Scientific Reports* **14**(1), 26754. https://doi.org/10.1038/s41598-024-78265-x

Pictures *Xylotrechus chinensis*. https://gd.eppo.int/taxon/XYLOCH/photos

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

2024/242 Update on the situation of *Xylotrechus chinensis* in Greece

Xylotrechus chinensis (Coleoptera: Cerambycidae, EPPO Alert List) was first reported in Greece in Crete in 2017 (EPPO RS 2018/156), and in the mainland (Athens) in 2020 (RS 2020/091). The pest is rapidly spreading in the Peloponnese peninsula, resulting in extensive damage to and mortality of mulberry (*Morus* spp.) trees in Corinthia (Nemea, Daphni and Vasiliko). During a study comparing trapping methods, Kavallieratos *et al*. noted that the adults fly from end of April to mid-October.

Source: Gastouniotis G, Kakiopoulos G (2024) New records and distributional data of some Coleoptera and Hymenoptera from Greece. *Natura Croatica* **33**(1), 123-138.
Kavallieratos NG, Boukouvala MC, Skourti A, Antonatos S, Petrakis PV, Papachristos DP, Papadoulis GT (2023) Comparison of three attractants for the effective capture of *Xylotrechus chinensis* adults in multi-funnel traps. *Insects* **14**(8), 676. https://doi.org/10.3390/insects14080676

Pictures *Xylotrechus chinensis*. https://gd.eppo.int/taxon/XYLOCH/photos

Additional key words: detailed record **Computer codes:** XYLOCH, GR

2024/243 First reports of *Dryocosmus kuriphilus*, *Oligonychus perseae* and *Phoracantha recurva* in the Azores (PT)

As a result of ongoing inventory and monitoring efforts conducted in the Azores (Portugal), 13 arthropod species are reported for the first time in the Archipelago. Among these, the following insect species were first recorded in the Azores, and all were found on the Island of Terceira:

- *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae – EPPO A2 List) has been found on chestnut (*Castanea sativa*) trees in the localities of Terra-Chã and Biscoitos.
- *Oligonychus perseae* (Acari: Tetranychidae – formerly EPPO Alert List) has been found in avocado orchards in the localities of Terra-Chã and São Pedro. It is noted that avocado orchards are scarce in the Azores and that the impacts of this new pest still need to be quantified.
- A single specimen of *Phoracantha recurva* (Coleoptera: Cerambycidae – formerly EPPO Alert List) has been found in the Campus of the University of Azores where several trees of *Eucalyptus globulus* are growing.

Source: Boieiro M, Varga-Szilay Z, Costa R, Crespo L, Leite A, Oliveira R, Pozsgai G, Rego C, Calado H, Teixeira M, Lopes DH, Soares A, Borges PAV (2024) New findings of terrestrial arthropods from the Azorean Islands. *Biodiversity Data Journal* **12**, e136391. https://doi.org/10.3897/BDJ.12.e136391

Pictures *Dryocosmus kuriphilus*. https://gd.eppo.int/taxon/DRYCKU/photos

Additional key words: detailed record **Computer codes:** DRYCKU, OLIGPA, PHOARE, PT

2024/244 Host plants of *Euwallacea fornicatus* in Australia

In Australia, an outbreak of *Euwallacea fornicatus* (Coleoptera: Curculionidae: Scolytinae – EPPO A2 List) was first found in 2021 in the Perth metropolitan area, Western Australia (EPPO RS 2022/001). The outbreak is still limited to this area and phytosanitary measures are in place to prevent any further spread. A list of more than 190 host plants of *E. fornicatus sensu stricto* has recently been published, indicating whether the pest is able to successfully reproduce on these hosts or not. Plant species were added to this list when the identity of the beetle and/or its symbiotic fungus was confirmed by DNA sequencing. Among the reproductive host tree species, the following ones were considered to be preferred hosts in Western Australia: *Acer negundo, Coprosma repens, Delonix regia, Erythrina x sykesii, Ficus macrophylla, Ficus rubiginosa, Morus alba, Morus nigra, Platanus x acerifolia, Robinia pseudoacacia*. The list of host plants of *E. fornicatus* has been updated in the EPPO Global Database: https://gd.eppo.int/taxon/EUWAWH/hosts

Source: Government of Western Australia. Department of Primary Industries and Regional Development. Polyphagous shot-hole borer (PSHB). Australian Host List (version 24.0, 2024-09-30). https://www.agric.wa.gov.au/sites/gateway/files/PSHB-WA-Host-List_2.pdf

Pictures *Euwallacea fornicatus s.l.* https://gd.eppo.int/taxon/XYLBFO/photos

Additional key words: host plants **Computer codes:** EUWAWH, AU

2024/245 Eradication of *Meloidogyne enterolobii* from the Netherlands

In the Netherlands, the root knot nematode *Meloidogyne enterolobii* (EPPO A2 List) was first detected in January 2023 on ornamental potted plants of *Ficus microcarpa* in the premises of one retail company (EPPO RS 2023/046).

Tracing back and trace forward activities allowed the further detection of the nematode in 12 places of production in total. *M. enterolobii* was detected on *F. microcarpa* plants in March 2023 in two additional companies importing plants from China. In April 2023 a specific survey targeted all similar growers in the Netherlands. *M. enterolobii* was detected again: twice on *F. microcarpa* and once on plants of *Zelkova*[1]. Subsequent inspections at these locations also detected the pest on plants of *Sageretia*[1] and *Syzygium*[1]. During the same period two more findings occurred: one on *Callistemon*[1] plants originating in another EU Member State and one on *F. microcarpa*. Further findings occurred during export inspections in October and November 2023, and early 2024 on *F. microcarpa*, as well as on *Syzygium* in August 2024.

All findings were linked to traded material from a third country and one EU Member State. Eradication measures were applied in each outbreak. More than 300 000 plants of infested lots were destroyed. For other lots of plants for planting which were connected to the same watering system at infested places of production, a quarantine period of at least 10 weeks was imposed. Those plants were released following meticulous checks of the root systems. The NPPO confirmed that eradication of the pest was achieved in October 2024.

[1] It may be noted that no *Zelkova* or *Sageretia* species were previously listed as hosts in EPPO Global Database, and only *Syzygium aromaticum* was listed in the genus *Syzygium*. No *Callistemon* species are recorded as hosts, but *Melaleuca citrina* (which is often marketed as 'callistemon') is.

The pest status of *Meloidogyne enterolobii* in the Netherlands is officially declared as: **Absent, pest eradicated.**

Source: NPPO of the Netherlands (2024-11).

Pictures *Meloidogyne enterolobii*. https://gd.eppo.int/taxon/MELGMY/photos

Additional key words: eradication, absence **Computer codes:** MELGMY, NL

2024/246 *Globodera pallida* found again in Slovenia

In Slovenia, *Globodera pallida* (EPPO A2 List) was first detected in 2012 (EPPO RS 2012/164) and eradicated (RS 2023/203).

During the official survey for potato cyst nematodes, two soil samples collected from two fields (0.45 ha in total) were found to be positive in October 2024. These two fields, where ware potatoes (*Solanum tuberosum*) had been cultivated in previous years, are located in the municipality of Ilirska Bistrica (region of Primorsko-notranjska). The demarcated areas (infested production sites) have been defined and appropriate measures will be applied in accordance with Regulation (EU) 2022/1192 and its last amendment Regulation (EU) 2024/2060.

The pest status of *Globodera pallida* in Slovenia is officially declared as: **Present, under eradication**.

Source: NPPO of Slovenia (2024-11).

Commission Implementing Regulation (EU) 2022/1192 of 11 July 2022 establishing measures to eradicate and prevent the spread of *Globodera pallida* (Stone) Behrens and *Globodera rostochiensis* (Wollenweber) Behrens (amended in 2024 Commission Implementing Regulation (EU) 2024/2060).
http://data.europa.eu/eli/reg_impl/2022/1192/2024-08-20

Pictures *Globodera pallida*. https://gd.eppo.int/taxon/HETDPA/photos

Additional key words: detailed record **Computer codes:** HETDPA, SI

2024/247 First report of *Xylella fastidiosa* in continental China

In China, walnut leaf scorch was first reported from *Juglans regia* in 2012 in Hotan (Xinjiang province). Symptoms include brown spots on the leaflets that further spread along the leaf margins, in a flame-like pattern. The scorched areas curl inward with a yellow halo. In severe cases, the leaves dry up and shrink, affecting the entire tree.

Xylella fastidiosa (EPPO A2 List) was detected by PCR in walnut (*Juglans regia)* leaf samples from three locations in Xinjiang. Koch's postulates were completed. The subspecies involved was identified as *X. fastidiosa* subsp. *multiplex*.

According to the EPPO Secretariat, this is the first confirmed record of *X. fastidiosa* in continental China. The authors note that *X. fastidiosa* had been found infecting grapes in Shaanxi (Chu, 2001) but the EPPO Secretariat could not access this publication and could not retrieve additional records of the bacterium in China. It can be noted that *X. fastidiosa* occurs in Taiwan.

Source: Chu YJ. (2001) Pierce's disease of grape and control techniques. *Yantai Fruits* **4**, 11-12 (in Chinese).
Guo T, Wang S, Pan C, Sattar A, Xing C, Hao H, Zhang C (2024) Evidence of the involvement of *Xylella fastidiosa* in the occurrence of walnut leaf scorch in Xinjiang, China. *Plant Disease*. https://doi.org/10.1094/PDIS-07-23-1430-PDN

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

Additional key words: new record **Computer codes:** XYLEFA, XYLEFM, CN

2024/248 Update on the situation of *Xylella fastidiosa* in Iran and first record on alfalfa

In Iran, *Xylella fastidiosa* (EPPO A2 List) was first reported in 2014 on symptomatic grapevine (*Vitis vinifera*) and almond (*Prunus dulcis*) and in 2019 on pistachio (*Pistacia vera*) trees. Studies in 2019 identified two subspecies: *X. fastidiosa* subsp. *fastidiosa* from grapes, and *X. fastidiosa* subsp. *multiplex* from pistachios and almonds.

A systematic sampling campaign was carried out in crops of different Iranian regions over the summer from 2019 to 2022, in the regions of Qazvin, Isfahan, Chaharmahal and Bakhtiari, Gilan, Zanjan, Tehran, and the central regions of Hormozgan and Kerman. In total 403 samples were collected from different crops, including alfalfa (*Medicago sativa*), almond, cherry, citrus, grapevine, olive and pistachio. *X. fastidiosa* was not detected in olive, citrus and cherry. *X. fastidiosa* was detected in 9 samples (out of 176) of grapevine from Qazvin province, as well as in 5 samples (out of 123) of almond and 5 (out of 18) of alfalfa from the provinces of Isfahan and Chaharmahal and Bakhtiari. The subspecies present on alfalfa was identified as *X. fastidiosa* subsp. *fastidiosa*.

Source: Ghanbari D, Hasanzadeh N, Ghayeb Zamharir M, Nasr S, El Handi K, Elbeaino T (2024) Detection and characterization of *Xylella fastidiosa* in Iran: first report in alfalfa *(Medicago sativa*). *Phytopathologia Mediterranea* **63**(3), 335-342. https://doi.org/10.36253/phyto-15569

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

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

2024/249 *Pseudomonas syringae* pv. *actinidiae* does not occur in Argentina

In 2018, a research study reported that *Pseudomonas syringae* pv. *actinidiae* (EPPO A2 List) was detected for the first time in Argentina, in pollen of *Actinidia deliciosa* cv. Chieftain (EPPO RS 2018/012). The tested pollen had been collected in February 2015 in the area of Mar del Plata, in the province of Buenos Aires.

The NPPO of Argentina recently informed the EPPO Secretariat that this record should now be considered as invalid. They noted that the study had been conducted by a team of Italian researchers in the absence of any Argentinian partners, and that information about the exact location from which the pollen had been sampled could not be obtained from the authors. In addition, the identification method used has later been shown to give false positive results due to cross-reactions with other *Pseudomonas* species. Furthermore, as *P. syringae* pv. *actinidiae* is a regulated pest in Argentina, the NPPO has conducted specific surveys since 2013, which have not detected the bacterium. Several Argentinian research groups have also conducted studies in orchards in different kiwifruit-growing areas, including the Mar del Plata area, which did not detect *P. syringae* pv. *actinidiae*.

The pest status of *Pseudomonas syringae* pv. *actinidiae* in Argentina is officially declared as: **Absent, unreliable record.**

Source: NPPO of Argentina (2024-11).

Balestra GM, Buriani G, Cellini A, Donati I, Mazzaglia A, Spinelli F (2018) First report of *Pseudomonas syringae pv. actinidiae* on kiwifruit pollen from Argentina. *Plant Disease* **102**(1), p 237. https://doi.org/10.1094/PDIS-04-17-0510-PDN

Sánchez MC, Clemente GE, Yommi, AK, Alippi AM, Ridao A del C (2018) Absence of *Pseudomonas syringae* pv. *actinidiae* in kiwifruit leaves and flowers from Buenos Aires Province, Argentina. *Acta Horticulturae* **1218**, 351-358. https://doi.org/10.17660/ActaHortic.2018.1218.49

Pictures *Pseudomonas syringae* pv. *actinidiae*. https://gd.eppo.int/taxon/PSDMAK/photos

Additional key words: absence, denied record **Computer codes:** PSDMAK, AR

2024/250 Revision of the taxonomy of *Grosmannia wageneri*

The fungus initially described as *Ceratocystis wageneri*, then as *Ophiostoma wageneri* (EPPO A1 List) and transferred to the genus *Grosmannia* in 2013 (EPPO RS 2022/028) is now transferred to the genus *Leptographium*. This fungus causes black stain root disease on several conifer species.

Three host-specialized varieties of this pathogen were previously described: *L. wageneri* var. *wageneri* on pinyon pines (*Pinus monophylla* and *P. edulis*); *L. wageneri* var. *ponderosum*, primarily on hard pines (e.g., *P. ponderosa*, *P. jeffreyi*); and *L. wageneri* var. *pseudotsugae* on Douglas-fir (*Pseudotsuga menziesii*).

Morphological, physiological, and ecological differences among the three pathogen varieties had been previously determined. A recent study analysed DNA sequences to assess phylogenetic relationships among isolates from different hosts. The results support that the varieties should be elevated to species rank: *L. ponderosum* comb. nov., *L. pseudotsugae* comb. nov., while *L. wageneri* var. *wageneri* is maintained as *Leptographium wageneri*.

Source: Choi D, Harrington TC, Shaw DC, Stewart JE, Klopfenstein NB, Kroese DR, Kim MS (2023) Phylogenetic analyses allow species-level recognition of *Leptographium wageneri* varieties that cause black stain root disease of conifers in western North America. *Frontiers in Plant Science* **14**, 1286157. https://doi.org/10.3389/fpls.2023.1286157

Additional key words: taxonomy **Computer codes:** LEPGWA

2024/251 Pre-emptive biological control of *Spodoptera frugiperda* using *Trichogramma* species

The fall armyworm *Spodoptera frugiperda* (Lepidoptera: Noctuidae - EPPO A2 List), is a highly invasive pest of maize and other crops worldwide. It has recently been reported in a few EPPO countries. *Trichogramma* species are egg parasitoids that are commonly used as augmentative biological control agents against a variety of pests worldwide. Some *Trichogramma* species have been used against *S. frugiperda*, for example, *T. pretiosum* in the Americas and *T. chilonis* in China. It is generally considered that full control of *S. frugiperda* using *Trichogramma* species is not easily achieved as the parasitoid cannot reach all eggs as the egg mass is composed of two or three layers and protected. In studies to assess the pre-emptive augmentative biological control of *S. frugiperda*, three European *Trichogramma* species (*Trichogramma brassicae*, *T. dendrolimi* and *T. cacoeciae*) were tested for their ability to parasitize egg masses with one to three layers and with or without protective covering (hair and scale cover). Each *Trichogramma* species was tested on egg masses with: one-layer without hair; one-layer with hair; two-layers without hair; two-layers with hair; three-layers with hair. *T. dendrolimi* was the most efficient species in reaching the eggs at the lowest layers with protective covering. *T. cacoeciae* was the least successful. Depending on the number of egg layers and presence or absence of covering, parasitism rates by *T. brassicae*, *T. dendrolimi* and *T. cacoeciae* varied between 99 and 41 %, 100 and 43 % and 100 and 28 %, respectively. Even though *Trichogramma* species may not be able to parasitise all eggs in the mass, they can be considered as biological control agents in a IPM programme and also used in combination with other natural enemies.

Source: Kenis M, Zhong Y, Fontes J, Herz A, Babendreier D (2024) Pre-emptive augmentative biological control of *Spodoptera frugiperda* in Europe using *Trichogramma* spp. *CABI Agriculture and Bioscience* **5**, 96. https://doi.org/10.1186/s43170-024-00296-1

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

Additional key words: biological control **Computer codes:** LAPHFR, 1TRIGG, TRIGBR, TRIGDE, TRIGCC

2024/252 Biological control of *Ailanthus altissima* in the United States

Ailanthus altissima (Simaroubaceae: EPPO List of Invasive Alien Plants) is native to Asia. It is a widespread species in the EPPO region where it can invade a variety of habitats including managed and unmanaged grasslands, forests, river/canal banks, rail/roadsides, wastelands, and urban areas. In North America, *A. altissima* commonly co-occurs with other invasive alien plant species. The wilt pathogen *Verticillium nonalfalfae*[2] (Sordariomycetes: Plectosphaerellaceae) is native to North America and is proposed as a biological control agent for *A. altissima*. Its potential as a biological control agent has also been evaluated in the EPPO region (see EPPO RS 2023/214). In 2017, individual *A. altissima* trees were inoculated with *V. nonalfalfae* at invaded sites in Virginia (US). This lead to the near eradication of the tree in treated sites. In 2022, these sites were revisited and the plant community was evaluated along with the composition of the soil seedbank. Other non-native species made up a large portion of the plant community and seedbank across all studied areas (treated and untreated sites). The study shows that natural regeneration alone does not effectively restore the native plant community after the use of *V. nonalfalfae*.

[2] EPPO note: in several European countries (EU member states, Switzerland and the United Kingdom), *Verticillium nonalfalfae* is listed a regulated non-quarantine pest (RNQP).

Restoration measures should also be conducted to promote native plant regeneration coupled with the control of non-native plant species.

Source: Shively TJ, Barney JN, Reid JL, Salom SM (2024) The bioherbicide *Verticillium nonalfalfae* effectively removes *Ailanthus altissima* but leaves many other nonnative plants. *Invasive Plant Science and Management*, 1-15. https://doi.org/10.1017/inp.2024.27

Pictures *Ailanthus altissima*. https://gd.eppo.int/taxon/AILAL/photos

Additional key words: biological control **Computer codes:** AILAL, VERTNO, US

2024/253 Potential for *Chrysoperla carnea* as a biological control for stink bugs

Halyomorpha halys (Hemiptera: Pentatomidae: formerly EPPO Alert List) and *Nezara viridula* (Hemiptera: Pentatomidae) are both plant pests. The current study assessed the potential of larvae of the green lacewing *Chrysoperla carnea* (Neuroptera: Chrysopidae) as biological control agent for the two stink bugs. *C. carnea* is a generalist predator which feeds on a wide range of pests in agroecosystems and plays an important role in the conservation and augmentation biological control of various arthropod pests, including aphids, lepidopterans, mealybugs, psyllids, leafhoppers, whiteflies, thrips, and spider mites. The predatory efficacy of *C. carnea* was assessed on the two stink bugs at three constant temperatures (16, 21, and 26°C) and two different arenas (Petri dish and caged plants). Second and third instars of *C. carnea* preyed on first instars of both *H. halys* and *N. viridula*. Only third instars of *C. carnea* could successfully kill and feed on second instars of either species. The complexity of the arena, as well as the life stage of the prey and predator influenced the predation efficacy of *C. carnea* but temperature did not. The results suggest that augmentative releases of *C. carnea* larvae may have some potential in greenhouse crops, particularly against *N. viridula* infestations, whereas in open field crops natural populations may contribute to pest suppression within the broader predator assemblance.

Source: Berteloot OH, Peusens G, Beliën T, Van Leeuwen T, De Clercq P (2024) Predation efficacy of *Chrysoperla carnea* on two economically important stink bugs. *Biological Control* **196**. https://doi.org/10.1016/j.biocontrol.2024.105586

Pictures *Chrysoperla carnea*. https://gd.eppo.int/taxon/CHROCR/photos
Halyomorpha halys. https://gd.eppo.int/taxon/HALYHA/photos
Nezara viridula. https://gd.eppo.int/taxon/NEZAVI/photos

Additional key words: biological control **Computer codes:** CHROCR, HALYHA, NEZAVI

2024/254 First report of *Youngia japonica* in the Azores archipelago (PT)

Youngia japonica (Asteraceae) is native to Asia and was recently discovered on the Azorean island of São Miguel, Portugal. It is reported as naturalised, and invasive in many regions of the world where it can establish in ruderal habitats, cultivated fields and forest margins, but it is also able to penetrate into natural areas which have previously experienced minimal disturbance. In Hawaii and mainland United States, it is reported to invade protected natural areas. On the island of São Miguel, *Y. japonica* is present along roadsides, on lawns and in disturbed habitats and the area covered is noted to be increasing. Spread is facilitated by a high seed production and seed are dispersed by wind and water. In the USA, seed of *Y. japonica* has been reported as a contaminant of seed lots of cultivated species. Contamination of seed lots could potentially be the pathway of entry into the Azores archipelago. Action is needed to mitigate potential damage to native and agricultural ecosystems. The authors of the study note the potential for *Y. japonica* to invade coffee plantations in the Azores which produce small quantities of high quality Azorean coffee.

Source: Roxo G, Silva L, Borges Silva L, Rego R, Resendes R, Moura M (2024) Early detection of *Youngia japonica* (L.) DC. (Asteraceae) in São Miguel Island, Azores, Portugal. *Invasive Plant Science Management* **17,** 3–8.

Additional key words: invasive alien plants **Computer codes:** UOUJA, PT

2024/255 First report of *Artemisia verlotiorum* in Azerbaijan

Artemisia verlotiorum (Asteraceae) is native to China and established in Africa, West Asia, South America, Australia and New Zealand. Within the EPPO region, it is a widespread species. During field surveys conducted in Azerbaijan between 2019-2023, *A. verlotiorum* was recorded in four geographical areas – the Greater Caucasus west (Zagatala district), the Lesser Caucasus north (Gazakh district), the Lankaran lowland (Lankaran and Astara districts) and Apsheron (Novkhany and Keshlya). Habitats where it occurs include plantations, coastal areas of the Caspian Sea, ruderal habitats and transportation networks and woodland up to 426 m a.s.l. It is likely that *A. verlotiorum* has been present in Azerbaijan for some time but has been misidentified as *A. vulgaris*. However, in some areas, small populations indicate new introductions which could have arrived either through natural spread or potentially as a contaminant of soil or plants.

Source: Mehtieva NP, Asadova KK, Mursal N (2024) *Artemisia verlotiorum* (Asteraceae) - a new species for the flora of Azerbaijan. *БОТАНИЧЕСКИЙ ЖУРНАЛ (Botanical Journal)* **109**, 99-102.

Additional key words: new record, invasive alien plants **Computer codes:** ARTVE, ARTVU, AZ

2024/256 Studies of four invasive alien plants in Southwestern Georgia

The distribution and invasiveness of four alien plant species was studied in the Chorokhi Delta in South-West Georgia.

Ambrosia artemisiifolia (Asteraceae: EPPO List Invasive Alien Plants) is native to North America and was first recorded in Georgia in the early 1900s along the coastal areas of the Black Sea. In the Chorokhi Delta, *A. artemisiifolia* occurs on different soil types and is

abundant along the edges of canals, in ruderal areas and edges of forests. In these areas, *A. artemisiifolia* inhibits the growth of native plant species.

Sicyos angulatus (Cucurbitaceae: EPPO List Invasive Alien Plants) is native to North America and was first recorded in Georgia in 2012 in agricultural habitats in the Chorokhi River Valley. In 2014, *Sicyos angulatus* was recorded from the Chorokhi Delta. It is widespread in moist soils along the edges of rivers, agricultural areas and semi-natural habitats. With its climbing habit, *S. angulatus* can smother native vegetation.

Solidago canadensis (Asteraceae: EPPO List Invasive Alien Plants) is native to North America and was first recorded in the surroundings of Ochamchire in the 1920s. The first individual specimens of *S. canadensis* were recorded in the Adjara region in 2011. In 2019, *S. canadensis* was recorded in the Chorokhi Delta and is widely distributed in South Kolkheti, occurring along roadsides, railways, in ruderal areas, along edges of canals and rivers, in abandoned construction sites, wetlands and degraded cleared forests.

Verbena brasiliensis (Verbenaceae), native to South America, was first recorded in the Black Sea area and has began to spread rapidly since the early 2000s. It grows along highways and around railway stations and the edges of rivers in low lying habitats in Western Georgia. In its native range, *V. brasiliensis* is an annual or short-lived perennial. In the Chorokhi Delta, it is a perennial which allows the species to dominate the habitats it invades. The species can produce up to 100 000 seeds with a high germination rate.

Source: Mikeladze I, Manvelidze Z, Tsiskaridze D, Shainidze G (2023) Distribution and invasiveness of four non-native species of plants in ecosystems in the Chorokhi delta (SW Georgia). *European Journal of Environmental Sciences* **13**, 80–89.

Pictures *Ambrosia artemisiifolia*. https://gd.eppo.int/taxon/AMBEL/photos
Sicyos angulatus. https://gd.eppo.int/taxon/SIYAN/photos
Solidago canadensis. https://gd.eppo.int/taxon/SOOCA/photos

Additional key words: invasive alien plants **Computer codes:** AMBEL, VEBBS, SIYAN, SOOCA, GE

2024/257 Manual removal of *Reynoutria japonica* along a river in Canada

Reynoutria japonica (Polygonaceae: EPPO List of Invasive Alien Plants) is native to Japan and is a widespread invasive alien plant in the EPPO region. The species can have negative impacts on areas where it invades, reducing biological diversity and having negative impacts on ecosystem services. The species can degrade urban areas and damage infrastructure causing significant economic impact. *R. japonica* is also invasive in other regions of the world, and in Canada a study on management measures was conducted in the province of Québec along the Etchemin River. The study assessed the effectiveness of controlling plant populations by manually removing rhizomes which have recently rooted after being deposited by floodwaters. This method was conducted in two areas of the river where the first area was heavily invaded by *R. japonica*, and the second area was only sparsely invaded. In the heavily invaded area, 1 550 and 737 *R. japonica* rhizome fragments were found and removed in 2019 and 2020, respectively. Only 21 fragments were found and removed in the sparsely invaded area in 2020. Along sparsely invaded riverbanks, a rapid removal campaign for *R. japonica* cost an estimated 142 CAD (96 EUR) per rhizome fragment removed. In highly invaded river stretches which can generate thousands of fragments annually, removing these fragments yearly is likely to incur significant costs and effort and is unsustainable. However,

in the sparsely invaded areas, manual removal campaigns may be used to reduce the number of propagules.

Source: Rouleau G, Bouchard M, Matte R, Lavoie C (2023) Effectiveness and cost of a rapid response campaign against Japanese knotweed (*Reynoutria japonica*) along a Canadian river. *Invasive Plant Science Management* **16**(2),124-129. https://doi.org/10.1017/inp.2023.11

Pictures *Reynoutria japonica*. https://gd.eppo.int/taxon/POLCU/photos

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

2024/258 Long-term chemical control of *Reynoutria* species in the Czech Republic

A study on the management of *Reynoutria* species in the Czech Republic highlights the need for a long-term management strategy for effective control. The study evaluates 17 years (2007 – 2023) of long-term chemical control with glyphosate-based herbicide in the Morávka river floodplain. The first record of *Reynoutria* species in this area is from the 1940s and currently three species (*R.* x *bohemica*, *R. japonica* and *R. sachalinensis*) are present. Before the start of the study in 2007, *Reynoutria* stands covered 29% of the study area (96.9 ha). Throughout the study, *Reynoutria* was controlled with glyphosate applied with a backpack sprayer, predominantly in August and September each year. The population was cut mechanically before herbicide application. Near the Morávka reservoir, foliar spraying was replaced by stem injection to reduce environmental risk. As a result of whole area chemical management, the area of *Reynoutria* decreased to 19.6% (65.3 ha) in 2009, and to 14.5% (48.2 ha) in 2013. The infested area was maintained at a similar size in the proceeding years with a minimum area of 41.8 ha recorded in 2018. Based on the results of the study, the following procedure for effective chemical management is recommended (1) in large infested sites, the first aim is to reduce the distribution of *Reynoutria* stands to isolated stands, (2) then, herbicide application only in periods of 3-5 years depending on the local context and the rate of regrowth, and (3) at infested sites exposed to soil disturbances herbicides should be applied immediately to target newly resprouting individuals.

Source: Švec P, Perglová I, Fröhlich V, Laštovička J, Seidl J, Růžičková K, Horáková I, Lukavský J, Ferko M, Štych P, Pergl J (2024) Perseverance of management is needed – Efficient long-term strategy of *Reynoutria* management. *NeoBiota* **94**, 261–288. https://doi.org/10.3897/neobiota.94.122337

Pictures *Reynoutria* x *bohemica*. https://gd.eppo.int/taxon/REYBO/photos
Reynoutria japonica. https://gd.eppo.int/taxon/POLCU/photos
Reynoutria sachalinensis. https://gd.eppo.int/taxon/REYSA/photos

Additional key words: invasive alien plants **Computer codes:** 1REYG, POLCU, REYSA, REYBO, CZ

2024/259 *Pueraria montana* var. *lobata* in Croatia

Pueraria montana var. *lobata* (Fabaceae: EPPO A2 List) is native to East Asia, and has been introduced as a garden ornamental in many countries of the world. In the EPPO region, the species was introduced as a ornamental species in the late 1800s. In Croatia, *P. montana* var. *lobata* was previously listed in the Flora Croatica Database under the name *Pueraria thunbergiana*. In 2018, records of *Pueraria montana* var. *lobata* were reported from Malinska

on the island of Krk. Following this record, a study was conducted in Croatia to evaluate the distribution of *Pueraria montana* var. *lobata* in the country and to assess its potential for further spread and negative impacts. *Pueraria montana* var. *lobata* was recorded in several scattered localities, mainly in the coastal areas of Croatia. In these areas, it was found in a variety of habitats from urban and semi-urban environments, and in the Trsteno Arboretum (South Dalmatia). Modelling predicts that there is potential for further establishment, especially in the southern and northern coastal areas of Croatia. At present, *Pueraria montana* var. *lobata* is not yet considered invasive in Croatia, though it has characteristics that show it can become invasive. As a species of European Union concern (EU Regulation 1143/2014), its use or exchange, transport, placement on the market, and keeping or releasing into the environment is prohibited and it should be eradicated at all known localities in Croatia.

Source: Boršić I, Kutleša P, de Groot M, Jelaska SD (2023) Kudzu vine (*Pueraria montana* var. *lobata* , Fabaceae): Invasive alien species of Union concern (EU Regulation 1143/2014) in Croatia. *EPPO Bulletin* **54**, 64-75.

Pictures *Pueraria montana* var. *lobata*. https://gd.eppo.int/taxon/PUELO/photos

Additional key words: detailed record, invasive alien plants

Computer codes: PUELO, HR

2024/260 Comparisons of herbivory on native and non-native plants in botanical gardens in Europe

The 'Enemy Release' hypothesis states that the invasion success of non-native species is due in part to their escape from natural enemies that keep the species in check in their native range. Released from this natural enemy pressure, non-native species can invest more into growth and fecundity and be better competitors than their native counterparts. To evaluate if reduced natural enemy damage (insect herbivory) is beneficial to the naturalisation of non-native plants, surveys were conducted in 2007-2021 in 15 botanical gardens across Europe. Botanical gardens across the world hold some 30 % of all plant species and have in some cases, contributed to the introduction of invasive alien plants. The botanical gardens in this study spanned from Bern (Switzerland) to Trondheim (Norway). In each botanical garden, as many species as possible were randomly sampled and details on the species, plant growth parameters and levels of herbivory were collected. Only plants growing outside were included in the study. In total, 5 986 individuals were surveyed including 2 752 plant species. Overall, herbivory levels were lower on non-native plants compared to native plants. However, non-native plants which are naturalised in Europe had similar levels of herbivory to native plant species. The results suggest that for some plant species which have become naturalised, herbivory may not affect their competitive ability.

Source: Ivison K, van Kleunen M, Speed JDM, Vange V, Pujara S, Boch S, Enters D, Groom Q, Janovský Z, Jeschke JM, Josh J, Kolb A, Kollmann J, Koubek T, Lemke T, Matthies D, Raabová J, Tielbörger K, Dawson W (2024) Non-native, non-naturalised plants suffer less herbivory than native plants across European botanical gardens. *Diversity and Distributions*, e13938. https://doi.org/10.1111/ddi.13938

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