

# New invasive forest pests threatening the European and Mediterranean forests: an EPPO perspective



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**REUFIS Annual meeting**  
June 2024, Skopje



# EPPPO: European and Mediterranean Plant Protection Organization

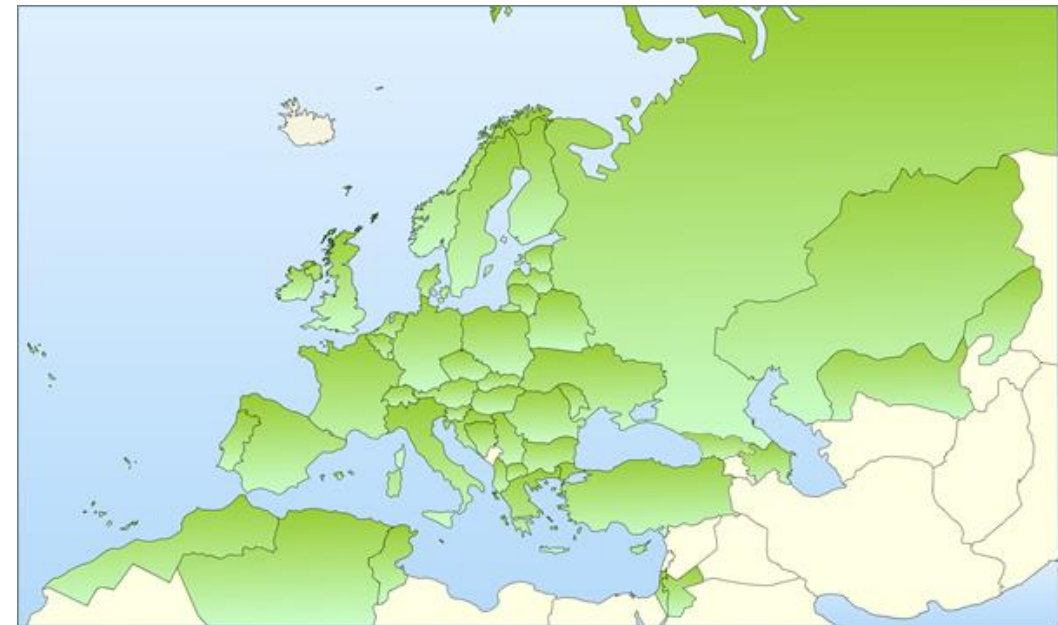


Food and Agriculture  
Organization of the  
United Nations



International  
Plant Protection  
Convention

- an intergovernmental organization
- 1 of 10 regional plant protection organizations under IPPC
- created in 1951 by 15 countries
- in 2024: 52 member countries
- international cooperation in plant health:
  - plant quarantine &
  - plant protection products
- works for and with national plant protection organizations



[www.eppo.int](http://www.eppo.int)



# Work of EPPO in plant quarantine




Manage an early warning system (EPPO Alert List)



Evaluate the risks presented by emerging pests (Pest Risk Analysis)



Make recommendations on pests which should be regulated in the EPPO region



Prepare associated Standards (e.g., diagnostics, phytosanitary measures)

# EPPO Alert List (since 1999)

## Purpose of the EPPO Alert List

The main purpose of the Alert List is to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and achieve early warning. It can also be used by EPPO to select candidates which may be submitted to a Pest Risk Analysis (PRA). Pests are marked with an asterisk\* in the table below when a PRA is planned or under development within EPPO. The entry date corresponds to the date when the pest was added to the Alert List. [Read a short introduction to the EPPO Alert List.](#)



## EPPO Alert List – last updated in 2024-04

### Insects and mites

Name	Main host plants	PRA	Entry date
<i>Agrilus mali</i> (Coleoptera: Buprestidae)	<i>Malus</i> spp.	*	2020-07
<i>Anoplophora horsfieldii</i>	Broadleaf trees		2023-10
<i>Arboridia kakogawana</i> (Hemiptera: Cicadellidae)	<i>Vitis vinifera</i>	*	2020-01
<i>Atherigona orientalis</i> (Diptera: Muscidae)	Capsicum, tomato		2023-11
<i>Atherigona reversura</i> (Diptera: Muscidae)	<i>Cynodon dactylon</i>		2022-05
<i>Blissus insularis</i> (Hemiptera: Blissidae)	<i>Stenotaphrum secundatum</i> (St. Augustine grass)		2023-02
<i>Chloridea virescens</i> (Lepidoptera: Noctuidae)	Polyphagous	*	2023-01
<i>Elasmopalpus lignosellus</i> (Lepidoptera: Pyralidae)	Polyphagous		2019-11
<i>Euplatypus parallelus</i> (Coleoptera: Curculionidae: Platypodidae)	Polyphagous		2021-07
<i>Eutetranychus banksi</i> (Acari: Tetranychidae) – <b>NEW</b>	Polyphagous		2024-04

[https://www.eppo.int/ACTIVITIES/plant\\_quarantine/alert\\_list](https://www.eppo.int/ACTIVITIES/plant_quarantine/alert_list)



# *Agrilus mali* (Coleoptera: Buprestidae), Apple buprestid

**Pest:** of *Malus* (cultivated and wild apple species).

**Impact:** severe impact on *Malus sieversii* forests in Tianshan Mountains in China.

**Native range:** Asia.

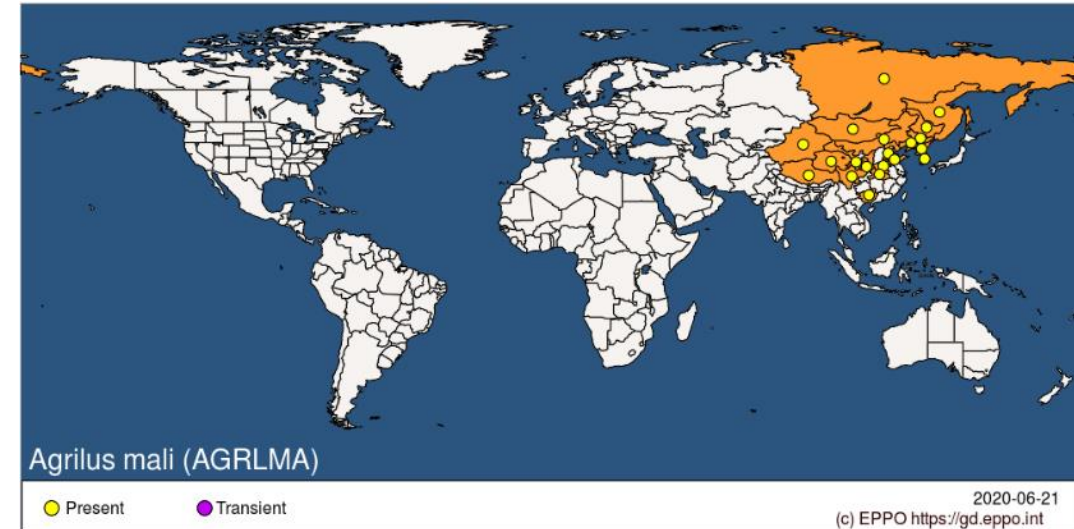
**EPPO region:** Far East of Russia.

**Pathways:** plants for planting, wood, cut branches.

*Only forest species are shown*

Added to the Alert List in 2020.

EPPO prepared a PRA in 2023/2024. The pest might be added to the EPPO A2 List.



Photos: Dr Wang Zhi-Yong (CN)

# *Euplatypus parallelus*

(Coleoptera: Curculionidae: Platypodinae)

Only forest species are shown

Added to the Alert List in 2021.

**Pest:** highly polyphagous ambrosia beetle of woody plants. It demonstrated invasive behaviour in Asia and might be associated with pathogenic fungi.

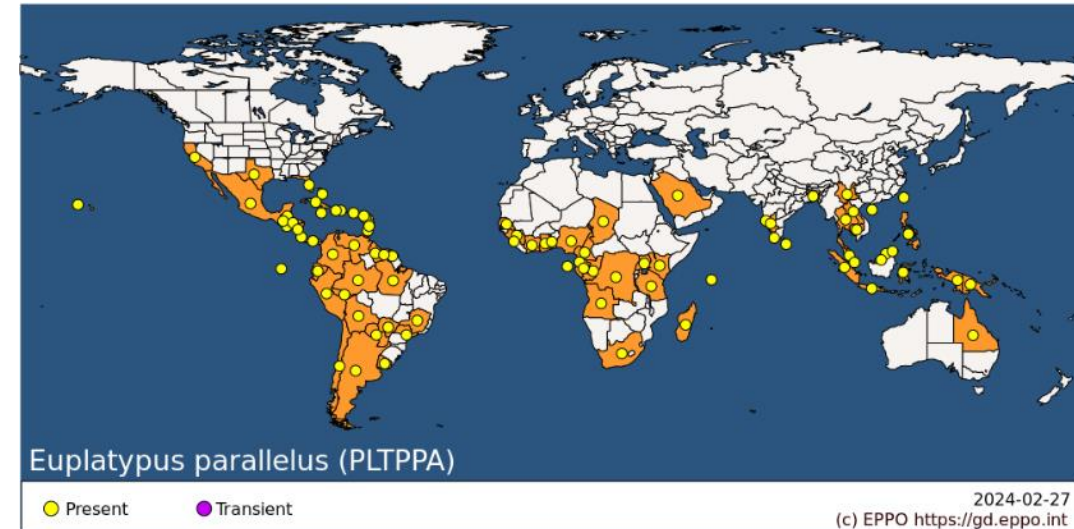
**Intercepted:** in international trade.

**Native range:** Central and South America.

**Introduced:** widely.

**EPPO region:** absent.

**Pathways:** wood, wood packaging materials, plants for planting.



Photos: Dalia Del Nista BCP of Leghorn port (IT)



# *Pochazia shantungensis*

(Hemiptera: Homoptera: Ricaniidae)

Only forest species are shown

Added to the Alert List in 2021.

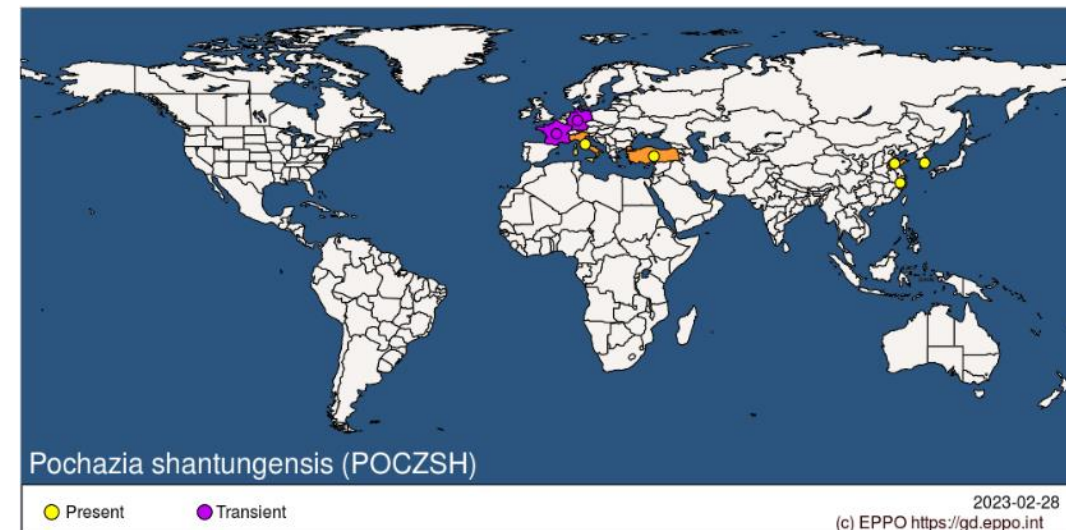
**Pest:** highly polyphagous, including fruit, forest and ornamental trees.

**Native range:** China.

**Introduced:** Republic of Korea.

**EPPO region:** Türkiye (2018), France (2018), Germany (2021), Russia (2022).

**Pathways:** plants for planting.





# *Toumeyella parvicornis*

(Hemiptera: Coccidae), Pine tortoise scale

*Only forest species are shown*

Added to the Alert List in 2021.

EPPO prepared a PRA report in 2024. The pest might be added to the EPPO A2 List.

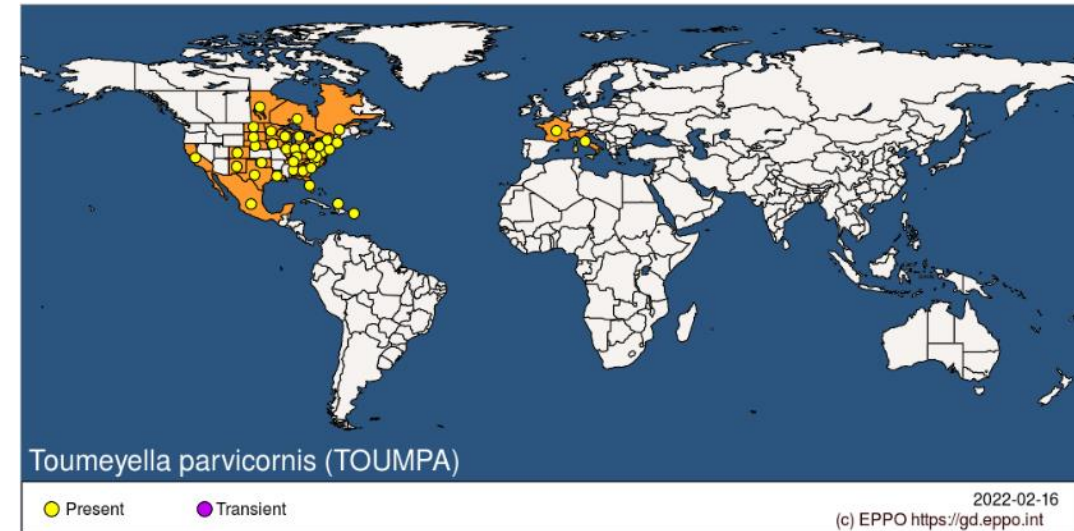
**Pest:** of *Pinus* species.

**Native range:** North America.

**Introduced:** the Caribbean.

**EPPO region:** Italy (2014), France (2021).

**Pathways:** plants for planting, cut branches (including Christmas trees).





# *Lambdina fiscellaria*

(Lepidoptera: Geometridae), Hemlock looper

**Pest:** polyphagous (coniferous and deciduous trees).

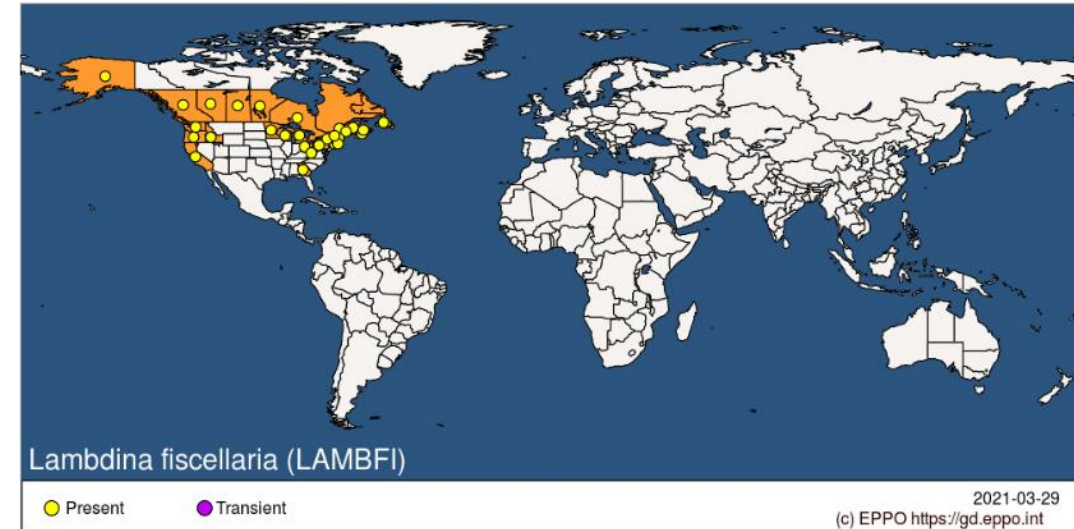
**Native range:** North America (3 subspecies).

**EPPO region:** absent.

**Pathways:** plants for planting, wood (?), mosses and lichens.

*Only forest species are shown*

Added to the Alert List in 2021.





# *Ceratocystis ficicola* (Ascomycota: Ceratocystidaceae)

**Pest:** only *Ficus carica*.

**Native range:** Japan.

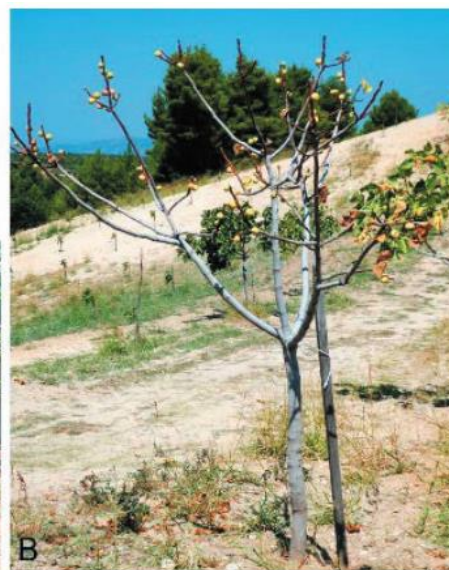
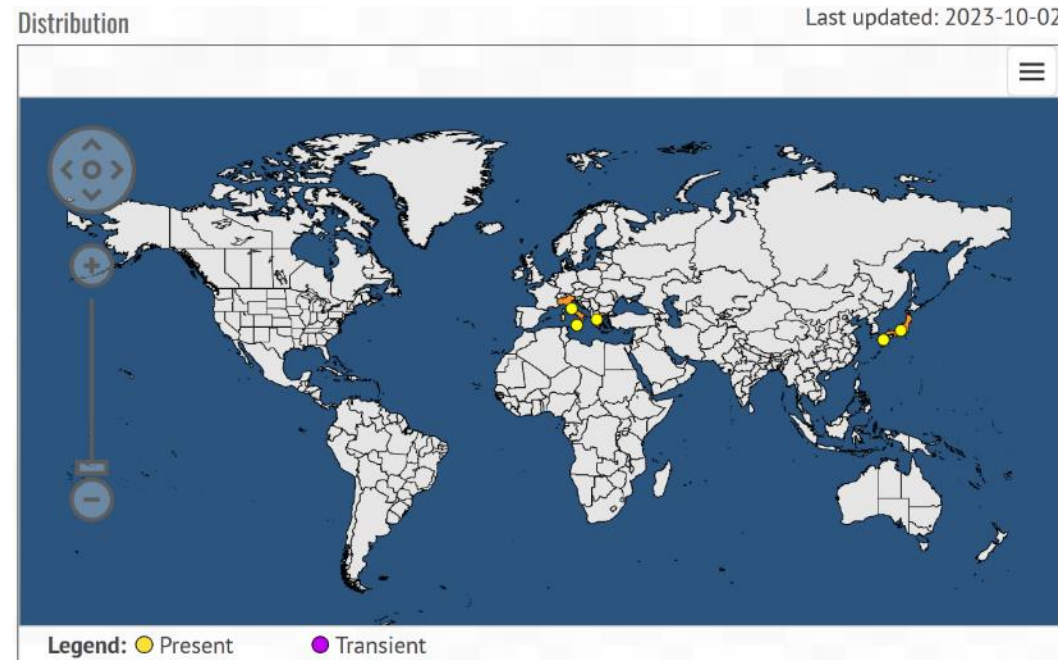
**EPPO region:** Greece (2018) and Italy (2021).

**Pathways:** plants for planting of *Ficus carica*.

*Only forest species are shown*

Added to the Alert List in 2022.

EPPO is preparing a PRA in 2024.  
The pest might be added to the  
EPPO A2 List.



Tsopelas et al. (2021)



# *Phytophthora pluvialis* (Oomycota: Peronosporaceae)

Only forest species are shown

Added to the Alert List in 2022.

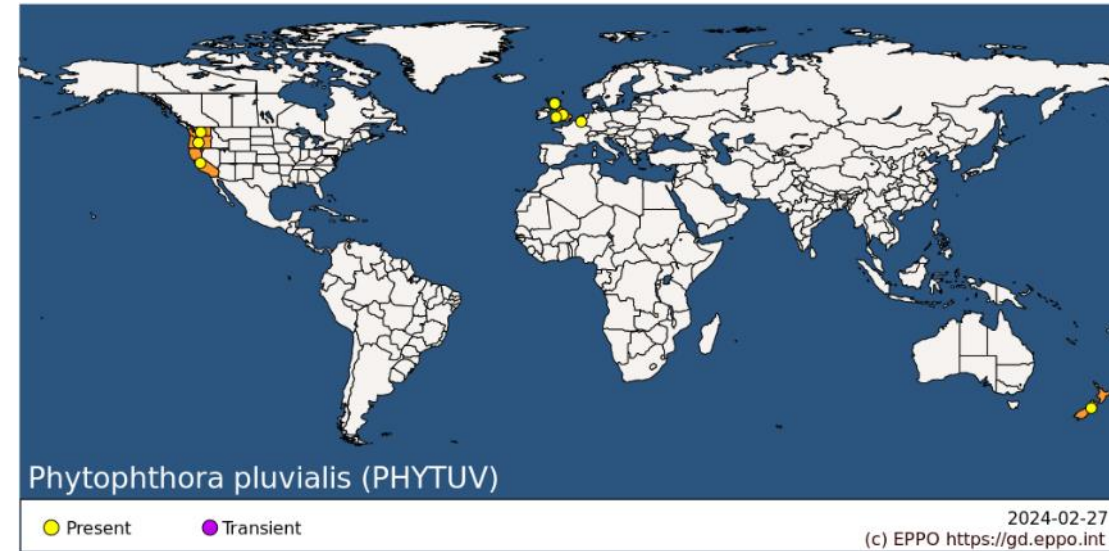
**Pest:** of conifers (*Pseudotsuga menziesii*, *Pinus* spp., *Tsuga heterophylla*) and *Notholithocarpus densiflorus* (?).

**Native range:** NW North America.

**Introduced:** NZ and UK (under eradication).

**EPPO region:** UK (2021), BE (2023).

**Pathways:** plants for planting, wood, cut branches, needles, mulch (?), soil.





# *Xylotrechus pyrrhoderus* (Coleoptera: Cerambycidae)

**Pest:** of grapevine and ornamental Vitaceae.

**Native range:** Asia.

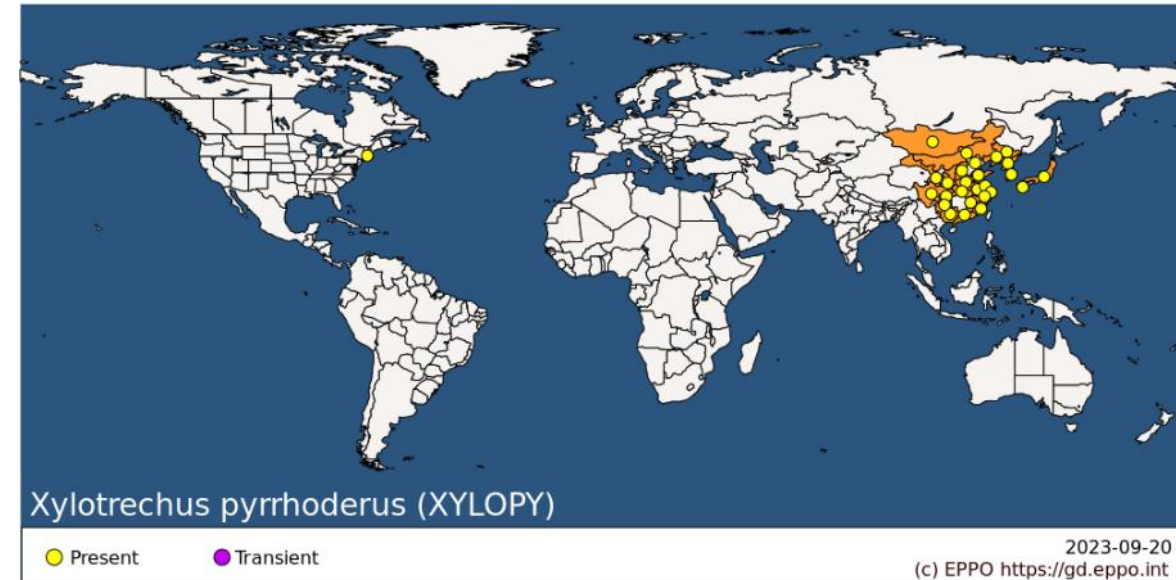
**Introduced:** USA.

**EPPO region:** absent.

**Pathways:** plants for planting, wood (?).

*Only forest species are shown*

Added to the Alert List in 2023.



Only forest species are shown

Added to the Alert List in 2023.

# *Anoplophora horsfieldii* (Coleoptera: Cerambycidae), Chinaberry yellow-banded longhorn beetle

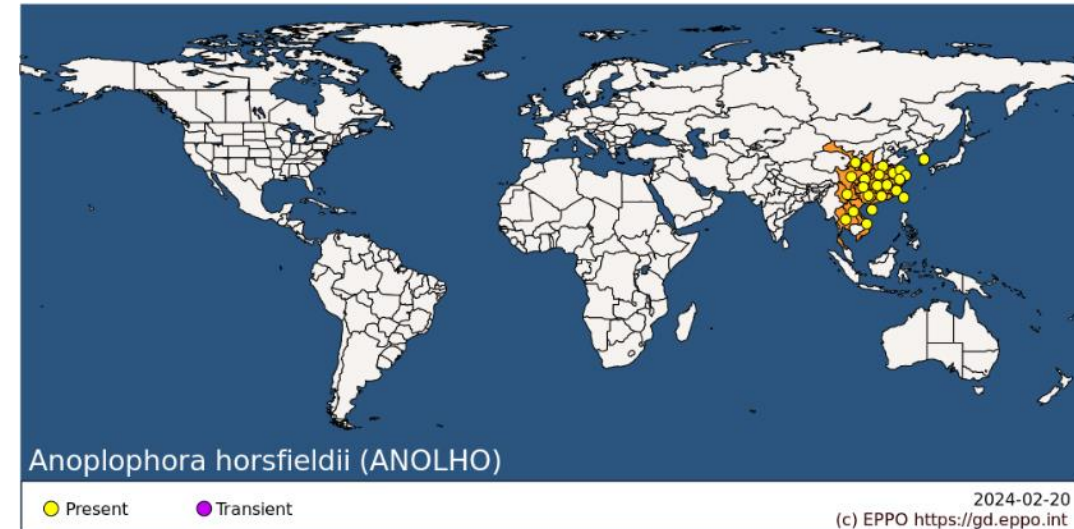
**Pest:** polyphagous (*Quercus*, *Ulmus*, *Citrus*, *Celtis*,  
*Camellia*, *Azadirachta*).

**Native range:** Asia.

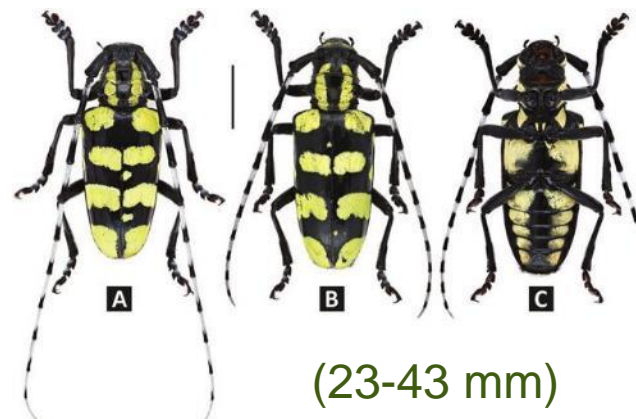
**Introduced:** Republic of Korea.

**EPPO region:** absent.

**Pathways:** plants for planting, wood.



<https://insectintegration.com/archives/60530>



Lee et al., 2023. <https://doi.org/10.1093/jipm/pmad008>



# *Trachymela sloanei*

(Coleoptera: Chrysomelidae), Australian tortoise beetle

Only forest species are shown

Added to the Alert List in 2024.

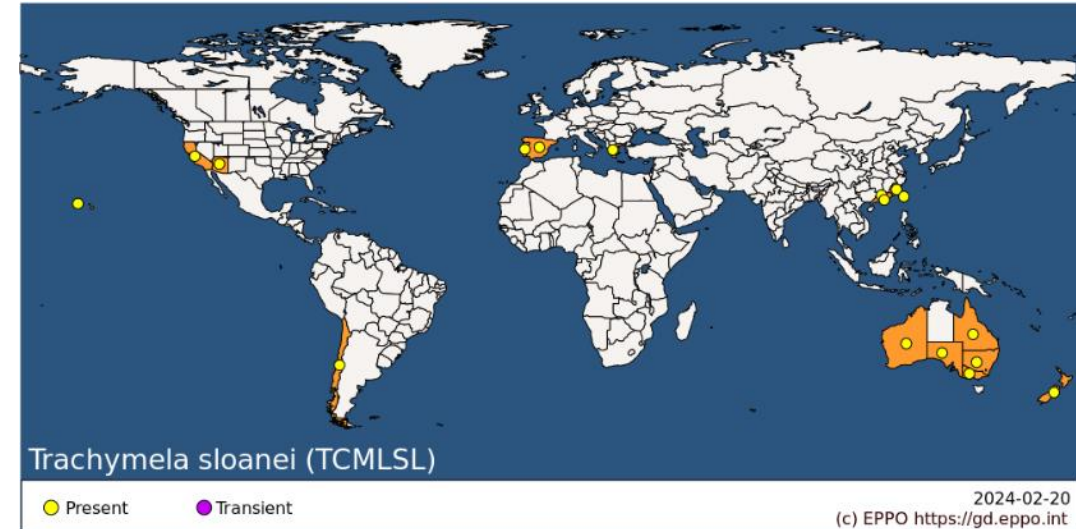
**Pest:** Eucalypts (*Corymbia*, *Eucalyptus*).

**Native range:** Australia.

**Introduced:** NZ, USA, Chile, China, Taiwan.

**EPPO region:** Spain, Portugal, Greece.

**Pathways:** plants for planting, cut foliage.





# *Pseudips mexicanus*

(Coleoptera: Curculionidae: Scolytinae)

Only forest species are shown

Added to the Alert List in 2024.

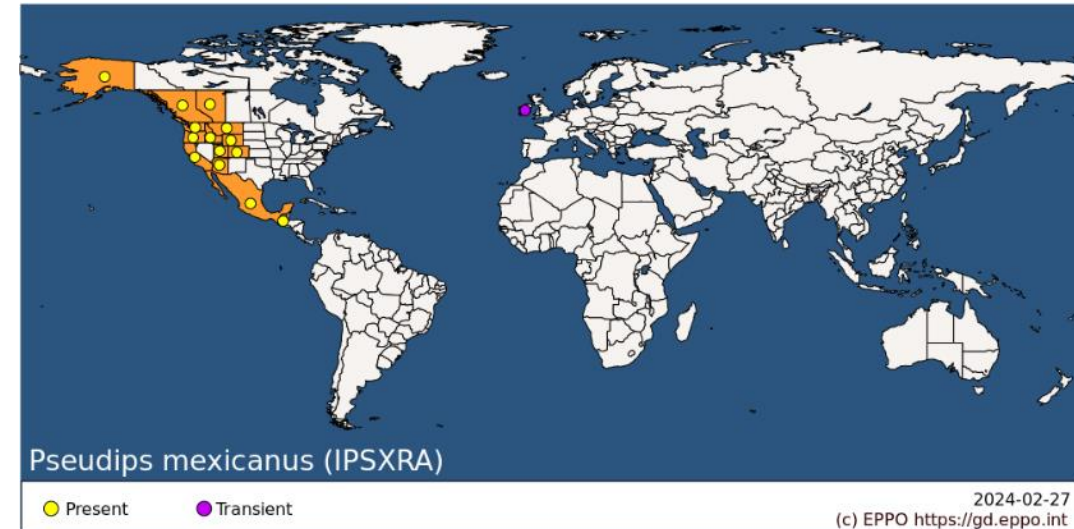
**Pest:** *Pinus* spp.

**Native range:** Western North and Central Americas.

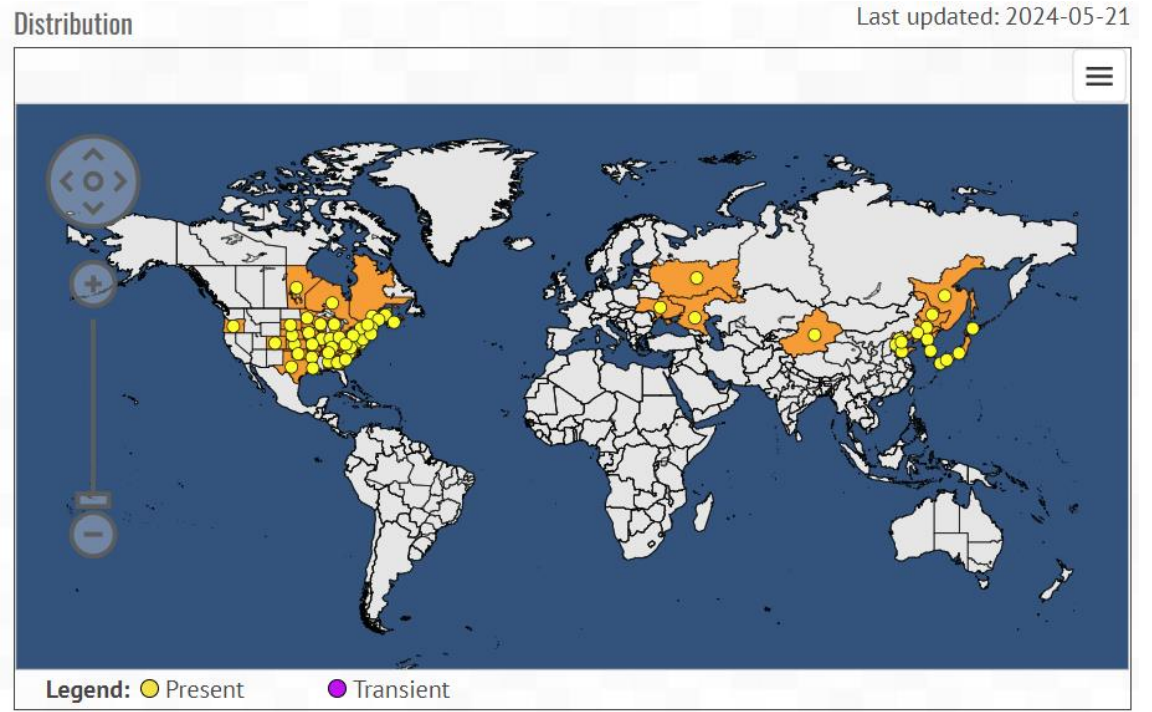
**Intercepted:** in trade in China and USA.

**EPPO region:** Ireland.

**Pathways:** plants for planting, wood, wood chips, wood packaging material, bark.



In October 2022,  
the EPPO Panel on Quarantine Pests for Forestry decided to  
organize a network of experts working on surveillance,  
monitoring, and control of *Agrilus planipennis* in Europe.



## Network of experts working on surveillance, monitoring, and control of Emerald ash borer

244

Responses

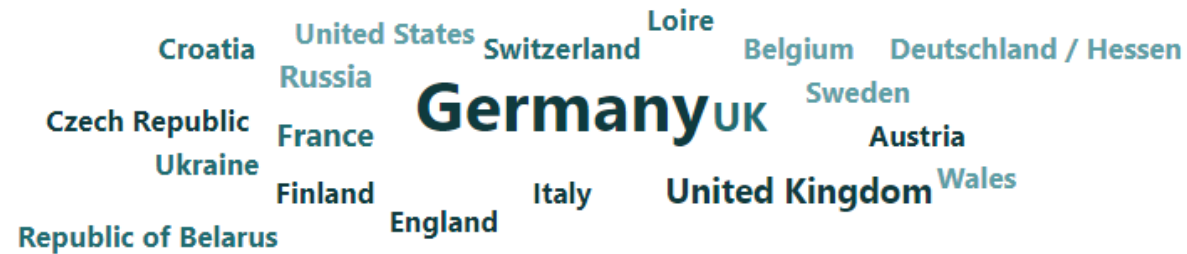
11:03

Average time to complete

Active

Status

26 respondents (11%) answered **Germany** for this question.



35 respondents (15%) answered **Institute** for this question.



240+ participants  
40+ countries

### How to participate in the network

The EPPO Secretariat invites National Plant Protection Organizations (NPPOs), researchers, and practitioners to subscribe to the email list via the following link (your registered email address will not be disclosed).

Subscribe here: <https://forms.office.com/e/7GxvJkS0YT> ✓





## Network of experts working on surveillance, monitoring, and control of *Agrilus planipennis* (Emerald ash borer)

- Call for participation (April 2023) -

In October 2022, the EPPO Panel on Quarantine Pests for Forestry decided to establish a network of experts working on surveillance, monitoring, and control of *Agrilus planipennis* (Coleoptera: Buprestidae – Emerald ash borer). This network will be established in association with an EPPO-EU project (Grant agreement SANTE/2020/G1/EPPO/SI2.823766).



Adult – Courtesy: Eduard Jendek



Larva – Courtesy: Eduard Jendek



Exit hole – Courtesy: Eduard Jendek



Trap – Courtesy: Dominic Eyre

### Objective and scope of the network

The objective of this network is to exchange data on monitoring and to get a better understanding of the current distribution and spread of *A. planipennis* in the EPPO region. Moreover, information on effective trapping and management options could be shared.

The network will focus on the EPPO region, however members from other regions are also welcome as significant knowledge on the pest biology, as well as experience on monitoring and control have been gathered in other parts of the world.

## Newsletters of the Network

### 2023

- [Newsletter # 1 \(July 2023\)](#) 
- [Newsletter # 2 \(September 2023\)](#) 
- [Newsletter # 3 \(December 2023\)](#) 

### 2024

- [Newsletter # 4 \(March 2024\)](#) 



## Useful links

### EPPO Standards and documents on *Agrilus planipennis*

- [EPPO Standards. Phytosanitary procedures. PM 3/87 \(1\) Monitoring and consignment inspection of wood chips, hogwood and bark for quarantine pests \[2019\]](#)
- [EPPO Standards. Diagnostics. PM 7/154\(1\) \*Agrilus planipennis\* \[2023\] NEW](#)
- [EPPO Standards. Commodity-specific phytosanitary measures. PM 8/11 \(1\) \*Fraxinus\* \[2020\]](#)
- [EPPO Standards. National regulatory control systems. PM 9/14 \(1\) \*Agrilus planipennis\*: procedures for official control \[2013\]](#)
- [EPPO Pest Risk Analysis for \*Agrilus planipennis\* \[2013\]](#)
- [EPPO Datasheet on \*Agrilus planipennis\* \[revised in 2021\]](#)
- [EPPO Reporting Service articles on \*Agrilus planipennis\*](#)
- [EPPO Poster on \*Agrilus planipennis\* \[template poster, PowerPoint file\]](#)

### EPPO links

- [EPPO Global Database](#)
- [EPPO Platform on PRAs \(FRA documents\)](#)
- [EPPO-Q-Bank \(specimens and sequences\)](#)
- [EPPO Platform on Communication Material \(search the platform by organism, select \*Agrilus planipennis\*\)](#)


### Other links of special interest

- [European Food Safety Agency \(EFSA\) Pest survey card on \*Agrilus planipennis\*](#)
- [CABI datasheet for \*Agrilus planipennis\* \(emerald ash borer\)](#)
- [Global Biodiversity Information Facility \(GBIF\) datasheet for \*Agrilus planipennis\*](#)
- [iNaturalist page for \*Agrilus planipennis\*](#)
- [The International Plant Sentinel Network \(IPSN\): Emerald Ash Borer monitoring in Eastern Europe](#)
- [Observatree: Monitoring Tree Health Project \(UK\): Useful information materials on \*A. planipennis\*](#)
- [Dynamics of the invasion of \*A. planipennis\* in Ukraine in 2019-2023 \(a dynamic map produced by The Ukrainian State Specialized Forest Protection Enterprise DSLP "Kharkivlisozakhist\)](#)



# In 2023–2024, four issues of the Newsletter were published


ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES



EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

## Newsletter

of the EPPO Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis*



No. 1 PARIS, 2023-07

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The webpage of the Network:  
[https://www.eppo.int/RESOURCES/special\\_projects/agrilus\\_planipennis\\_network](https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network)


A photo of *Agrilus planipennis*: Courtesy of Dr. Eduard Jendek.

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ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES



EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

## Newsletter

of the EPPO Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis*



No. 2 PARIS, 2023-09

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The webpage of the Network:  
[https://www.eppo.int/RESOURCES/special\\_projects/agrilus\\_planipennis\\_network](https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network)

Photo of *Agrilus planipennis* above: Courtesy of Dr. Eduard Jendek.

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ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES



EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

## Newsletter

of the EPPO Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis*



No. 3 PARIS, 2023-12

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The webpage of the Network:  
[https://www.eppo.int/RESOURCES/special\\_projects/agrilus\\_planipennis\\_network](https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network)


Photo of *Agrilus planipennis* above: Courtesy of Dr. Eduard Jendek.

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ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES



EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

## Newsletter

of the EPPO Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis*



No. 4 PARIS, 2024-03

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The webpage of the Network:  
[https://www.eppo.int/RESOURCES/special\\_projects/agrilus\\_planipennis\\_network](https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network)

Photo of *Agrilus planipennis* above: Courtesy of Eduard Jendek.

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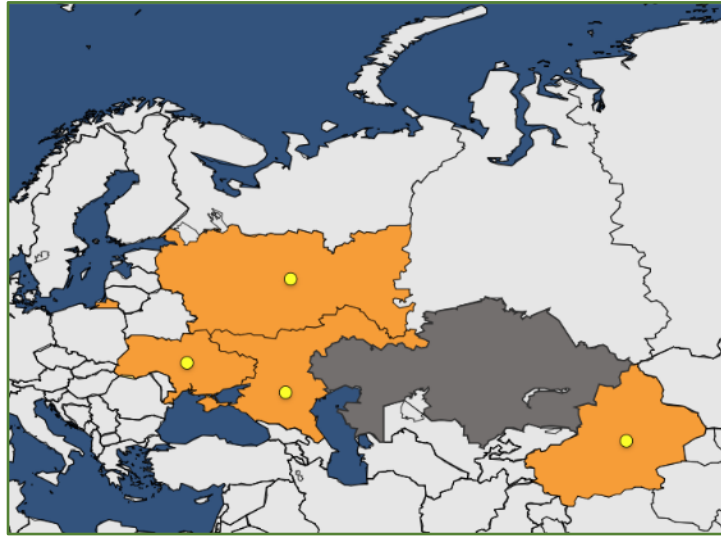
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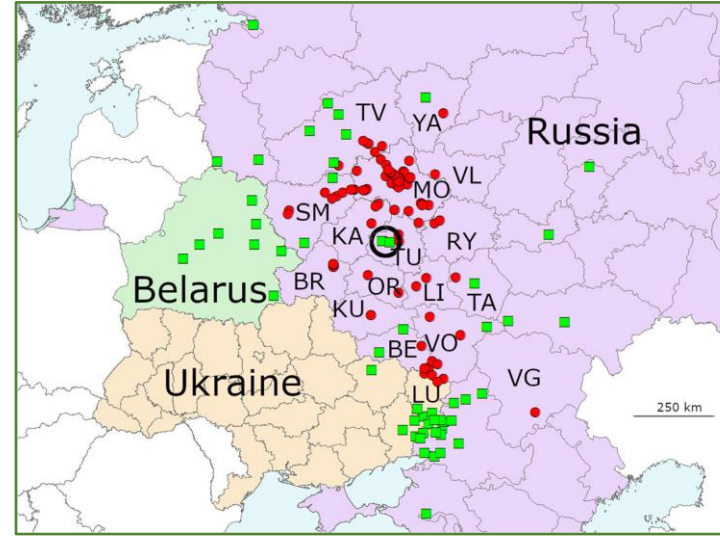
To subscribe: <https://forms.office.com/e/7GxvJkS0YT> or email to [dm@epp.int](mailto:dm@epp.int)



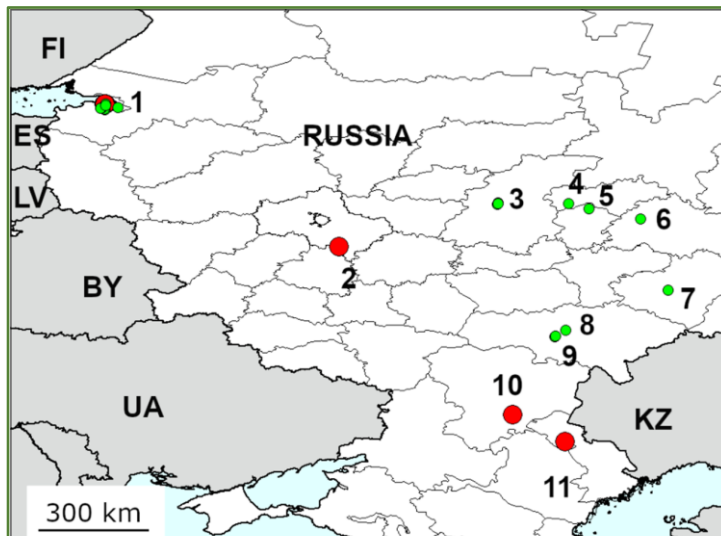
# A call to create a dynamic map of spreading in Europe



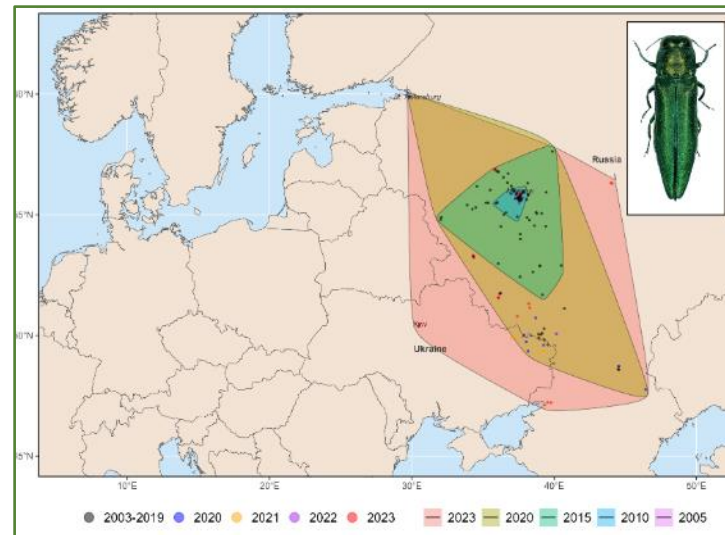
(from EPPO Global Database)



(from Orlova-Bienkowskaja et al., 2020)

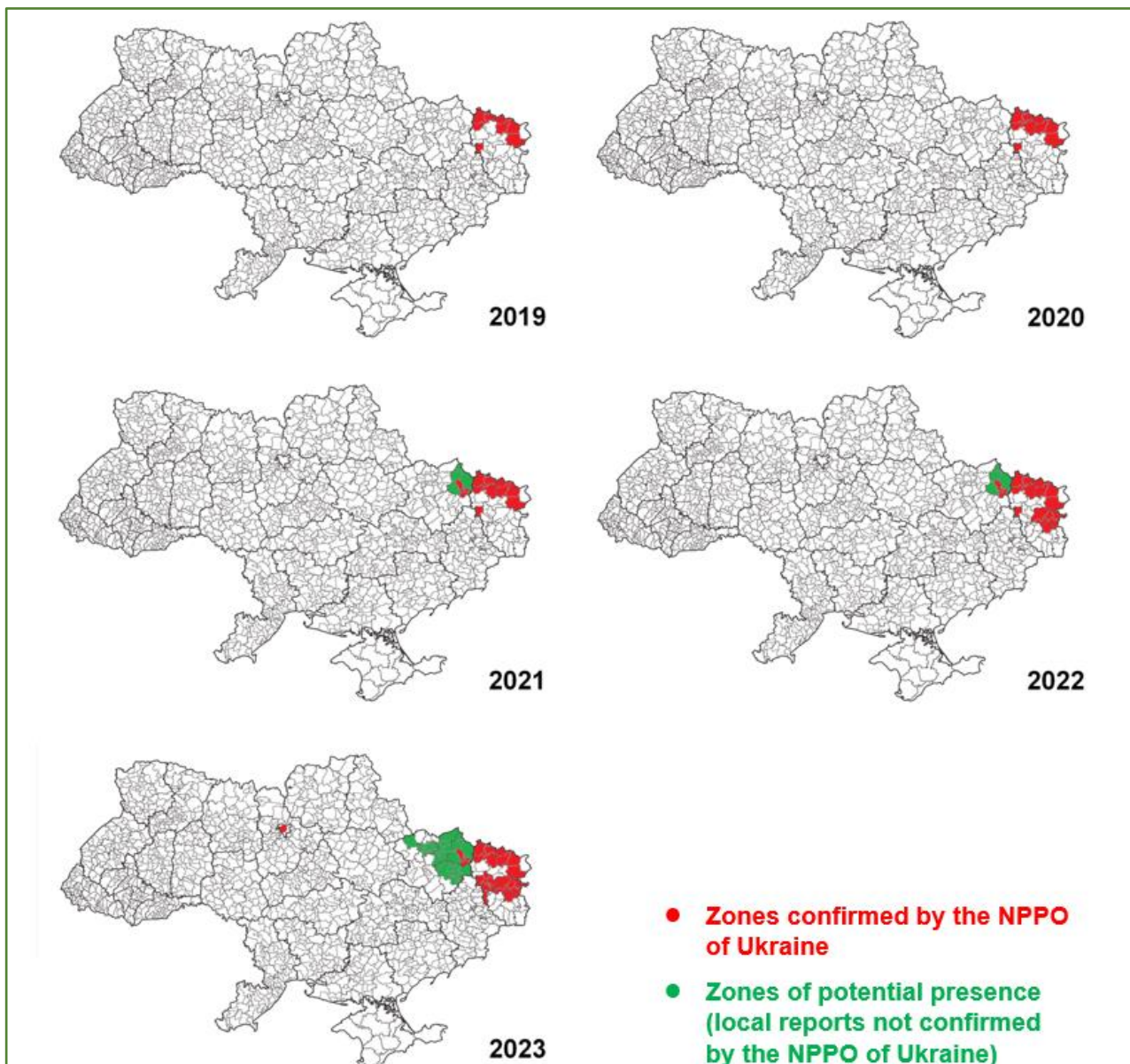


(from Volkovitsh et al., 2021)



(J. Gohli, P QPF, 2023)

## A call to create a dynamic map of spreading in Europe



The Ukrainian State Specialized Forest Protection Enterprise DSLP "Kharkivlisozakhist" recently developed and published on its webpage a dynamic map showing the change of the range of *A. planipennis* in Ukraine in 2019-2023 (<https://lisozahyst.at.ua/index/agrilus-planipennis/0-17>).



# A call to share reference specimens

- Ukraine to Sweden
- United Kingdom to Sweden
- United Kingdom to Estonia
- United Kingdom to Romania
- Russia to EPPO
- Canada to EPPO
- EPPO to Malta
- EPPO to EURL





# News from of the European Union Reference Laboratory

## 2024 EURL Proficiency Test on *Agrilus planipennis*:

<https://eurl-insects-mites.anses.fr/en/minisite/insects-and-mites/pt-2024-1-agrilus-planipennis>



The screenshot shows the website for the European Union Reference Laboratory for Insects and Mites (EURL). The header includes the EURL logo, the ANSES logo, and the AGES logo. A navigation bar contains links for HOME, PRESENTATION, EURL ACTIVITIES, DOCUMENTS, NRLS WORKPLACE, and CONTACT US. A search bar with the text 'Identify' and a magnifying glass icon is also present. The main content area features a large image of a green metallic beetle (Agrilus planipennis) on a textured surface. A text box overlaid on the image provides the following information: '01 March 2024', 'PT 2024-1 AGRILUS PLANIPENNIS', and 'This first proficiency test is organized in 2024 by the Agence nationale de...'. A small text credit 'Courtesy D.B. Lyons (Ressources naturelles Canada)' is visible in the bottom left corner of the image area.





**Newsletter**  
of the EPPO Network of experts working  
on surveillance, monitoring, and control  
of the Emerald ash borer, *Agrilus planipennis*

No. 4



PARIS, 2024-03

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**The webpage of the Network:**

[https://www.eppo.int/RESOURCES/special\\_projects/agrilus\\_planipennis\\_network](https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network)

Photo of *Agrilus planipennis* above: Courtesy of Eduard Jendek.

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