

A webinar

'Emerald ash borer (*Agrilus planipennis*) in the EPPO region: preparedness of countries for its further spread'











PROGRAM

Link to attend the webinar: https://zoom.us/j/94071242677

Time: 5 December 2024 10.00-13.00 (CET).

spread'

Underlined: presenting authors.

Timing: 15 min per presentation and 5-10 min to answer questions. Approximate timings are given below.

Questions from attendees can be asked in written in the 'Q&A' box at any time during the presentations and they will be answered by presenters after the end of their presentations or at the end of the webinar. Please note that we have over 600 participants registered so far. Therefore, please do not use this 'Q&A' box to introduce yourself or to thank the presenters. It is solely for questions for the presenters.

10.00: <u>Nico Horn, Dmitrii Musolin</u> (EPPO). European and Mediterranean Plant Protection Organization (EPPO/OEPP) and its Network of experts working on surveillance, monitoring, and control of *Agrilus planipennis* (Emerald ash borer)

10.25: <u>Oleg Kulinich</u>, <u>Dmitry Ryaskin (Russia)</u>. Emerald ash borer, *Agrilus planipennis* in the Russian Federation: its spread, damage and control

10.50: <u>Darya Straltsova</u>, Tatsiana Yerchyk, Tatsiana Balashova (Belarus). Prevention of the Emerald ash borer (*Agrilus planipennis*) in the Republic of Belarus: Safeguarding Belarusian ash trees

11.15-11.25: a coffee break

11.25: Mart Kinkar (Estonia). Survey of Agrilus planipennis in Estonia

11.50: <u>Liisa Vihervuori</u> (Finland). *Agrilus planipennis*: preparedness of Finland for its possible arrival

12.15: <u>Sandra Zandere</u> (Latvia). Preparedness of Latvia for a potential outbreak of the Emerald ash borer, *Agrilus planipennis*

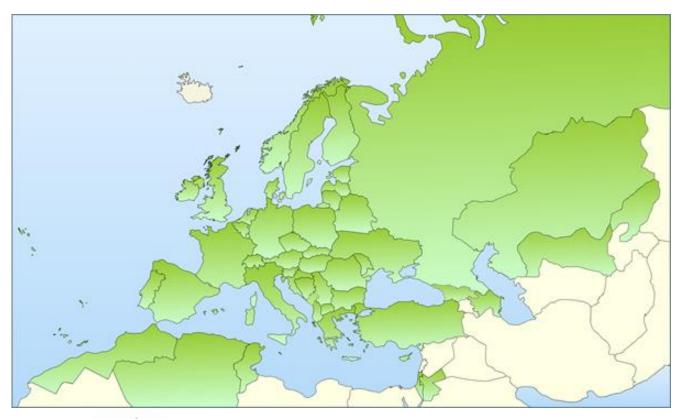
12.40: Nico Horn (EPPO). Concluding remarks.



EPPO

European and Mediterranean Plant Protection Organization

- Intergovernmental Organization
- Created in 1951 by 15 countries (EPPO Convention)
- 52 member countries in 2024
- International cooperation in plant health:
 - plant quarantine
 - plant protection products
- Works for and with National Plant Protection Organizations

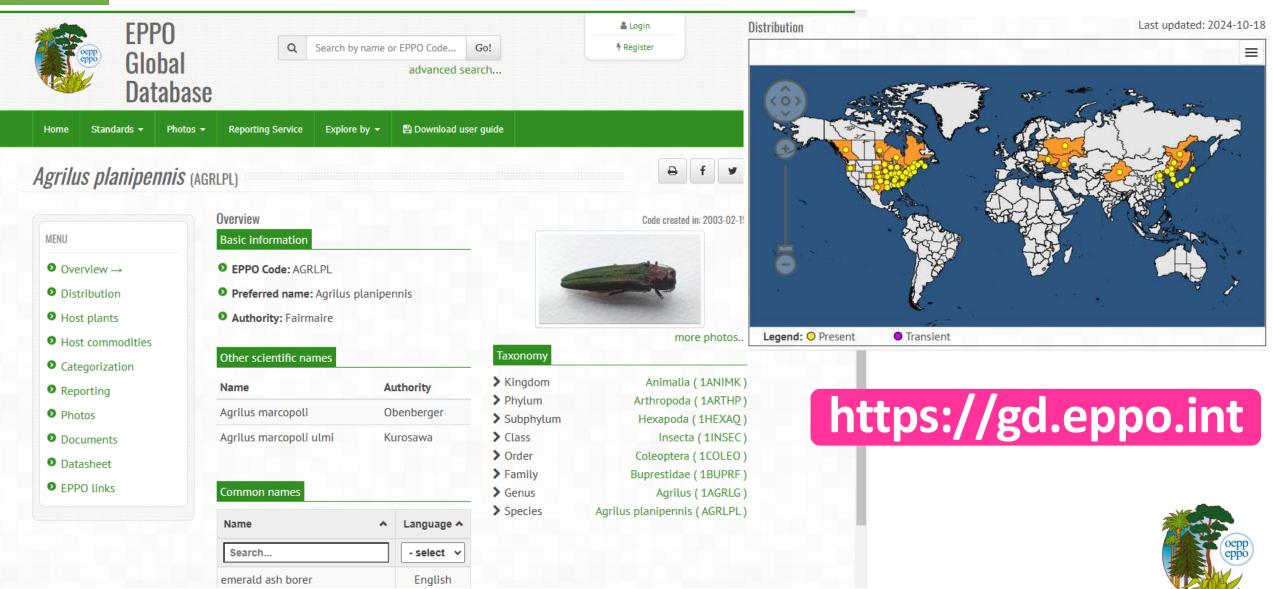




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Information Exchange





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



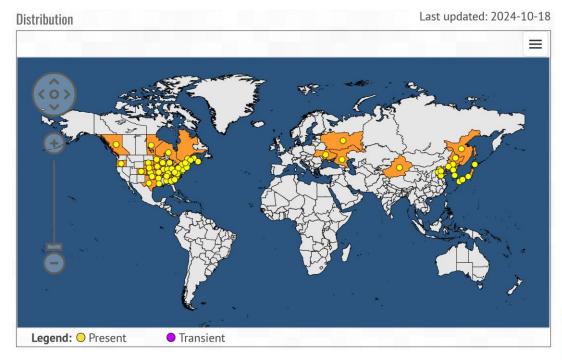




In 2022, the EPPO Panel on Quarantine Pests for Forestry decided to organize a Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis* in Europe.









https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network



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

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).

On the 5th of December 2024, at 10.00 (CET) EPPO will hold a webinar 'Emerald ash borer (*Agrilus planipennis*) in the EPPO region: preparedness of countries for its further spread'.

Webinar webpage: /MEETINGS/2024_meetings/wk_agrilus_planipennis 2



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.



https://www.eppo.int/RESOURCES/special_projects/agrilus_planipennis_network



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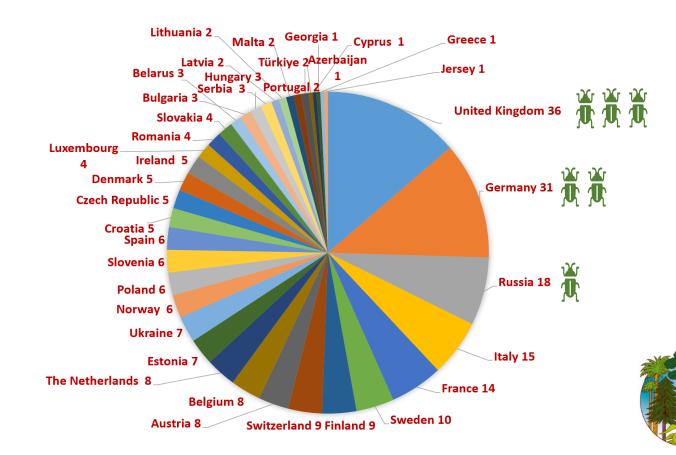




Network of experts working on surveillance, monitoring, and control of the Emerald ash borer, *Agrilus planipennis*

As of December 2024:

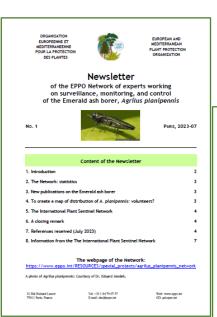
Continent	Countries	Experts
Europe	38	263
Asia	4	6
Africa	1	1
Americas	3	10
Australia	1	2
TOTAL	47	282
EPPO MC	40	266

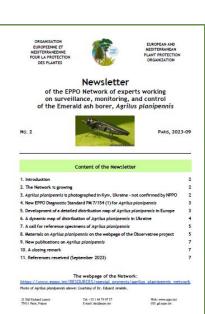




In 2023–2024, six issues of the Newsletter were published

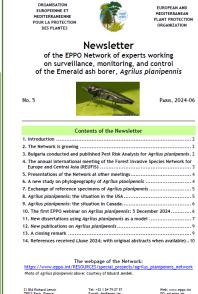














To subscribe: https://forms.office.com/e/7GxvJkS0YT



Search for Agrilus planipennis in Kazakhstan in 2024: Atyrau, Uralsk and their environs

In August 2024, in the framework of a biosecurity pilot project, ash trees (Fraxinus spp.) were surveyed in the Republic of Kazakhstan in the cities Atyrau and Uralsk (also called Oral) and in nearby settlements in order to check for the presence of A. planipennis.

On 5-9 August, areas planted with ash trees were examined in Atyrau (Atyrau Region; 47°07'00" N, 51°53'00" E) (Fig. 1 A-C). This city is located 350 km from Astrakhan (Russia), the region where A. planipennis was first recorded in 2020^{2,3}. In Atyrau, mainly recently planted ash trees were present. No ash trees were found along intercity roads. Outside Atyrau, the valley of the left bank of the Ural River in the village of Akzhar (47°12'51" N, 51°56'36" E) was also visited, where trees of Fraxinus spp. were found. In total, in these two localities 440 ash trees were examined.

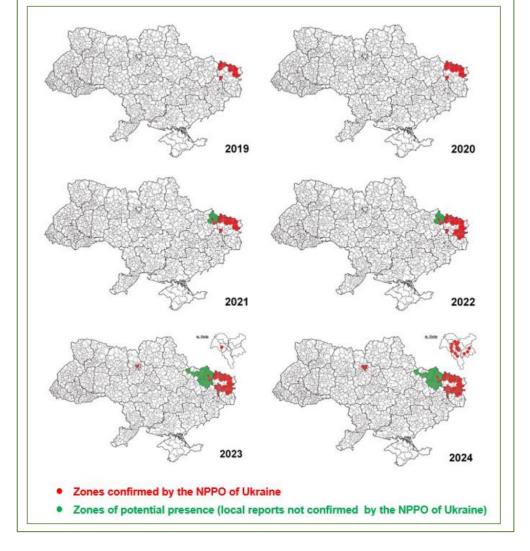


Figure 1. Studied localities in Kazakhstan (A, B) and a general view to Fraxinus spp. plantings in Atyrau (C) and Uralsk (next to the train station) (D). Abbreviation of the countries (TM - Turkmenistan, UZ - Uzbekistan, KG - Kyrgyzstan), the regions in Russia (AST - Astrakhan Region, VGG - Volgograd Region, SAR - Saratov Region, SAM - Samara Region, ORE - Orenburg Region), and in Kazakhstan (ATY - Atyrau Region, WKR - West-Kazakhstan Region). Points: 1 - Atyrau, 2 - Akzhar, 3 - Uralsk, 4 - Zherom. Photos by V.V. Rudoi.

8. A dynamic map of distribution of Agrilus planipennis in Ukraine: an update

In August 2024, the Ukrainian State Specialized Forest Protection Enterprise DSLP "Kharkivlisozakhist" updated a dynamic map showing the change of the range of *A. planipennis* in Ukraine in 2024 (https://lisozahyst.at.ua/index/agrilus-planipennis/0-17).

The map shows now not only districts where the presence of the pest is confirmed by the NPPO, but also districts with local reports that are not yet confirmed by the NPPO. For 2023 and 2024, an insert for the capital city of Kyiv is added.







² Volkovitsh MG, Bienkowski AO, Orlova-Bienkowskaja MJ (2021) Emerald ash borer approaches the borders of the European Union and Kazakhstan and is confirmed to infest European ash. Forests 12, 691. https://doi.org/10.3390/f12060691

³ Martynov VV, Nikulina TV, Shokhin IV, Terskov EN (2022) Contributions to fauna of invasive insects of Astrakhan Region and Republic of Kalmykia. Field Biologist Journal 4(4): 329-343. (in Russian). https://doi.org/10.52575/2712-9047-2022-4-4-329-343

6. EABRACE: A new project focused on Agrilus planipennis

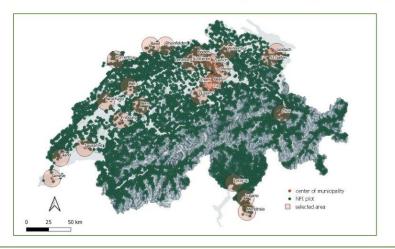
Iryna Matsiakh (Swedish University of Agricultural Sciences) obtained financial support from the Svenska Institute (https://si.se/) to study the invasion of A. planipennis. The project 'EABRACE: Emerald ash borer invasion: exploring spread patterns and xylobiont beetle biodiversity dynamics for strategic conservation measures' will run for two years - from November 2024 to November 2026.

The aim of the project is to monitor the spread of A. planipennis towards the EU border and to assess the dynamics of the xylobiont beetles' biodiversity during the invasion of A. planipennis.

The research conducted within the EABRACE project will enhance our understanding of the spread of the emerald ash borer in Europe and help to develop effective monitoring tools. This effort aligns with the work of our Network of experts, as the Network's objectives include exchange of data on monitoring, gain insights into the current distribution and spread of *A. planipennis* in the EPPO region, and development of effective trapping and management options for the EU quarantine pest.

7. New research: Urban ash trees as monitoring opportunity for Agrilus planipennis

Invasive forest pests often first arrive in urban or peri-urban environments and spread from there into surrounding forests. To investigate which tree species invasive forest pests encounter once they arrive, Benno Augustinus (Swiss Federal Research Institute, WSL) and colleagues (Meinrad Abegg, Valentin Queloz and Eckehard Brockerhoff) collected 26 Swiss urban tree inventories, and compared the tree species composition in cities with the tree species composition in surrounding forests. They found that urban environments have a vastly higher species richness than surrounding forests (>1300 vs. 76 species in total).



11. New MSc thesis using Agrilus planipennis as a model

Recently, a MSc thesis, in which A. planipennis was used as a model, was prepared and publicly presented in Canada the USA:

Abby D (2004). Stewarding floodplain forests in a changing climate: assisted migration and spring tree phenology in an urban climate change experiment and monitoring for floodplain tree regeneration. A thesis submitted to the faculty of the University of Minnesota in partial fulfillment of the requirements for the degree of Master of Science University of Minnesota ProQuest Dissertations & Theses, 2024. 31337343. Available at: https://www.proquest.com/openview/b77dad94943b6995aa02271e7badff17/1?pq-origsite=gscholar&cbl=18750&diss=y

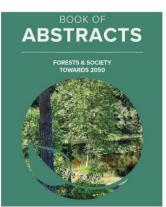
Original abstract: As climate change continues to affect the world's ecosystems, land managers seek to determine the best actions to maintain or adapt their forests to the current and projected climatic shifts. Floodplain forests are an ecosystem of interest for mitigating the effects of climate change, primarily through increased critical habitat and biodiversity, reduced nutrient input in riverine systems, and carbon sequestration. These unique forests are critical in climate action plans, but they are also facing increasing stressors due to severe



12. Agrilus planipennis in talks presented at the IUFRO 2024 World Congress



Stockholm, Sweden 23–29 June 2024



The International Union of Forest Research Organizations (<u>IUFRO</u>) World Congress is one of the largest global forest events, held every five years since 1893.

The congress gives a unique opportunity to gather worldwide leading scientists and top leaders to contribute and co-create for a sustainable future within forestry, climate and society.

The 26th IUFRO World Congress was held in Stockholm, Sweden, on 23-29 June 2024. Forests



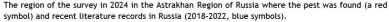
If you would like to publish in the Newsletter any news related to the Emerald ash borer in Europe or elsewhere:

- a new scientific or citizen science project,
- a new publication (on paper or online, a dissertation),
- a new conference presentation,
- a request for information or samples,
- an invitation to collaborate, etc.,

please send a note to dm@eppo.int

4. Agrilus planipennis is present just 17 km away from Kazakhstan





6. A new study on phylogeography of Agrilus planipennis

A new study was recently initiated within our Network. Natalia Kirichenko (<u>Sukachev Institute of Forest, SB RAS</u>, and <u>All-Russian Plant Quarantine Center</u>, Russia) and her collaborators are running a phylogeographic research on Emerald ash borer in its secondary range in the European part of Russia. This study will identify invasive haplotypes, which continue to spread in Russia. Furthermore, it will help clarify if the Moscow Region, where *A. planipennis* was recorded for the first time in 2003, served as a main source for further pest expansion through the so-called 'bridgehead effect'. The latter explains the process of an ongoing invasion from an established range to new areas through intermediate locations. Such a phenomenon is often observed in invasive species, particularly insect pests.







Samples of A. planipennis prepared for DNA barcoding. Photos by N. Kirichenko.





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 Latvia EPPO to EURL











News from of the European Union Reference Laboratory

Information and link to the **2024 EURL Proficiency Test on** *Agrilus planipennis*:

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

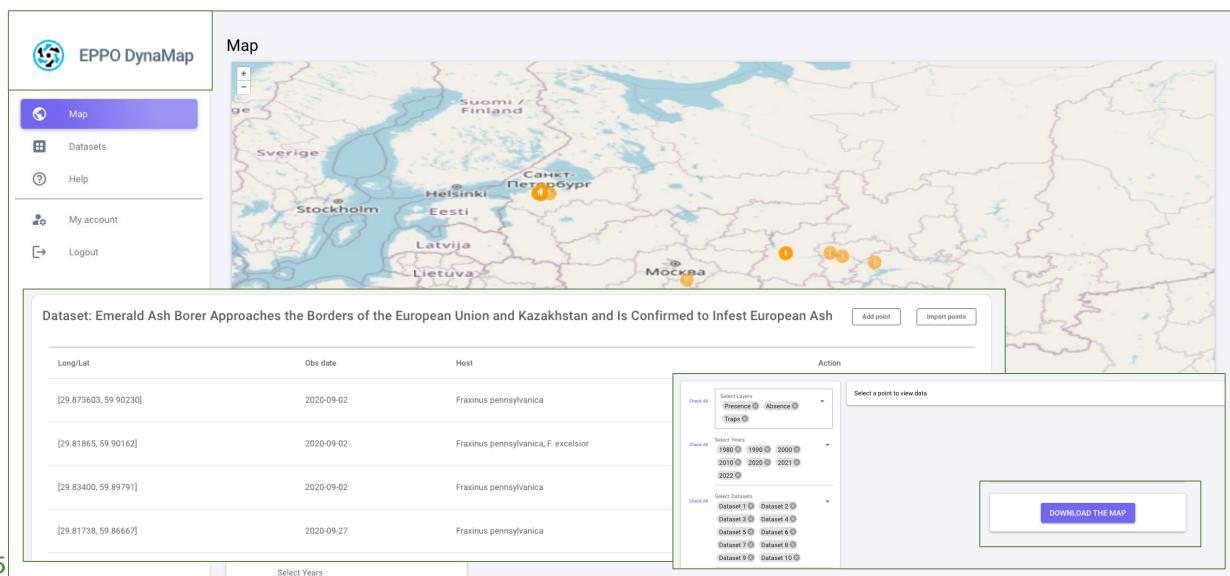


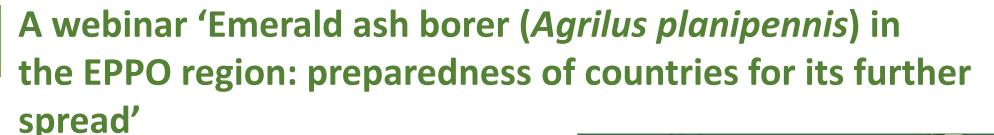




A call to create a dynamic map of spreading of *A. planipennis* in Europe



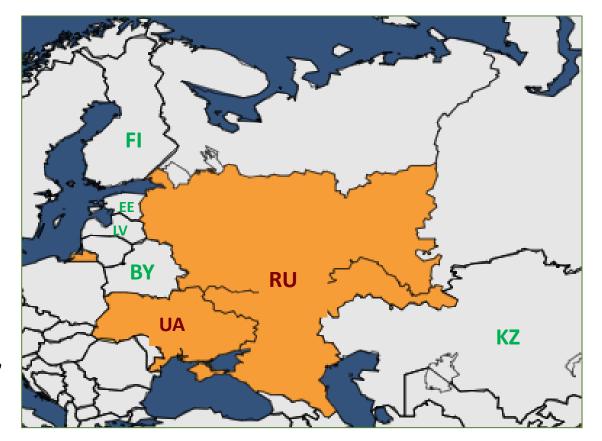






EPPO invited NPPOs of:

- countries in which A. planipennis
 is present (Russia, Ukraine),
 and
- countries located **near the current limits** of the distribution of this pest
 in the EPPO region (Belarus, Estonia,
 Finland, Kazakhstan, and Latvia).







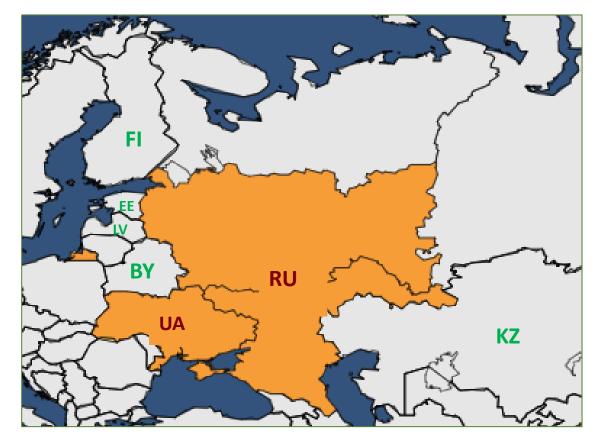


The invitation was accepted by NPPOs:

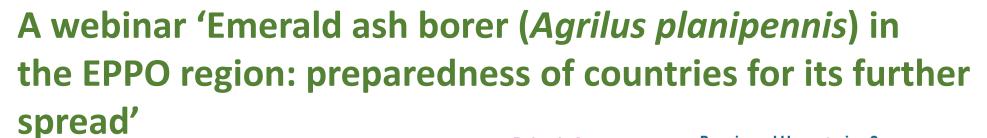
- Belarus,
- Estonia,
- Finland,
- Latvia,
- Russian Federation.

They were invited to present the current situation and control measures undertaken or planned in their countries to limit the correct the control of their countries to limit the correct to limit the

in their countries to limit the spread and impact of this pest.

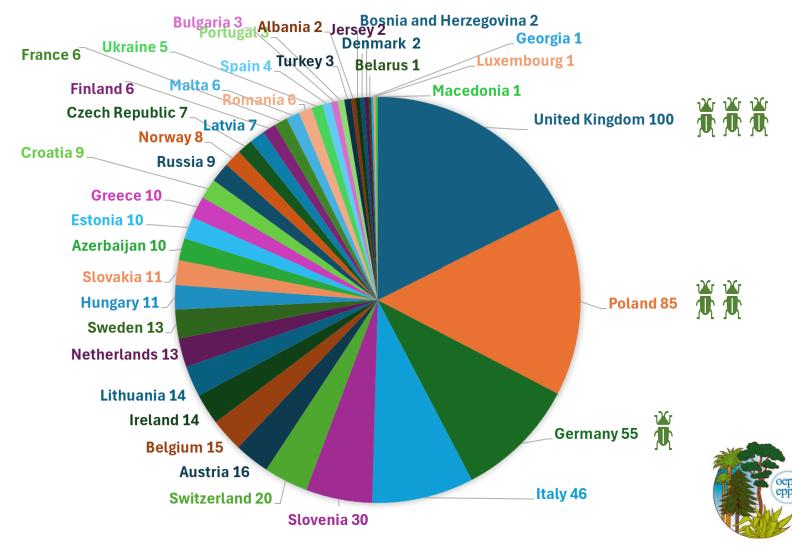








Continent	Countries	Attendees
Europe	39	574
Asia	8	9
Africa	4	5
Americas	3	9
Australia	1	3
TOTAL	55	600
EPPO MC	42	578





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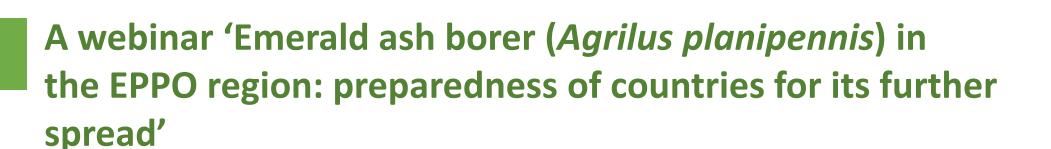
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12.40: Nico Horn (EPPO). Concluding remarks.







Summaries of the presentations are already posted on the website of the Network.

After the webinar we will post on the website of the Network :

- a video recording of the webinar,
- pdf files of all presentations.

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