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2024/211 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**

Ceratothripoides claratris (Thysanoptera: Thripidae, EPPO A1 List) is first reported from Colombia. One specimen was identified during a field survey in 2014 on a wild *Crotalaria* sp. in the tropical moist forest (Ebratt-Ravelo *et al.*, 2024). **Present**.

Heteronychus arator (Coleoptera: Scarabaeidae, EPPO A1 List) is emerging as a damaging pest in Cameroon where it affects wheat **(***Triticum aestivum*) (Achiri *et al.*, 2024) and maize (*Zea mays*) (Suh *et al.*, 2023). **Present**.

- **New pests and taxonomy**

In Henan province (China), investigations identified the cyst nematode attacking tobacco (*Nicotiana tabacum*) as a subspecies of *Heterodera glycines* (EPPO A2 List - soybean cyst nematode), *Heterodera glycines* subsp. nov. *tabacum* (Ren *et al.*, 2024).

Sources:
Achiri TD, Chaba AF, Nsobinenyui D, Khumbah ND (2024) Characterization of wheat (*Triticum aestivum*) plant infested by and identification of the African black beetle *Heteronychus arator* (Fabricius, 1775), a pest attacking wheat in Cameroon. *World News of Natural Sciences* **53**, 159-168.
Ebratt-Ravelo E, Castro-Avila A, Goldaracena-Lafuente A (2024) Updated checklist of the order Thysanoptera in Colombia. *Zootaxa* **5489**(1), 192-203. https://doi.org/10.11646/zootaxa.5489.1.14
Ren H, Chen K, Xu X, Li R, Kang X, Chang F, Zhou Y, Peng D, Zhou Y, Jiang S, Cui J (2024) Identification and biological characterization of a new cyst nematode, *Heterodera glycines* sbsp. n. *tabacum*, parasitizing tobacco in China. *Plant Disease* **108**(8), 2389-2398.
Suh NN, Ngosong C, Okolle NJ, Ntonifor NN (2023) *Heteronychus arator* population dynamics and its influencing climatic factors in the humid rainforest maize field in Cameroon. *Journal of Entomology* **20**, 14-22. https://scialert.net/abstract/?doi=je.2023.14.22

Additional key words: new record, taxonomy **Computer codes:** CRTZCL, HETDGL, HETRAR, CM, CN, CO

2024/212 Pests recently intercepted in the Netherlands

The following pests have recently been detected on imported plant material (interceptions) by the Dutch NPPO. Their potential risk was evaluated by a Quick scan. A short summary is presented below.

- *Austropuccinia psidii* (myrtle rust - formerly EPPO Alert List): this fungus was detected on plants for planting of *Syzygium* imported from China. It can infect many species within the Myrtaceae family. It could establish and cause damage in parts of the EU that have an oceanic or humid subtropical climate (e.g. in *Eucalyptus* plantations).

- *Melanagromyza obtusa* (Diptera: Agromyzidae): this pod fly was detected in pods on pigeon pea (*Cajanus cajan*). As it originates in tropical Asia, outdoor establishment in the Netherlands is considered unlikely.

- *Monema flavescens* (Lepidoptera: Limacodidae) was intercepted on bonsais of *Crataegus* originating in Japan. This pest is native to Asia. The larvae can defoliate broadleaf tree species. Recent papers suggest that it is damaging in urban areas and orchards in China. Official measures will be taken in the case of a finding or interception.

Source: NVWA (2024) Quick scan for *Austropuccinia psidii*
https://pra.eppo.int/pra/ae7a38d5-c675-47e1-8bbf-8d8972dcd0a4
NVWA (2024) Quick scan for *Melanagromyza obtusa*.
https://pra.eppo.int/pra/af648f14-3b2a-465f-9fa4-3841f001d9b0
NVWA (2024) Quick scan for *Monema flavescens*.
https://pra.eppo.int/pra/3cb6b4f7-c0a6-4985-9a6a-17ac3e2a367d

Pictures *Austropuccinia psidii*. https://gd.eppo.int/taxon/PUCCPS/photos

Additional key words: interception **Computer codes:** CNIDFL, MEAGOP, PUCCPS, NL

2024/213 Binomial nomenclature for virus and viroid 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 2022, the first changes were made for a number of genera (EPPO RS 2022/207) and continued in 2023 and 2024 (RS 2023/177, RS 2024/031, RS 2024/125). In September 2024, ICTV released an updated list, and as a consequence, changes were made in the EPPO Global Database for the virus and viroid species belonging to families and genera listed below:

	Family	Genus	EPPO Code
Viruses	Metaxyviridae	Cofodevirus	1COFVG
	Solemoviridae	Enamovirus	1ENAMG
		Polerovirus	1POLVG
		Sobemovirus	1SOBEG
	Partitiviridae	Alphapartitivirus	1ACRYG
		Betapartitivirus	1BCRYG
		Deltapartitivirus	1DCRVG
		Gammapartitivirus	1GCRYG
Viroids	Avsunviroidae	Avsunviroid	1AVSUG
		Elaviroid	1ELAVG
		Pelamoviroid	1PELAG

	Family	Genus	EPPO Code
Viroids	Pospiviroidae	Apscaviroid	1APSCG
		Cocadviroid	1CCADG
		Coleviroid	1KOLEG
		Hostuviroid	1HOSTG
		Pospiviroidae	1POSPF

The EPPO Secretariat has summarized in the table below the list of viruses and viroids which are included in the EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests with their new names.

Viruses and viroids	New binomial nomenclature	EPPO Code	EPPO List
American plum line pattern virus	*Ilarvirus APLPV*	APLPV0	A1
Andean potato latent virus	*Tymovirus latandigenum*	APLV00	A1
Andean potato mild mosaic virus	*Tymovirus mosandigenum*	APMMV0	A1
Andean potato mottle virus	*Comovirus andesense*	APMOV0	A1
Bean golden mosaic virus	*Begomovirus costai*	BGMV00	A1
Bean golden yellow mosaic virus	*Begomovirus birdi*	BGYMV0	A1
Beet leaf curl virus	-	BLCV00	A2
Beet necrotic yellow vein virus	*Benyvirus necrobetae*	BNYVV0	A2
Blueberry leaf mottle virus	*Nepovirus myrtilli*	BLMOV0	A1
Blueberry scorch virus	*Carlavirus vaccinii*	BLSCV0	A2
Cherry rasp leaf virus	*Cheravirus avii*	CRLV00	A1
Chrysanthemum stem necrosis virus	*Orthotospovirus chrysanthinecrocaulis*	CSNV00	A1
Chrysanthemum stunt viroid	*Pospiviroid impedichrysanthemi*	CSVD00	A2
Citrus bark cracking viroid	*Cocadviroid rimocitri*	CBCVD0	A2
Citrus blight agent	-	CSB000	A1
Citrus leprosis disease*	-	CILV00	A1
Citrus tristeza virus	*Closterovirus tristezae*	CTV000	A2
Citrus yellow mosaic virus	*Badnavirus tessellocitri*	CMBV00	A1
Coconut cadang-cadang viroid	*Cocadviroid cadangi*	CCCVD0	A1
Cucumber vein yellowing virus	*Ipomovirus cucumisvenaflavi*	CVYV00	A2
Cucurbit yellow stunting disorder virus	*Crinivirus cucurbitae*	CYSDV0	A2
Grapevine red blotch virus	*Grablovirus vitis*	GRBAV0	A1
Impatiens necrotic spot virus	*Orthotospovirus impatiensnecromaculae*	INSV00	A2
Lettuce infectious yellows virus	*Crinivirus lactucaflavi*	LIYV00	A1
Peach mosaic virus	*Trichovirus persicae*	PCMV00	A1
Peach rosette mosaic virus	*Nepovirus persicae*	PRMV00	A1
Pepino mosaic virus	*Potexvirus pepini*	PEPMV0	A2
Plum pox virus	*Potyvirus plumpoxi*	PPV000	A2
Potato black ringspot virus	*Nepovirus solani*	PBRSV0	A1

Viruses and viroids	New binomial nomenclature	EPPO Code	EPPO List
Potato deforming mosaic virus (Argentina)	-	PDMV00	A1
Potato spindle tuber viroid	*Pospiviroid fusituberis*	PSTVD0	A2
Potato virus T	*Tepovirus tafsolani*	PVT000	A1
Potato yellow dwarf virus	*Alphanucleorhabdovirus tuberosum*	PYDV00	A1
Potato yellow vein virus	*Crinivirus flavisolani*	PYVV00	A1
Potato yellowing virus	-	PYV000	A1
Raspberry leaf curl virus	-	RLCV00	A1
Raspberry ringspot virus	*Nepovirus rubi*	RPRSV0	A2
Rose rosette emaravirus	*Emaravirus rosae*	RRV000	A1
Satsuma dwarf virus	*Sadwavirus citri*	SDV000	A2
Squash leaf curl virus	*Begomovirus cucurbitapeponis*	SLCV00	A2
Strawberry latent C virus	-	STLCV0	A1
Strawberry vein banding virus	*Caulimovirus venafragariae*	SVBV00	A2
Tobacco ringspot virus	*Nepovirus nicotianae*	TRSV00	A2
Tobacco streak ilarvirus potato strain	-	TSVP00	A1
Tomato brown rugose fruit virus	*Tobamovirus fructirugosum*	TOBRFV	A2
Tomato chlorosis virus	*Crinivirus tomatichlorosis*	TOCV00	A2
Tomato infectious chlorosis virus	*Crinivirus contagichlorosis*	TICV00	A2
Tomato leaf curl New Delhi virus	*Begomovirus solanumdelhiense*	TOLCND	A2
Tomato mottle virus	*Begomovirus solanumvariati*	TOMOV0	A1
Tomato ringspot virus	*Nepovirus lycopersici*	TORSV0	A2
Tomato spotted wilt virus	*Orthotospovirus tomatomaculae*	TSWV00	A2
Tomato yellow leaf curl Sardinia virus	*Begomovirus solanumflavusardiniaense*	TYLCSV	A2
Tomato yellow leaf curl virus	*Begomovirus coheni*	TYLCV0	A2
Watermelon silver mottle virus	*Orthotospovirus citrullomaculosi*	WMSMOV	A1

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* Citrus leprosis disease is associated with at least 7 viruses:
- *Citrus leprosis virus C (Cilevirus leprosis);*
- *Citrus leprosis virus C2 (Cilevirus colombiaense);*
- *Hibiscus green spot virus 2 (Higrevirus waimanalo);*
- *Strains of Orchid fleck virus (Dichorhavirus orchidaceae);*
- *Citrus leprosis virus N (Dichorhavirus leprosis);*
- *Citrus chlorotic spot virus (Dichoravirus citri);*
- *Citrus bright spot virus (Dichoravirus australis).*

Source: EPPO Secretariat (2024-10).

Additional key words: taxonomy **Computer codes:** 1VIRUK, 1VIRDD

2024/214 Taxonomic studies on *Cronartium* species

Cronartium species are plant parasitic rusts that can infect branches, cones and stems of *Pinus* species, resulting in economic losses and ecological damage in temperate regions of the Northern hemisphere. *Cronartium* species are difficult to identify, have complex life cycles, and alternate between two types of taxonomically unrelated host plants to complete their life cycle (aecial/telial hosts). Over the years, the numerous and different taxonomic classifications, either based on morphology or host specificity, have created confusion and uncertainties. As some of these *Cronartium* species are of regulatory interest, it is essential to have a clear understanding of the species boundaries.

Studies have been conducted (Zhao *et al.*, 2022) to revise the taxonomy of *Cronartium* using 1032 herbarium specimens (235 from *Pinus* – 797 from other plant families: Asclepiadaceae, Fagaceae, Gentianaceae, Myricaceae, Paeoniaceae, Santalaceae, Saxifragaceae and Scrophulariaceae). Species delimitation was established based on morphological examination and molecular phylogeny studies. As a result, 26 *Cronartium* species including 7 new species were recognized. The EPPO Secretariat has extracted below new data concerning species that are of regulatory interest to the EPPO region.

- ***Cronartium coleosporioides*** (EPPO A1 List) was confirmed as a distinct species based on the study of specimens from Honduras***** (collected from *Castilleja integrifolia*), Canada (*Melampyrum lineare*), USA (*Castilleja miniata*, *Pinus contorta* var. *latifolia*), and Japan***** (*Pinus pumila*). It was also noted that specimens of *C. coleosporioides* included in the USDA fungus collection had been collected from Costa Rica***** (*Castilleja tenuiflora*), and Guatemala* (*Lamourouxia dependens*, *L. rhinanthifolia*, *Orthocarpus luteus*).

- ***Cronartium comandrae*** (EPPO A1 List) was confirmed as a distinct species based on the study of specimens from Canada (*Comandra umbellata, C. umbellata* subsp. *pallida, Pinus banksiana*), USA (*Comandra livida, C. umbellata, C. umbellata* subsp. *pallida, Pinus contorta* var. *latifolia, P. contorta* var. *murrayana, P. eldarica, P. ponderosa* var. *scopulorum, P. ponderosa*). It was also concluded that *Cronartium comandrae* is distinct from *C. pyriforme* (with which it was previously synonymized).

- ***Cronartium comptoniae*** (EPPO A1 List) was confirmed as a distinct species based on the study of specimens from Canada (*Comptonia peregrina, Pinus banksiana*) and USA (*Comptonia peregrina, P. banksiana*).

- ***Cronartium fusiforme*** (EPPO A1 List) was confirmed as a distinct species based on the study of specimens from China***** (*Pinus massoniana, P. sylvestris, Quercus emoryi, Q. fabri, Q. variabilis*), Japan***** (*Q. serrata*), Sweden***** (*Vincetoxicum nigrum*), USA (*Q. emoryi, Q. fabri, Q. nigra, Q. palustris*). Previously, it had been suggested that *C. fusiforme* was a *forma specialis* of *C. quercuum* (*C. quercuum* f.sp. *fusiforme*) infecting *P. elliottii* and *P. taeda*, but Zhao *et al.* (2022) confirmed that morphological differences could be observed between *C. fusiforme* and *C. quercuum*, and that *C. fusiforme* formed a well-supported clade, distant from *C. quercuum*.

- ***Cronartium orientale*** (not listed by EPPO but see *C. quercuum* below) was confirmed as a distinct species based on the study of specimens from China (*Pinus hwangshanensis, P. densata, Quercus aquifolioides, Q. glandulifera, Q. liaotungensis, Q. spinosa, Q. semecarpifolia, Q. variabilis*) and Japan (*Q. crispula*). Previous studies from Kaneko (2000) had shown the presence of *C. orientale* in China, Japan, the Republic of Korea, and the Russian Far East on various other hosts (*Castanea crenata, Pinus densiflora, P. thunbergii, Quercus acutissima, Q. aliena, Q. fabri, Q. glauca, Q. phellos, Q. rubra,*

Q. serrata, Q. spinosa), and had also concluded that *C. orientale* was a species distinct from *C. quercuum*.

- ***Cronartium quercuum*** (EPPO A1 List) is a rust alternating between *Pinus* and Fagaceae (mainly *Quercus* spp.) and has a complex taxonomic history. It has been considered to be a species complex, and some authors have proposed that it comprised several *formae speciales*. The present study confirmed the following points:
  1) *C. quercuum* is distinct from *C. fusiforme*, *C. strobilinum* and *C. conigerum* (other North American species which were considered as synonyms in the past).
  2) *C. harknessii* (EPPO A1 List - an asexual and autoecious form found only on *Pinus* spp., not alternating on *Quercus* spp.) belongs to the *C. quercuum* clade, and therefore should be considered as a synonym (as already suggested by other authors).
  3) Records of pine-oak rust in Asia (China, Japan, Republic of Korea, Russian Far East) which had previously been attributed to *C. quercuum*, most probably correspond to other species (e.g. *C. orientale*- see above).

These results illustrate the importance of taxonomy in plant quarantine. More studies using molecular tools are clearly needed on *Cronartium* species, in particular to clarify their geographical distribution, host range, and economic impact (as most herbarium specimens used in the present study were collected many years ago). Up-dated information is needed to be able to re-assess the risks that *Cronartium* species may present to the EPPO region in the light of this new taxonomy.

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* New country records. However, as these geographical records are based on herbarium specimens and not on recent observations or surveys made in the field, these records need to be confirmed by other studies. For the moment, the EPPO Secretariat has considered them as 'doubtful' in the EPPO Global Database, awaiting more information.

Source: Zhao P, Liu F, Huang JE, Zhou X, Duan WJ, Cai L (2022) *Cronartium* rust (Pucciniales, Cronartiaceae): species delineation, diversity and host alternation. *Mycosphere* **13**(1), 672–723.

Kaneko S (2000) *Cronartium orientale*, sp. nov., segregation of the pine gall rust in eastern Asia from *Cronartium quercuum*. *Mycoscience* **41**(2), 115-122.

USDA Fungal Databases. Fungus-Host. https://fungi.ars.usda.gov/

Pictures
Cronartium coleosporioides. https://gd.eppo.int/taxon/CRONCL/photos
Cronartium comandrae. https://gd.eppo.int/taxon/CRONCO/photos
Cronartium comptoniae. https://gd.eppo.int/taxon/CRONCP/photos
Cronartium fusiforme. https://gd.eppo.int/taxon/CRONFU/photos
Cronartium quercuum. https://gd.eppo.int/taxon/CRONQU/photos

Additional key words: taxonomy

Computer codes: 1CRONG, CRONCL, CRONCO, CRONCP, CRONFU, CRONOR, CRONPY, CRONQU

2024/215 *Bactrocera latifrons* and *Bactrocera zonata* are absent from France

In France, the fruit fly *Bactrocera latifrons* (Diptera: Tephritidae – EPPO A1 List) was first reported in November 2022 when one specimen was caught in a trap in the Rhône department (Auvergne-Rhône-Alpes region) (EPPO RS 2023/037). Surveys including trapping and inspections were conducted. No other adults were trapped, and no symptoms were observed. This confirms that this isolated finding was probably due to the entry of infested exotic fruits, and not linked to an outbreak.

The pest status of *Bactrocera latifrons* in France is officially declared as: **Absent**.

A few specimens of *Bactrocera zonata* (Diptera: Tephritidae – EPPO A1 List) had been trapped in an urban area close to Orly airport (Ile-de-France region) in 2020-2022 as part of official surveys (EPPO RS 2023/038). It was considered that these isolated findings were probably due to the entry of infested exotic fruits. As no further specimens were trapped during surveys since October 2022, the pest is considered absent from France.

The pest status of *Bactrocera zonata* in France is officially declared as: **Absent.**

Source: NPPO of France (2024-07).

Pictures *Bactrocera latifrons*. https://gd.eppo.int/taxon/DACULA/photos
Bactrocera zonata. https://gd.eppo.int/taxon/DACUZO/photos

Additional key words: absence **Computer codes:** DACULA, DACUZO, FR

2024/216 First report of *Atherigona orientalis* in France

Atherigona orientalis (Diptera: Muscidae - EPPO Alert List) is first reported from France. In October 2022, four larvae of *Atherigona orientalis* were collected on commercial peppers (*Capsicum annuum)* grown under tunnels in the town of Solliès-Toucas (Var department, Provence-Alpes-Côte d'Azur region) during official surveillance targeting *Bactrocera dorsalis* (Diptera: Tephritidae – EPPO A1 List). Peppers were overripe and also found to be infested by larvae of diverse Diptera species. No further specimens were detected during the official survey in 2023.

In November 2023, *A. orientalis* was detected in the town of Clapiers (Hérault department, Occitanie region): four adults emerged from fruits of *Passiflora caerulea* collected in a private garden. Those fruits were also infested by *Ceratitis capitata* larvae.

The situation of *Atherigona orientalis* in France can be described as: **Present, not widely distributed**.

Source: Mouttet R, Taddei A (2024) First record of *Atherigona orientalis* Schiner, 1868 (Diptera: Muscidae) in France. *EPPO Bulletin* **54**(2), 230–235. https://doi.org/10.1111/epp.13022

Pictures *Atherigona orientalis*. https://gd.eppo.int/taxon/ATHEOR/photos

Additional key words: new record **Computer codes:** ATHEOR, FR

2024/217 Update on the situation of *Aleurocanthus spiniferus* in France

In France *Aleurocanthus spiniferus* (Hemiptera: Aleyrodidae – EPPO A2 List) was first reported in the departments of Gard and Hérault (Occitanie region) in June 2023 (EPPO RS 2023/160). In August 2023, *A. spiniferus* was detected in the municipality of Menton (Alpes-Maritimes, region Provence-Alpes-Côte d'Azur) in a citrus orchard. Further surveys revealed the presence of the pest in two additional production plots and two nurseries in Menton, as well as in an orchard (*Citrus* sp. and *Vitis* sp.) in the nearby municipality of Castellar.

Phytosanitary measures were applied. Delimiting surveys conducted within a 2 km radius around the infested sites in Menton and Castellar showed that *A. spiniferus* is present in public sites on a range of host plants including several new hosts : *Akebia quinata, Mespilus germanica, Photinia x fraseri, Schefflera* sp., *Wisteria sinensis*. The full extent of its spread is still being determined. The measures, which were already in place in Occitanie, such as insecticide treatments, destruction of infested plants, and movement restrictions, are also being applied in the newly affected areas.

The pest status of *Aleurocanthus spiniferus* in France is officially declared as: **Present only in specific parts of the area concerned, under containment, in case eradication is impossible**.

Sources: NPPO of France (2024-07).

Pictures *Aleurocanthus spiniferus*. https://gd.eppo.int/taxon/ALECSN/photos

Additional key words: detailed record, new host plants **Computer codes:** ALECSN, FR

2024/218 First report of *Scirtothrips aurantii* in Islas Baleares (ES) and update in Andalucía (ES)

In Spain, *Scirtothrips aurantii* (Thysanoptera: Thripidae – EPPO A1 List) was first reported in Andalucía (province of Huelva) in September 2020 (EPPO RS 2021/008, RS 2022/084) and in May 2024 in Alicante and Valencia provinces, in the Autonomous Region of Comunidad Valenciana (RS 2024/139).

At the end of September 2024, *S. aurantii* was detected for the first time in Islas Baleares. The pest was found in three adjacent citrus plots located in the municipalities of Sóller and Fornalutx on Mallorca Island. The identity of the pest was confirmed by the National Reference Laboratory. Phytosanitary treatments have been carried out in the affected plots, and intensive surveys (including trapping) are being carried out to delimitate the demarcated area.

In Andalucía, surveys were conducted in 2024 and further detected *S. aurantii* in citrus plots in the provinces of Córdoba (municipalities of Fuente Palmera and Hornachuelos) and Málaga (municipalities of Alhaurín de la Torre, Alhaurín el Grande, Coín, Estepona, Pizarra, Vélez-Málaga, Málaga).

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

Source: NPPO of Spain (2024-10).

Pictures *Scirtothrips aurantii*. https://gd.eppo.int/taxon/SCITAU/photos

Additional key words: new record **Computer codes:** SCITAU, ES

2024/219 Updated situation of *Pseudips mexicanus* in Ireland

In Ireland, *Pseudips mexicanus* (Coleoptera: Curculionidae: Scolytinae - EPPO Alert List) was first found in traps in August 2023 in the municipality of Shannon (Clare county, Mid-West region) (EPPO RS 2020/004).

Intensive trapping and surveys have been carried out in 2024. In addition, selected pine trees of poor vigour were felled and examined. As a result a single adult female beetle has been found in a dead (wind-blown) pine tree in site approximately 50 m from a trap where beetles were previously caught in autumn 2023. Trapping since April 2024 has resulted in beetles being caught in 19 traps within the demarcated area and at a single trap approximately 7 km to the southwest of the demarcated area. The demarcated area had therefore been enlarged within the counties Clare and Limerick, using a 10 km radius outward from the new trap findings.

No breeding population has been detected and no evidence of damage has been observed.

The NPPO underlines that these findings do not necessarily represent a further spread of the beetle, but this wider survey allowed delimitation of the presence of the beetle following the initial findings.

In addition to the delimiting survey, a national network of traps for *P. mexicanus* has been established outside the demarcated area. No other findings of the beetle have been made in this network.

Source: NPPO of Ireland (2024-10).

A map of the demarcated area is available at: https://www.gov.ie/en/publication/b62ba-monterey-pine-engraver-pseudips-mexicanus-discovered-in-co-clare/

Pictures *Pseudips mexicanus*. https://gd.eppo.int/taxon/IPSXRA/photos

Additional key words: detailed record **Computer codes:** IPSXRA, IE

2024/220 Updated situation of *Strauzia longipennis* in Germany

In Germany, *Strauzia longipennis* (Diptera: Tephritidae – formerly EPPO Alert List) was detected for the first time in 2010 on sunflower plants (*Helianthus annuus*) in private gardens in Berlin (EPPO RS 2011/037), and later also in Brandenburg (RS 2012/053). The level of infestation was low with limited economic damage. Annual surveys and phytosanitary measures were carried out until 2020. Measures stopped after 2020 as *S. longipennis* was excluded from the list of non-European Tephritidae listed as quarantine pests for the European Union (RS 2022/030). As part of the general surveillance, *S. longipennis* has not been observed in the last 4 years. However, from a technical point of view, the NPPO notes that its occurrence is still probable.

The pest status of *Strauzia longipennis* in Germany is officially declared as: **Present, only in specific parts of the area concerned.**

Source: NPPO of Germany (2024-06) Notification of the presence of a harmful organism Closing note on an outbreak on *Helianthus annuus* (sunflower) in several places in Berlin and Brandenburg. https://pflanzengesundheit.julius-kuehn.de/en/pest-reports-1-223-2-223.html

Pictures *Strauzia longipennis*. https://gd.eppo.int/taxon/STRALO/photos

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

2024/221 *Phenacoccus miruku*: an invasive mealybug in Florida (US)

Phenacoccus miruku (Hemiptera: Pseudococcidae) was first described in 2022 from Japan. This new mealybug species was found in Okinawa Island (Kyushu) on *Bidens pilosa* var. *radiata* (syn. *B. pilosa*) (Asteraceae).

In 2019, an unknown mealybug was observed on the roots of *Bidens alba* (a common roadside perennial), in Lake county, Florida, USA. In subsequent months, this mealybug rapidly spread to other locations and expanded its host range, thus showing an invasive behaviour in Florida. At that time, this mealybug was identified as *Phenacoccus sisymbriifolium*, and it was only in the light of the new description made in Japan, that the pest could be finally identified as *Phenacoccus miruku*.

From 2019 to 2024, *P. miruku* was found in 20 counties of Florida (Alachua, Brevard, Broward, Collier, Dixie, Hernando, Hillsborough, Indian River, Lake, Marion, Okaloosa, Orange, Palm Beach, Pasco, Polk, Putnam, St Johns, St. Lucie, Sumter and Volusia). It was observed feeding on more than 20 host plants from 10 families, the most common host being *Bidens alba*. *P. miruku* was found on tomato (*Solanum lycopersicum*), aubergine (*S. melongena*), *Capsicum* and sweet potato (*Ipomoea batatas*) in both outdoor gardens and greenhouses. As this mealybug shows a preference for Solanaceae and Asteraceae, it is considered that it has the potential to become a pest of vegetables and ornamentals. In Florida, *P. miruku* was mostly found on the roots and sometimes on the crown of its host plants. It was also frequently observed in association with the red imported fire ant, *Solenopsis invicta*. On *B. alba*, *P. muruku* was found in mixed infestations with other scale insects: *Phenacoccus solani* and *Pseudococcus sorghiellus*. Mixed infestations with *Planococcus citri* were also observed on *Solanum quitoense* and *S. lycopersicum*, as well as on the invasive alien plant *Ambrosia artemisiifolia*. It is concluded that *P. miruku* should continue to be monitored in Florida to evaluate its potential damage to crops.

A distribution map and a list of host plants of *P. miruku* have been added to the EPPO Global Database:
https://gd.eppo.int/taxon/PHENMK/distribution
https://gd.eppo.int/taxon/PHENMK/hosts

Source: Powell EC, Deeter LA, Moore MR, Ahmed MZ & Miller DR (2024) Taxonomy, hosts, and distribution of an emerging invasive mealybug, *Phenacoccus miruku* (Hemiptera: Coccomorpha: Pseudococcidae), in Florida. *Florida Entomologist* **107**(s1), 20240024. https://doi.org/10.1515/flaent-2024-0024

Tanaka H, Sasaki D, Choi J, Husnik F & Kamitani S (2022) Two new species of mealybugs (Hemiptera: Coccomorpha: Pseudococcidae) from Japan. *Zootaxa* **5168**(3), 306–318.

Additional key words: new pest **Computer codes:** PHENMK, JP, US

2024/222 First report of *Xylella fastidiosa* in Peru

In April 2024, *Xylella fastidiosa* was detected in coffee plants (*Coffea* sp.) in the Junín region (Peruvian Amazon) in several farms located in the district of Perené (province of Chanchamayo) and in the districts of Pangoa and Satipo (province of Satipo). In August 2024, positive results were confirmed in asymptomatic citrus plants (mandarin, sweet orange, lime, rough lemon) in the same areas. As of September 21st, the pest had been detected in 21 sites (12 coffee plantations, and 9 citrus orchards). Eradication measures are implemented. They include the intensification of surveys, the destruction of host plants in the infested sites, insecticide treatments against the vectors, and restriction of the movement of host plants.

The pest status of *Xylella fastidiosa* in Peru is officially declared as: **Present: transient**.

Source: IPPC website. Official Pest Reports. Peru (PER-08/2 of 2024-09-30) Detección de *Xylella fastidiosa*. https://www.ippc.int/en/countries/peru/pestreports/2024/09/deteccion-de-xylella-fastidiosa/
SENASA (2024) Resolución Jefatural N.° 155-2024-MIDAGRI-SENASA-JN. https://www.gob.pe/institucion/senasa/normas-legales/6015501-155-2024-midagri-senasa-jn

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

Additional key words: new record **Computer codes:** XYLEFA, PE

2024/223 First report of *Ralstonia pseudosolanacearum* in Peru

Ralstonia pseudosolanacearum (EPPO A2 list) is first reported from Peru. In March 2024, ginger plants (*Zingiber officinale* cultivar Criollo) grown in fields in Junín region (provinces of Chanchamayo and Satipo), exhibited severe disease symptoms starting with plant yellowing and rapidly progressing to rhizome necrosis. The pathogen responsible was identified as *R. pseudosolanacearum* (bacterial wilt) by pathogenicity tests, PCR and sequencing. The authors consider that the pathogen may have been introduced from Asia, the area of origin of this species.

The Junín region provides 90% of Peru's ginger production. In 2024, an estimated average yield loss of 30% has been attributed to bacterial wilt in the Junín region. It may be recalled that outbreaks of *R. pseudosolanacearum* in ginger production have occurred in the EPPO region, which were traced-back to ginger root imported from Peru (EPPO RS 2021/140, RS 2023/092).

The situation of *Ralstonia pseudosolanacearum* in Peru can be described as follows: **Present, not widely distributed.**

Source: Soto-Heredia J, Ramos-Tito S, Alves AR, Ferreira LD, Calderon LL, Rossato M (2024) First report of *Ralstonia pseudosolanacearum* causing bacterial wilt in ginger in Peru. *Plant Disease* (early view). https://doi.org/10.1094/PDIS-09-24-1874-PDN

Pictures *Ralstonia pseudosolanacearum*. https://gd.eppo.int/taxon/RALSPS/photos

Additional key words: new record **Computer codes:** RALSPS, RALSSO, PE

2024/224 First report of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* in the Netherlands

Curtobacterium flaccumfaciens pv. *flaccumfaciens* (EPPO A2 List) causing vascular wilt of bean is reported for the first time from the Netherlands. The pathogen was detected in September 2024 from green beans (*Phaseolus vulgaris)* grown in three fields belonging to the same operator in the municipality of Altena. No specific symptoms were observed. These findings were detected following tracing of seed lots originating in the USA. The seed lot originally imported from the USA had been marketed as sub-lots to several operators in the Netherlands and other EU Member States. Eradication measures are being taken. They include the destruction of the entire crop (including roots) and crop remains; hygiene measures for machinery, root/tuber crops, and personnel for the next two years; a fallow period of at least 120 days; prohibition to cultivate Fabaceae for the next two years; and the eradication of any weeds and volunteer seedlings of Fabaceae.

A buffer zone (100 m radius around the infested field) has been established where growers were advised not to cultivate Fabaceae for the next two years. In addition, monitoring surveys will be carried out in demarcated fields (infested fields plus buffer zones) for the next two years, including sampling and testing of any Fabaceae present.

The pest status of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* in the Netherlands is officially declared as: **Present: under eradication**.

Source: NPPO of the Netherlands (2024-09) First outbreak *of Curtobacterium flaccumfaciens* pv. *flaccumfaciens* on *Phaseolus vulgaris* on three fields for vegetable production in the Netherlands. https://english.nvwa.nl/topics/pest-reporting/pest-reports

Pictures *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*. https://gd.eppo.int/taxon/CORBFL/photos

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

2024/225 First report of tomato brown rugose fruit virus in Croatia

The NPPO of Croatia recently informed the EPPO Secretariat of the first detection of tomato brown rugose fruit virus (*Tobamovirus fructirugosum*, ToBRFV – EPPO A2 List) on its territory. ToBRFV was first detected in October 2024 as part of the official survey programme in a small greenhouse (300 m^2) producing tomato fruit in the municipality of Martijanec (Northern Croatia). Phytosanitary measures according to EU Regulation 2023/1032 are applied.

The pest status of tomato brown rugose fruit virus in Croatia is officially declared as follows: **Present, in specific parts of the Member State, where host crop(s) are grown, under eradication**.

Source: NPPO of Croatia (2024-10).

Commission Implementing Regulation (EU) 2023/1032 of 25 May 2023 establishing measures to prevent the introduction into and the spread within the Union territory of Tomato brown rugose fruit virus (ToBRFV) and amending Implementing Regulation (EU) 2020/1191, OJ L 139. http://data.europa.eu/eli/reg_impl/2023/1032/oj

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

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

2024/226 Tomato leaf curl New Delhi virus found again in Türkiye

In Türkiye tomato leaf curl New Delhi virus (*Begomovirus solanumdelhiense*, ToLCNDV - EPPO A2 List), was first identified in 2019 in cucurbits grown in greenhouses in Antalya province and subsequently eradicated (EPPO RS 2023/117).

Another survey was conducted in the Antalya province (Mediterranean region). ToLCNDV was detected in a total of 108 samples, both in greenhouse production and in open fields, on cucumber (*Cucumis sativus*), melon (*Cucumis melo*) and squash (*Cucurbita pepo*). It is also noted that during this survey, the most prevalent virus species found was cucurbit yellow stunting disorder virus (*Crinivirus cucurbitae*, CYSDV - EPPO A2 List).

The situation of tomato leaf curl New Delhi virus in Türkiye can be described as: **Present, not widely distributed**.

Source: Fidan H, Çelik S, Koç G (2024) Virus diseases limiting greenhouses and open field production of cucurbits in Antalya province. *Mediterranean Agricultural Sciences* **37**(2), 57-65. https://doi.org/10.29136/mediterranean.1454954

Pictures *Begomovirus solanumdelhiense*. https://gd.eppo.int/taxon/TOLCND/photos

Additional key words: detailed record **Computer codes:** CYSDV0, TOLCND, TR:

2024/227 Findings of tobacco ringspot virus in ornamentals in the Netherlands from 1997 to 2020

A recent article reviews findings of tobacco ringspot virus (*Nepovirus nicotianae*, TRSV - EPPO A2 List) in ornamentals made in the Netherlands from 1997 to 2020. A large-scale survey was also conducted from 2005 to 2020. In total, TRSV was identified in 13 ornamental species, comprising over 30 cultivars. No symptoms were observed in infected plants, except for several *Hemerocallis* plants which, after sequencing in 2022, appeared to be co-infected by a novel putative Luteovirus. The nematode vector *Xiphinema americanum sensu lato* was not detected in the 487 soil samples tested.

In addition to the host plants already listed in EPPO Global Database, the following plants species/genera are reported as host: *Allium* (ornamental), *Anemone, Astilbe, Gladiolus, Gypsophila, Hosta, Iris chrysographes, Iris x louisiana, Iris pallida, Iris pseudacorus, Iris spuria, Iris versicolor, Iris virginica, Pentas*.

As TRSV was detected in consignments of ornamental plants from other EU countries, the authors suggested that TRSV may be more widespread than previously assumed and that TRSV should be regulated as a Regulated Non-Quarantine Pest for blueberry, grapevine and soybean, instead of being listed as a quarantine pest. It may be noted that the status of TRSV in the EU has recently been changed to become a RNQP for blueberry and soybean (EPPO RS 2024/166).

Source: Schoen R, de Krom CE, Westenberg M, Botermans M, van Bruggen AS, Meekes ET, Didden L, Hooftman M, Roenhorst JW (2024) Findings of tobacco ringspot virus in ornamentals in the Netherlands from 1997 to 2020 indicate a need for evaluation of its European Union quarantine status. *European Journal of Plant Pathology* (early view). https://doi.org/10.1007/s10658-024-02957-3

Pictures Tobacco ringspot virus. https://gd.eppo.int/taxon/TRSV00/photos

Additional key words: detailed record, RNQP **Computer codes:** TRSV00, XIPHAA, NL

2024/228 *Austropuccinia psidii* added again to the EPPO Alert List

Why: *Austropuccinia psidii*, causing myrtle rust, was added to the EPPO Alert List (as *Puccinia psidii*) in 1998 and removed in 2003 as a Pest Risk Analysis concluded that the risk was low for the EPPO region. However, since then, the fungus has established in areas with a climate more similar to the climate of the EPPO region, significantly increased its host range, and recent interceptions indicate that it can move in trade with plants for planting. In addition, new aggressive races of *A. psidii* have been observed. The Panel on Phytosanitary Measures considered that it should be added again to the Alert List to raise awareness among NPPOs.

Where:
A. psidii is considered to be native from South America.
Africa: South Africa.
Asia: China (Guangdong, Hainan), Indonesia (Java, Sumatra), Japan, Singapore.
North America: Mexico, United States of America (California, Florida, Hawaii).
Central America and Caribbean: Costa Rica, Cuba, Dominica, Dominican Republic, Guatemala, Jamaica, Panama, Puerto Rico, Trinidad and Tobago, Virgin Islands (British), Virgin Islands (US).
South America: Argentina, Brazil (Amapa, Bahia, Espirito Santo, Minas Gerais, Parana, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Santa Catarina, Sao Paulo), Colombia, Ecuador, Paraguay, Uruguay, Venezuela.
Oceania: Australia (New South Wales, Northern Territory, Queensland, Tasmania, Victoria), New Caledonia, New Zealand.

On which plants: *A. psidii* infects over 500 species in the Myrtaceae family. This includes numerous native species in Oceania, as well as commercially important species for wood production (e.g. *Eucalyptus* spp.), for fruit production (e.g. *Acca sellowiana, Psidium guava)* or as ornamentals (e.g. *Callistemon*, *Eugenia*, *Melaleuca*, *Syzygium*). *Myrtus communis*, the sole Myrtaceae species native to Europe, and an important component of vegetation in Mediterranean regions, was recently shown to be a host.

Damage: *A. psidii* infects young leaves, shoot tips and young stems. Fruit and flower parts are also susceptible. The first signs of rust infection are tiny spots or pustules which then evolve to form distinctive yellow pustules. The disease can cause deformed leaves, heavy defoliation of branches, dieback, stunted growth and even plant death.

Dissemination: Urediniospores of *A. psidii* can be wind-dispersed over long distances. Spores can also be dispersed by animals (e.g. birds, bats, insects). Viable spores have been detected on clothing, personal effects, and equipment following visits to rust-affected plantations. In trade, infected plants for planting are considered as a pathway of introduction into new areas. The potential introduction with wood is not clear.

Pathways: Plants for planting, cut foliage, wood?

Possible risks: *A. psidii* has caused significant impacts in *Eucalyptus* plantations in Brazil and in natural ecosystems in Oceania. Once introduced into an area, it has proved impossible to eradicate. In the EPPO region, hosts plants are grown for wood and ornamental purposes, and *M. communis* is an important species in Mediterranean ecosystems. There is uncertainty on the climatic suitability of the whole EPPO region for the establishment of the fungus but it seems advisable to prevent its introduction.

Sources

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EPPO RS 1998/199, 1999/134, 2003/041, 2014/150, 2023/194, 2024/049, 2024/228

Panel review date – Entry date 2024-10

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

2024/229 First report of *Klasea quinquefolia* in Italy

Klasea quinquefolia (Asteraceae) is a perennial and rhizomatous species native to the Russian Caucasus, Armenia, Azerbaijan, Georgia, Iran, and Asian parts of Türkiye. In the native range, *K. quinquefolia* occurs in deciduous forests or open areas at altitudes between 300 – 2 200 m a.s.l. *K. quinquefolia* was first recorded in Italy in August 2023 at the Monza Park, Monza (Monza and Brianza province), Lombardy. In total 10 populations were found ranging from a few individuals to 120-140 individuals occupying an area of 8.5 hectares. In total, the population was approximately 500 individuals with approximately 350 flowering individuals. The population occurred on the edge of a forest along a pathway. Continuous monitoring is required of the population to provide information on the invasion potential of *K. quinquefolia*. Eradication may be possible.

Source: Borghesan S, Fasano F, Crippa A, Quaglini LA, Citterio S, Banfi E, Galasso G, Gentili R (2024) First record of *Klasea quinquefolia* (M.Bieb. ex Willd.) Greuter & Wagenitz (Asteraceae) in Italy. *BioInvasions Records* **13**, 577–588.

Additional key words: new record, invasive alien plants **Computer codes:** QLKQU, IT

2024/230 Nine non-native grass species (Poaceae) in the island of Madeira (PT)

During field surveys conducted in 2021 and 2022, nine non-native grass species (Poaceae) are newly reported for the island of Madeira, Portugal. All species are reported as established locally in the island of Madeira.

Table 1. Nine non-native grass species in Madeira, Portugal.

Species	Native range	Presence in Madeira	Habitats in Madeira
Axonopus fissifolius	Americas	Funchal	Ruderal
Chloris pycnothrix	South America / Africa	Santa Cruz	Ruderal
Digitaria radicosa	Asia, Oceania	Funchal	Parks and gardens
Digitaria violascens	Asia, Oceania	Funchal/Machico	Urban / Woodland footpaths
Eragrostis multicaulis	Asia	Funchal	Urban and semi-urban
Nassella hyalina	South America	Funchal	Footpath
Paspalum notatum	South America	Santa Cruz	Ruderal
Paspalum urvillei	South America	Santa Cruz	Grassland / riverbanks
Sporobolus fertilis	Asia	Santo da Serra	Urban

Source: Verloove F, Gonçalves Silva JJ, Leliaert F (2024) Critical notes on grasses (Poaceae) of Madeira, Portugal. *Phytotaxa* **670**, 1-17.

Additional key words: new record, invasive alien plants **Computer codes:** AXOAF, CHRPY, DIGTI, DIGVI, ERAMU, 1NASG, PASNO, PASUR, SPZIP, PT

2024/231 Management of *Ambrosia trifida*

Ambrosia trifida (Asteraceae – EPPO A2) is native to North America, where it is recorded as weedy in many US states. It was introduced into the EPPO region at the end of the 19th century, and it has expanded its range since the mid-1900s. Studies on eradication measures to control *A. trifida* were conducted in 2022 in the Republic of Korea. In replicated 2 by 2 m plots, *A. trifida* was treated using different methods (1) cutting of plants just above ground level, and (2) uprooting of plants, where all roots were removed from the site. In the spring of 2023, in each plot, following control of *A. trifida*, three different native seed mixtures were sown as well as a control plot in which no seeds were sown. These included seed mixtures of annual species (*Lactuca indica*, *Elsholtzia splendens* and *Portulaca oleracea*), seed mixtures of non-woody plants (*Phragmites australis*, *Pennisetum alopecuroides* and *Plantago asiatica*) and seed mixtures of woody perennials (*Lespedeza bicolor*, *L. juncea* and *Sorbaria sorbifolia*). In the late summer 2023, the number of shoots and cover of all plant species, including *A. trifida* was estimated for each plot. The presence of *A. trifida* was lowest in the uprooting treatment. The sowing of native seeds following invasion removal did not show any significant additional suppressive effects on invasion of *A. trifida* or increase of native species diversity. The EPPO Standard PM 9/31 *Ambrosia trifida* details that it is possible to achieve total control of *A. trifida* with a combination of chemical and mechanical means though this is most applicable to small outbreaks.

Source: Byun C, Singh K, Hong SH, Lee J, Yoon TK, Kang H (2024) Uprooting is a promising tool to control invasive giant ragweed and recover native diversity. *NeoBiota* **94** 311–331.

EPPO (2021) PM 9/31 *Ambrosia trifida*. *EPPO Bulletin* **51**, 616-621.

Pictures *Ambrosia trifida*. https://gd.eppo.int/taxon/AMBTR/photos

Additional key words: invasive alien plants **Computer codes:** AMBTR, KR

2024/232 Alien plant species associated with railways in the Czech Republic

A study of plant species (including invasive alien plant species) along railways was conducted in the Czech Republic. The study was conducted along the First Transit Railway corridor from Břeclav to Děčín. An inventory of the vascular plant taxa were recorded from 39 railway stations, railway yards and their close vicinity between June - August of 2020-2022. Alien plant species represented 40 % of the total number (309) of plant plant species recorded. The majority of alien species (239) were naturalised, 53 were classified as invasive and 70 were casual. Table 1 lists the most frequently occurring invasive alien plants recorded in the study. The majority (130) of alien species were of Mediterranean origin, 55 taxa were from the rest of Europe, 54 from North America and 53 from Asia. The highest diversity of alien and invasive plant species were recorded from the largest train stations. Railways are ruderal habitats for some invasive alien plant species and they can act at the starting point for further spread into natural and agricultural habitats.

Table 1. Most frequently occurring invasive alien plants in the study.

Species	Family	Type	Native range
Arrhenatherum elatius	Poaceae	Archaeophyte	Africa/Asia/Europe
Cirsium arvense	Asteraceae	Archaeophyte	Africa/Asia/Europe
Digitaria sanguinalis	Poaceae	Archaeophyte	Africa/Asia/Europe
Erigeron annuus	Asteraceae	Neophyte	North America
Erigeron canadensis	Asteraceae	Neophyte	Americas
Lactuca serriola	Asteraceae	Archaeophyte	Africa/Asia/Europe
Portulaca oleracea	Portulacaceae	Archaeophyte	Africa/Asia/Europe
Robinia pseudoacacia	Fabaceae	Neophyte	North America
Sisymbrium loeselii	Brassicaceae	Neophyte	Asia/Europe
Solidago canadensis	Asteraceae	Neophyte	North America

Source: Kutlvašr J, Turková S, Hejda M, Vojík M, Kadlecová M, Bímová KB, Pyšek P, Pergl J (2024) Railways as a source of alien plants. *Preslia* **96**, 247-266.

Additional key words: invasive alien plants **Computer codes:** ARREL, CIRAR, DIGSA, ERIAN, ERICA, LACSE, POROL, ROBPS, SOOCA, SSYLO, CZ

2024/233 Using iNaturalist to determine invasiveness of *Melaleuca* species in South Africa

Woody invasive alien plant species can have a wide range of negative impacts from displacement of plant species to negative impacts on water resources and degradation of agricultural land. The genus *Melaleuca* comprises of a number of fast growing tree species that are invasive in different regions/areas of the world. For example *M. quinquenervia*, which is native to Australia, has been widely introduced into tropical regions of the world where it can become invasive with negative impacts. *Melaleuca* species are relatively recent additions into South Africa where they have been planted in gardens and along roadsides since at least the 1980s. Reports of invasions are now being recorded, for example for *Melaleuca rugulosa*, and *M. hypericifolia*. Data was collected for all *Melaleuca* species reported in iNaturalist. In 2023, in total there were 3 221 records from across the country. Following filtering of uncertain records, a total of 2 815 records were left comprising of 26 species in total. Before this study, for 5 of the species, there was no information on their invasive potential in South Africa. For each of the 26 species, an Invasiveness Index was calculated for each municipality. The Invasiveness Index was used to determine which areas have the highest risk of invasion. Cape Town had the highest number of records. 56 % of the records in the city of Cape Town were recorded as casual (cultivated) and 43 % were naturalised. The species with the highest invasion potential were *M. rugulosa*, *M. armillaris*, *M. hypericifolia*, *M. styphelioides*, and *M. quadrifida*. These species can be the focus of management efforts to mitigate any spread into natural areas.

Source: Potgieter LJ, ter Huurne MB, Richardson DM (2024) Community science can inform invasive species management: *Melaleuca* (Myrtaceae) in South Africa. *Ecological Solutions and Evidence* **5**, https://doi.org/10.1002/2688-8319.12391

Additional key words: invasive alien plants **Computer codes:** 1MLAG, ZA