



**Report of a Pest Risk Analysis
for *Harringtonia lauricola* and its vector *Xyleborus glabratus***

PRA report prepared by the EPPO Secretariat and reviewed by the Panel on Phytosanitary Measures.



Dark discoloration in the sapwood associated with laurel wilt disease.
Courtesy: Jiri Hulcr, University of Florida (USA) – EPPO Global Database
(EPPO Code: RAFFLA).

PRA area: EPPO region in 2026-09.

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Based on this PRA report, *Harringtonia lauricola* and its vector *Xyleborus glabratus* were added to the EPPO A1 List of pests recommended for regulation as quarantine pests in 2026. Measures for plants for planting; round wood and sawn wood (with or without bark); harvesting wood residues (except sawdust and shavings), wood chips, hogwood; cut branches; and wood packaging material made of *H. lauricola* host genera are recommended.

Introduction

The aim of this PRA report is to assess the status of *Harringtonia lauricola* and its vector *Xyleborus glabratus* as candidates for listing on the EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests. It is worth noting that EPPO recommendations for regulation are normally made either on the basis of EPPO Pest Risk Analyses (PRAs) prepared by Expert Working Groups (EWGs) or PRAs developed by EPPO member countries for the EPPO region, or PRA reports based on national PRAs or EFSA PRAs. The present PRA report is based on the EPPO Study on the risk of bark and ambrosia beetles associated with imported non-coniferous wood (EPPO, 2020) and the EPPO datasheet on *H. lauricola* (EPPO, 2025), as well as targeted literature searches to complete the assessment. It was prepared after publication of the EFSA pest categorisation of non-EU Scolytinae on non-coniferous hosts (EFSA, 2024) which listed *X. glabratus* (and *X. ferrugineus*) on the list of species ‘most likely to satisfy the criteria to qualify as potential EU quarantine pests’. Because EPPO (2020) and EPPO (2025) did not fully assess the risk, additional assessment is made in particular on likelihood of entry with individual pathways. All information and analysis that are not in EPPO (2020) and EPPO (2025) are cited as ‘*complement, 2025-10*’.

In the absence of a PRA using rating scales, the Panel on Phytosanitary Measures assessed the likelihood of entry and establishment, as likely or unlikely; and the magnitude of spread and impact on a five-level scale (very low, low, moderate, high, very high); all ratings associated with three level uncertainty (low, moderate, high). Risk management measures were first drafted based on EPPO (2020) for wood commodities and based on EPPO (2025) and other EPPO PRAs and PRA reports for plants for planting, and were later adjusted by the Panel on Phytosanitary Measures.

The PRA report was presented to the meeting of the Panel on Phytosanitary Measures in October 2025 and March 2026; and to the Panel on Quarantine Pests for Forestry in November 2025. EPPO Working Party on Phytosanitary Regulations and EPPO Council agreed in 2026 that *Harringtonia lauricola* and its vector *Xyleborus glabratus* should be added to the EPPO A1 List of pests recommended for regulation as quarantine pests.

Stage 1: Initiation

Reason for doing the PRA

Xyleborus glabratus was one of the Scolytinae identified as a potential risk for the EPPO region in the EPPO Study on the risk of bark and ambrosia beetles associated with imported non-coniferous wood (EPPO, 2020). The study also showed the importance of its fungal symbiont *Harringtonia lauricola* and noted that *H. lauricola* had been found associated with several other beetles in the family Curculionidae. *H. lauricola* and *X. glabratus* are absent from the EPPO region. *H. lauricola* could pose a threat to natural and cultivated populations of Lauraceae in the EPPO region (e.g. native laurel

forests). In addition, *H. lauricola* is a pest of avocado (*Persea americana*) in the USA, and this crop has economic importance in several EPPO countries. At its meeting in March 2024, the Panel on Phytosanitary Measures decided that a PRA report should be prepared covering *H. lauricola* and all known and potential vectors.

Notes on *X. glabratus*, potential vectors and coverage of the PRA report

X. glabratus is the only confirmed vector of *H. lauricola* to date (EPPO, 2025). *H. lauricola* and *X. glabratus* are symbionts. Developing larvae of *X. glabratus* feed on nutritional conidia of *H. lauricola* produced in the galleries of the ambrosia beetle. When the new generation of adult emerges, the dispersing adult females accumulate conidia in fungus-carrying cavities (mycangia) at the internal base of the mandibles. These asexual spores replicate in a yeast-like phase within the mycangia, increasing the amount of inoculum available upon arrival at the next plant host (EPPO, 2025, citing Harrington & Fraedrich, 2010). The risk from *X. glabratus* is assessed throughout the PRA report.

H. lauricola has been found associated, naturally or experimentally, with several other beetles in the family Curculionidae (Annex 1 – complement, 2025-10). Such beetles may allow the pathogen to persist in environments that seem to be suboptimal for *X. glabratus*, such as avocado orchards. However, the efficiency of transmission and concentration of propagules of *H. lauricola* is extremely variable across potential vectors (EPPO, 2025). Furthermore, many of them are polyphagous and feed on plants outside of the Lauraceae. The impact that colonizing non-susceptible hosts might have on the transmission of *H. lauricola* across multiple generations of these potential vectors and the implications for overall pathogen epidemiology have not been investigated in detail (EPPO, 2025). Experience from Florida (Hulcr, unpublished) suggests that persistent infection of *H. lauricola* in natural environments (i.e., where susceptible trees are not distributed homogeneously within a small area, as in avocado orchards) is only maintained by *X. glabratus* (EPPO, 2025).

The present PRA report uses the term ‘*potential vector*’ for these other species. They are studied only in relation to *H. lauricola* (i.e. their own impacts independently from *H. lauricola* are not fully assessed). Similarly, other species in the EPPO region, especially Scolytinae, may also be potential vectors, but this cannot be assessed in this PRA report.

Taxonomic position of the pest

***Harringtonia lauricola*:** Ascomycota, Sordariomycetes, Order, Ophiostomataceae, *Harringtonia*, *Harringtonia lauricola* (T.C. Harr., Fraedrich & Aghayeva) Z.W. de Beer & M. Procter

Other scientific names: *Raffaelea lauricola* Harrington, Fraedrich & Aghayeva

English common name: laurel wilt

EPPO code: RAFFLA

The name *Raffaelea lauricola* is widely used in the literature because many publications on this species pre-date its allocation to the genus *Harringtonia* in 2022. Note on identification: *H. lauricola* can be identified by molecular methods (EPPO, 2025).

***Xyleborus glabratus*:** Arthropoda, Insecta, Coleoptera, Curculionidae, Scolytinae, *Xyleborus*, *Xyleborus glabratus* Eichhoff

Other scientific names: *Xyleborus kumamotoensis* Murayama

English common name: redbay ambrosia beetle

EPPO code: XYLBGR

Note on identification: *X. glabratus* can be identified by morphological and molecular methods (EFSA, 2024).

Stage 2: Pest Risk Assessment

2.1. Likelihood of introduction

2.1.1. Entry

2.1.1.1. Geographical distribution

H. lauricola and *X. glabratus* are native to Asia. In the USA, *X. glabratus* was first trapped in Georgia in May 2002 and has since been recorded throughout the South-East of the USA, together with *H. lauricola*. Because ambrosia beetles depend on their fungal partners for survival, it is most prudent for quarantine purposes to use the distribution of *Xyleborus glabratus* to infer the full current range of *H. lauricola* (EPPO, 2025).

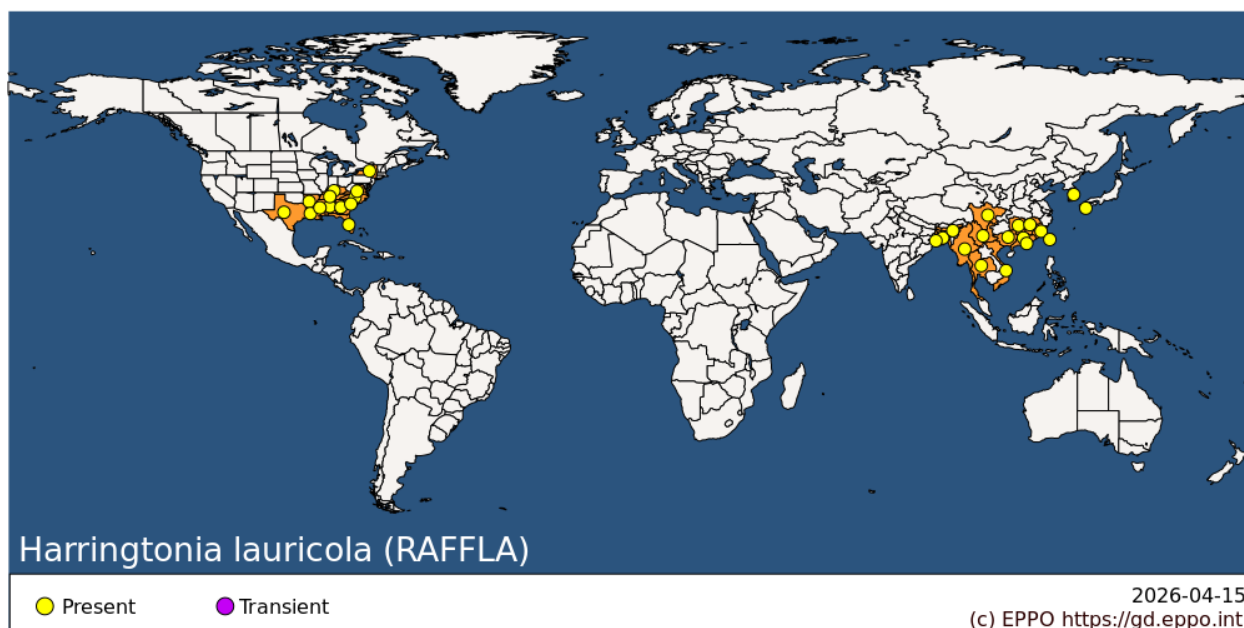


Fig. 1. Geographical distribution of *Harringtonia lauricola* (RAFFLA) in EPPO Global Database <https://gd.eppo.int/taxon/RAFFLA/distribution> (EPPO, 2026). Legend: Data on presence is shown by displaying a bright yellow dot together with an orange background. For large countries, geographical data is given as far as possible at provinces/state level.

General distribution information regarding potential vectors is provided in Annex 1.

2.1.1.2. Host plant(s)

A summary table of hosts of *H. lauricola* and *X. glabratus* published at the time of the preparation of this PRA report is provided in Annex 2. Updated lists of host plants are maintained in EPPO Global Database (EPPO, 2026).

Harringtonia lauricola affects woody species in the Lauraceae family. Major hosts in EPPO Global Database (EPPO, 2026) are *Laurus nobilis* (laurel, native to the EPPO region), *Persea americana* (avocado), *Persea borbonia* (redbay), *Persea palustris* (swampbay) and *Sassafras albidum*. (EPPO, 2026).

The taxonomic status of two *Laurus* species (*L. azorica* and *L. novocanariensis*) present in the EPPO region in Macaronesia (Cape Verde, Canary Islands, Madeira and the Azores) and Morocco; and whether they are distinct from *L. nobilis*, has been debated (EPPO, 2025). No further information was available when preparing this PRA report, and these species are considered as *L. nobilis*, and therefore as hosts.

The natural and experimental host range of *H. lauricola* includes many species in the family Lauraceae, including species not present in its native distribution and attacked when the fungus was introduced into the USA. Other as-yet untested Lauraceae may prove to be susceptible when/if the beetle-pathogen complex continues to expand its range (EPPO, 2025). Consequently, all Lauraceae were considered as potential hosts of *H. lauricola* in this PRA report. However, considering that the Lauraceae family contains 58 genera (Plants of the world online) and only 10 contain natural or

experimental hosts (see Annex 2), the Panel on Phytosanitary Measures suggested that plant species belonging to genera with at least one reported host species were more likely to be hosts.

Xyleborus glabratus was found associated with Lauraceae, but also with species in other families (Annex 2). In the USA, it has only been recorded on Lauraceae. Because of the symbiotic association, Lauraceae hosts of *X. glabratus* are also considered as hosts of *H. lauricola*. The significance of non-Lauraceae hosts of *X. glabratus* is not known, but they are considered dubious in EPPO (2025) and may represent an uncommon behaviour of the species (Hulcr & Lou, 2013 - complement, 2025-10). In particular, it is not known if *X. glabratus* reproduces on these plants (EPPO, 2020). These species are not considered to be hosts of *H. lauricola*.

Potential vectors. Potential vectors of *H. lauricola* are not especially associated to Lauraceae. Their non-Lauraceae hosts are not considered to be hosts of *H. lauricola*. Host lists of these vector species are not provided as these species were not considered significant for entry or establishment, but details on the plants to which they were found associated with *H. lauricola* is provided in Annex 1 since they may be significant for spread and impact.

In the rest of this PRA report, when '*H. lauricola* hosts' is used, it refers to its confirmed hosts and potential hosts (i.e. Lauraceae hosts of *X. glabratus* and other Lauraceae – see above). '*H. lauricola* non-hosts' refer to non-Lauraceae hosts of *X. glabratus* or any other plant.

2.1.1.3. Likely pathways of entry

Text related to assessment of pathways was developed for the purpose of this PRA report.

General elements that apply to all pathways of *H. lauricola* hosts

- *H. lauricola* is carried by *X. glabratus* into its galleries inside a plant, i.e. into lignified parts of woody plants (complement, 2025-10). However, *H. lauricola* is systemic in its host plants (EPPO, 2025). If *H. lauricola* is carried into a non-host, it would not develop (complement, 2025-10).
- Life stages of *X. glabratus* are associated with the wood of host trees. *X. glabratus* attacks healthy and stressed hosts (EPPO, 2020 citing Hughes et al., 2016). There is no information on the size of material attacked across its host range. In *Persea borbonia*, the smallest stem section with a successful gallery was 1.7 cm diameter. Trees < 2.5 cm were poor quality hosts, with rare brood production, long time to emergence (4-6 months), and small numbers of beetles (EPPO, 2020 citing Maner et al., 2014).
- Inbreeding, which is a character of *X. glabratus* is favourable to entry (EPPO, 2020).
- There is a higher uncertainty attached to entry on potential hosts than on confirmed hosts (complement, 2025-10).
- Because *H. lauricola* and *X. glabratus* are symbionts, it is likely that if *X. glabratus* is associated with a commodity at origin, this will be together with *H. lauricola* (complement, 2025-10).
- For all pathways except plants for planting, successful transfer requires that *X. glabratus* (or a potential vector) carries the fungus to a suitable Lauraceae host. Transfer is more likely to occur in areas of widespread presence of Lauraceae, e.g. in Macaronesia and Morocco (wild laurel forests) or where avocado is grown. In the rest of the EPPO region, there is a sparse presence of hosts, but transfer could occur within a nursery or towards amenity plants in the vicinity of entry points (complement, 2025-10).

- For all pathways except plants for planting, entry of *H. lauricola* in the absence of *X. glabratus* (e.g. if the vector died naturally or by treatment) is unlikely. For transfer to occur, a vector or potential vector should infest the commodity at destination, pick-up the fungus and carry it to a suitable Lauraceae host (complement, 2025-10). *X. glabratus* is not present in the EPPO region (EPPO, 2026) and it infests live trees or those that have recently died (EPPO, 2025). A few species identified as potential vectors are present in the EPPO region, but are not solely associated with Lauraceae (e.g. *X. saxesenii*, *X. crassiusculus*, *X. bispinatus*), and it is unknown which species may have this role.
- Interceptions: one interception of *X. glabratus*, from China, is reported in the period 1984-2008. The wood commodity concerned is not mentioned (EPPO, 2020 citing Haack & Rabaglia, 2013).

Entry on *H. lauricola* non-hosts commodities: unlikely, with a moderate uncertainty

Theoretically, *H. lauricola* could become associated to a non-host at origin (i.e. non-Lauraceae hosts of *X. glabratus*), if *H. lauricola* is carried by *X. glabratus* to a non-host tree, from which a commodity is harvested and traded. *H. lauricola* would not develop on such non-hosts. There is no evidence that *X. glabratus* reproduces on its non-Lauraceae hosts, which are considered dubious or representing an unusual behaviour (see *Hosts*). The quantity of fungus in such plant species is likely much lower than on Lauraceae hosts. *X. glabratus* on a non-host commodity would need to survive storage and transport, and transfer to a *H. lauricola* host. Entry is even more unlikely if the fungus has arrived on a *H. lauricola* non-host without *X. glabratus* (i.e. if this was eliminated by treatment). Although EPPO (2025) noted that the trade of non-Lauraceae wood could (more rarely) provide additional opportunities for introduction, this was considered unlikely here for the reasons above (complement, 2025-10).

Entry with potential vectors : unlikely for all commodities, with a moderate uncertainty

Because there is no symbiosis with potential vectors, association of *H. lauricola* requires that the beetle enters a gallery where *X. glabratus* has developed – i.e. on a *H. lauricola* host - and picks up *H. lauricola*. The inoculum carried is likely much lower than with *X. glabratus*. At destination, transfer would require that the potential vector exits the commodity, and finds and enters a *H. lauricola* host. Entry of *H. lauricola* with a potential vector on a commodity of a *H. lauricola* non-host is also unlikely, due to association and transfer. Potential vectors are more relevant for spread and impact (complement, 2025-10). There is a moderate uncertainty linked to this assessment due to the possible role of potential vectors for within-stand transmission of *H. lauricola* in avocado orchards in the USA (EPPO, 2025).

The likely pathway/s of introduction identified were:

Plants for planting of *H. lauricola* hosts (except seed, pollen and tissue culture)

H. lauricola can be present on its host plants of all sizes, including non-lignified cuttings as it is systemic. The size of the material may limit association of *X. glabratus*; on *P. borbonia*, trees < 2.5 cm are poor quality hosts and the smallest stem section with a successful gallery was 1.7 cm diameter (EPPO; 2020 citing Maner et al., 2014). *X. glabratus* with *H. lauricola* is therefore more likely to be associated with ornamental rooted plants of a certain size (complement, 2025-10).

H. lauricola can maintain and develop on its host plants, with or without *X. glabratus* (e.g. if the latter has died naturally or by treatment, or *H. lauricola* was present in non-lignified cuttings). (complement, 2025-10).

The possibility for transmission through trade of avocado seedlings or grafts should be considered (EPPO, 2025 citing Carrillo et al., 2014).

It is not expected that heavy infestations would be present, as especially the beetles may be detected through quality inspection procedures prior to dispatch. Plants for planting are normally subject to controls during production, and attacked plants may be detected and discarded. Especially breeding material, e.g. of avocado, would be subject to strict controls (complement, 2025-10).

Limited data was found on the trade of Lauraceae into the EPPO region. Data for the period 2000–2010 (ISEFOR data regarding imports from non-EU countries into seven EU countries – Eschen *et al.*, 2017) (Annex 3 – complement 2025-10) show limited import of Lauraceae plants for planting from countries where *H. lauricola* and *X. glabratus* are present, but show some trade in most genera known to contain hosts of *H. lauricola* (data not shown). Commodities were registered in nursery or ornamental categories, with 10 *Persea* as ‘budsticks’. These data are incomplete and there is a high uncertainty concerning import volumes of host plants for planting into the EPPO region. The origin of such trade may also change. *Cinnamomum* plants were only imported from Asia or the USA, with a few thousand plants in total over the whole period. Limited numbers of *Lindera*, *Persea*, *Sassafras* and *Umbellularia* were imported from Asia and the USA (most from the Middle East, Africa or Central America). Further investigations into the import of avocado (*Persea americana*) plants for planting into Spain and Türkiye showed that imports of plants for planting (rooted plants or cuttings) only originated from countries outside the pest’s distribution, mostly within the EPPO region (e.g. from Israel; Cexveg database of MAPA, 2025; Hasenem, pers. comm., 2025). *Laurus* were not imported from Asia nor the USA (other continents not shown). One case of *P. borbonia* plant originating from the USA that can be bought in a nursery was found for this PRA report through a general Internet search (<https://www.florama.fr/produit/persea-borbonia-avocatier-de-caroline/>) (complement, 2025-10). In some countries this pathway is already closed, as is the case in Israel where all Lauraceae plants for planting are prohibited at import (PPIS, 2009).

In conclusion, entry on plants for planting (except seed, pollen, tissue culture) of *H. lauricola* hosts (with or without *X. glabratus*) is considered likely, for countries where import of Lauraceae plants for planting is not already prohibited. There is a low uncertainty for *H. lauricola* confirmed hosts and a moderate uncertainty for potential hosts (Lauraceae) (it has been shown that other Lauraceae are hosts when the pest was introduced in a new area).

Round wood and sawn wood of *H. lauricola* hosts, with or without bark

This pathway includes firewood. In the USA, the movement of infested firewood was considered to be an important means of dissemination within the country (EPPO, 2025).

Processes applied to produce wood commodities (e.g. felling, transforming into sawn wood) would destroy some individuals (EPPO, 2020). For sawn wood, galleries of wood borers may be visible at processing (complement, 2025-10). *X. glabratus* infests sapwood of live trees or those that have recently died (EPPO, 2025) and it is assumed that it could infest the wood after felling.

A major issue is whether wood of *H. lauricola* hosts is traded into the EPPO region from countries where the fungus occurs. The wood of some Lauraceae hosts such as *Cinnamomum camphora* or *Umbellularia californica* (experimental host) is used and traded worldwide (www.wood-database.com; EPPO, 2017 cited in EPPO, 2020), but no data was available on trade into the EPPO region (EPPO, 2020). Infected host wood is more likely imported from Asia, where large Lauraceae occur (EPPO, 2025) but it is not known how prevalent *X. glabratus* or *H. lauricola* are on known hosts (EPPO, 2020). From the USA, it is unlikely that the main hosts *Persea borbonia* and *P. palustris* are traded as round or sawn wood, and it is not known if infested firewood would be traded internationally (EPPO, 2020). American laurels are not used for industrial purposes (Hulcr pers. comm. during the preparation of EPPO, 2025).

If *H. lauricola* and *X. glabratus* are associated with wood of a *H. lauricola* host, successful entry would require that *X. glabratus* survives during transport and storage in the progressively drying wood. Although no information was found on survival of *X. glabratus* inside wood, import of wood infested with *X. glabratus* is considered likely. *X. glabratus* should then carry the fungus to a *H. lauricola* host (complement, 2025-10).

In conclusion, entry is likely for round and sawn wood of *H. lauricola* hosts carrying *X. glabratus* with a low uncertainty. Entry of *H. lauricola* on its own is unlikely (and consequently for all wood, eliminating *X. glabratus* would make entry unlikely). Entry on sawn wood is less likely than on round wood.

Wood packaging material if not treated according to ISPM 15

It is suspected that *X. glabratus* carrying *H. lauricola* was introduced into the USA with wood packaging material (EPPO 2025 citing Hughes *et al.*, 2015). Pallets or packaging material is typically not made from Lauraceae, but shippers can use untreated wood for other purposes (typically dunnage) (Hulcr, pers. comm. during the preparation of EPPO, 2025). Large Lauraceae occur in Asia, while American laurels are usually small trees and are not used for industrial purposes (EPPO, 2025). Processes applied to produce wood commodities would destroy some individuals (EPPO, 2020). Secondary colonization of material after treatment is unlikely to impossible when WPM treatment criteria are satisfied, given that *X. glabratus* depends on live or freshly dead trees (EPPO, 2025). Requiring treatment with ISPM 15 should be sufficient, and this pathway is not considered further (complement, 2025-10).

Other likely pathways of introduction with lower significance were identified:

Cut branches of *H. lauricola* hosts

It is not known if hosts are traded as cut branches (EPPO, 2020) from areas of current pest distribution. Fresh laurel wreaths can be bought on internet shops (e.g. Flowers Milano, 2025). Although often used indoor, cut branches may be used under outdoor conditions e.g. in cemeteries. Laurel wreath can be used for graduation or funerals.

The association of *X. glabratus* with cut branches is considered less likely than with plants for planting due to the limited size of the material (which may not provide sufficient space for galleries) and the likelihood that symptomatic branches (e.g., those containing galleries) would be removed because of aesthetic and quality requirements. Transfer from this pathway is considered likely only

if the cut branches were simultaneously infested by both *H. lauricola* and *X. glabratus* and used outdoors.

In some countries this pathway is already closed, as is the case in Israel where all Lauraceae cut branches are prohibited at import (PPIS, 2009).

Infestation during storage or transport is not considered relevant for entry via this pathway, as the relatively short shelf life of this commodity would not allow sufficient time for the beetle to complete its life cycle

Overall, for countries where import of Lauraceae cut branches is not already prohibited, this pathway is considered likely with a high uncertainty (lack of data on trade, on minimum size, and transfer under a sequence of specific events).

Wood chips, hogwood, processing wood residues (except sawdust and shavings) of host genera

As for WPM, secondary colonization of material is unlikely given that *X. glabratus* depends on live or freshly dead trees (EPPO, 2025). Processes applied to produce such commodities would destroy some individuals of *X. glabratus* (EPPO, 2020). The survival of *X. glabratus* and *H. lauricola* in wood chips made from infested *P. borbonia* trees was studied in the USA. Chipping significantly reduced the number of *X. glabratus* and limited the persistence of *H. lauricola* but did not completely eliminate them (EPPO, 2020 citing EPPO, 2018a). If *X. glabratus* survives processing into wood chips or similar, it would then need to survive transport and storage. The wood may become unsuitable (complement, 2025-10). Successful transfer to a suitable Lauraceae hosts is also less likely.

Entry of *X. glabratus* with *H. lauricola* on wood chips, hogwood and processing wood residues is considered likely. High uncertainty remains because of survival during the processing, storing and transport and transfer. But the likelihood of entry is considered lower than on round or sawn wood (EPPO, 2020).

Unlikely pathways

Bark on its own is an unlikely pathway for *X. glabratus* (EPPO, 2020), and therefore of *H. lauricola*.

Avocado fruit is not a pathway for *X. glabratus* (EPPO, 2020)

2.1.2. Potential establishment

2.1.2.1. Plant(s) at risk

Establishment would be limited by the presence of hosts (EPPO, 2020). In the EPPO region, the main host present is *Laurus nobilis* (native) present in natural environments (table 1 – incl. *L. azorica* and *L. novocanariensis* – see section on *Hosts*). *L. nobilis* is also an ornamental and is grown commercially for seasoning and cosmetics in Algeria, France, Greece, Morocco, Portugal, Spain, Turkey (EPPO, 2025 citing Ciesla, 2002) and Italy. Several other Lauraceae species are endemic and present in natural environments in Macaronesia and Morocco. Among them, *Persea indica* is an experimental host. Primary natural protected Lauraceae forests (including genera such as *Apollonias*, *Laurus*, *Ocotea*, *Persea*) are found in the Azores, Madeira (PT) and Islas Canarias (ES) (EPPO, 2025; EPPO 2020). The susceptibility of most native Lauraceae species is not known to date.

Avocado (*Persea americana*) is grown commercially in the EPPO region in Spain and Israel, and to a lesser extent in Türkiye, Morocco, Portugal, Cyprus, and France, amounting to a collective production of 400 000 tonnes in 2021 (EPPO, 2025). Production areas are reported to increase in the EPPO region:

- In Spain, avocado cultivation covers 21 300 ha in 2024 (about 112 400 tonnes) with an increase of 88% surface (and 30% volume) since 2015. Traditionally cultivated in Andalusia and the Canary Islands, it is now grown also in other regions such as the Valencian Community where this crop has been an alternative for citrus farmers following loss of profitability (MAPA, 2025).
- In Israel, avocado cultivation covers about 16 000 ha in 2025 (about 235 000 tonnes), concentrated mainly in the north (Western Galilee, Jordan Valley, Upper Galilee), and is now expanding southwards into the Negev; with approximately 800–1 000 ha newly planted each year (Levi, PPIS, pers. comm., 2025).
- In Türkiye, production surfaces are reported to represent 5 800 ha in 2024 (65 000 tonnes) with about 1 100 ha newly planted each year during the last 2-years (Data from the Turkish Statistical Institute; Hasenem, pers. comm., 2025).

Various Lauraceae hosts may be grown as ornamentals, especially *Cinnamomum camphora* (EPPO, 2020). Based on a general Internet search, *Sassafras albidum*, and to a lesser extend *P. borbonia*, are also available as ornamentals in nurseries of the EPPO region, while no evidence was found for *P. palustris* (apart from the sale of seeds online) (complement, 2025-10).

Table 1. Lauraceae species in nature in the EPPO region (complement, 2025-10)

Species	Distribution in nature in EPPO	Reference
<i>Laurus nobilis</i> (known host)	Mediterranean, Black Sea Madeira	Rodríguez-Sánchez et al., 2009 http://world-heritage-datasheets.unep-wcmc.org/ https://www.gbif.org/fr/species/3034015
<i>Laurus azorica</i> (see note in Hosts)	Azores, Southern Morocco Madeira (UNEP reference)	https://www.macaronesian.org ; Ettaqy et al. 2023 http://world-heritage-datasheets.unep-wcmc.org/
<i>Laurus novocanariensis</i> (see note in Hosts)	Canarias, Madeira	https://www.macaronesian.org , Rodríguez-Sánchez et al., 2009 http://world-heritage-datasheets.unep-wcmc.org/

<i>Persica indica</i> (experimental host)	Madeira Canarias	http://world-heritage-datasheets.unep-wcmc.org/ La Gomera
<i>Apollonias barbujana</i>	Madeira, Canarias	https://www.macaronesian.org http://world-heritage-datasheets.unep-wcmc.org/
<i>Ocotea foetens</i>	Madeira, Canarias (and introduced to Azores)	https://www.macaronesian.org http://world-heritage-datasheets.unep-wcmc.org/

2.1.2.2. Climatic suitability

In most of its range, *X. glabratus* occurs in tropical and subtropical conditions (EPPO, 2020). The islands of Madeira and the Canaries also have a subtropical climate considered suitable for establishment; and the subtropical climate of the Azores, although it presents lower temperatures, is also assumed to be suitable (complement, 2025-10).

The climate around the Black Sea, the Balkans, northern Italy (EPPO, 2025 citing EPPO, 2020) and northern Spain (complement, 2025-10) most closely matches the humid, subtropical zone in which *X. glabratus* and *H. lauricola* have become invasive in the USA. Other hot and arid areas in the Mediterranean region e.g. in the South of Spain may be suitable when under irrigation, as is the case of part of the Granada and Malaga coast where avocado and other tropical fruits are cultivated.

Cold temperatures are limiting for *X. glabratus* (via chill injury), and establishment may not occur in areas where minimum winter temperatures are -6.2° C or colder for 12 h (EPPO, 2020 citing Formby et al., 2018). This may not have practical importance, as the cold tolerance exceeds that of most Lauraceae hosts (EPPO, 2025). Nevertheless, there is uncertainty about whether *X. glabratus* and *H. lauricola* could establish in more temperate areas of the EPPO region (EPPO, 2020), as well as in areas where *L. nobilis* is present in nature where cold periods may occur (e.g. parts of the Mediterranean and Black Sea areas) (complement, 2025-10).

Climate change will likely increase areas for potential establishment.

Environmental conditions indoors are not mentioned in EPPO (2020) and EPPO (2025), but would likely favour establishment of *X. glabratus* (complement, 2025-10).

2.1.2.3. Other characteristics for establishment

Inbreeding, which is a character of *X. glabratus* is favourable to establishment (EPPO, 2020). *X. glabratus* has a haplodiploid sex determination system and typically mates with its siblings or beetles in neighbouring galleries before dispersing, meaning that a single foundress could hypothetically start an entire outbreak (EPPO, 2025).

2.1.2.4. Areas and likelihood of potential establishment

Potential establishment in the Canary Islands, Madeira and Azores is likely with a low uncertainty. In Northern Italy, Balkans and around the Black Sea and some areas in Spain where hosts are present, potential establishment is likely with a higher uncertainty which relates to climatic conditions and sufficient presence of hosts (complement, 2025-10).

It is not known if *X. glabratus* and *H. lauricola* can establish in other parts of EPPO, including some areas where *L. nobilis* is present in nature (complement, 2025-10). Establishment under protected conditions (nursery, botanical gardens, avocado grown in glasshouses) was not assessed in EPPO (2020) and EPPO (2025) but environmental conditions are likely suitable (complement, 2025-10).

2.1.3. Magnitude of spread

Spread of *H. lauricola* would rely on the presence of *X. glabratus* or other vector (none known to date). *X. glabratus* is not a good flyer (EPPO, 2020). In flight mill studies, ca. 90% flew <20 m over a 24 h period, and only a very small proportion flew between 100-200 m. It is not known how far emerging females can fly before initiating boring, and results indicated that flights >10 m per day may be rare (all from EPPO, 2020). However, in the USA, in the early stages of the US outbreak, the infection front advanced about 15 to 20 km a year, probably approximating the natural rate of dispersal of *X. glabratus*, with much larger jumps facilitated by human transport of infested firewood, cut trees, and possibly wood chips (EPPO 2025 citing Cameron et al., 2008). Spread in the EPPO region would depend on whether *X. glabratus* finds a susceptible host, as happened with *P. borbonis* and *P. palustris* in the USA (EPPO, 2020), i.e. it will depend mostly on the suitability of native Lauraceae, including *L. nobilis*. Spread in avocado production areas would be limited unless a suitable vector occurs. Within avocado orchards, *H. lauricola* may also move through root grafts (EPPO, 2025 citing Ploetz et al., 2012).

Potential vectors may contribute to spread, but evidence is lacking. Several potential vectors have been reported in the EPPO region (such as *X. saxesenii* (native), *X. bispinatus* or *X. crassiusculus*, both with restricted distribution) (see Annex 3 – complement, 2025-10). However, it seems unlikely that *H. lauricola* would spread widely in the absence of *X. glabratus* (EPPO, 2025).

In conclusion, magnitude of spread for *H. lauricola* is rated as very high with low uncertainty if the vector and the fungus are introduced simultaneously, and in presence of susceptible hosts. Based on advancement of the infection front in the USA, and if *L. nobilis* (or related species) are suitable, Madeira or one of the Canary islands may be colonized within a few years.

2.2. Potential Impact

2.2.1. Symptoms and nature of the damage

Damage results from the tunnelling of *X. glabratus* infecting the tree with *H. lauricola*. American Lauraceae are generally more susceptible to the disease in the USA (EPPO, 2020 citing others). Trees of highly susceptible species such as *P. borbonia*, *P. palustris* and sassafras die. *P. borbonia* has been extensively killed. The whole crown wilts within few weeks to few months, resulting in eventual tree death. In contrast, *Cinnamomum camphora* is generally not killed, but wilt and dieback can occur in infected branches (EPPO, 2020 citing others).

2.2.2. Impact within the current area of distribution

Lauraceae native to the original range of *H. lauricola* are not affected by laurel wilt (EPPO, 2025). In Asia, one outbreak was reported on avocados introduced into Myanmar as an agricultural commodity (EPPO, 2025 citing Ploetz et al., 2016), in which avocado trees were killed within 1-2 months of the appearance of symptoms (EPPO, 2020 citing Ploetz et al., 2016).

To date, the most significant impacts of *H. lauricola* have occurred in the USA, with loss of native laurels in south-eastern forests and tree death in avocado orchards (EPPO, 2025). In the USA, laurel wilt has caused widespread mortality of *P. borbonia* and *P. palustris*, killing nearly all trees in the colonized areas within 3-5 years after *X. glabratus* was first detected in 2002 (EPPO, 2025). Over 300 million *P. borbonia* are estimated to have been killed in the USA since the early 2000s (ca. 1/3 of the pre-invasion population) (EPPO, 2020 citing Hughes et al., 2017). *H. lauricola* also incurred major

indirect costs such as tree removal on public and private property, nursery losses, public education efforts, attempts to regulate untreated wood, etc. (EPPO, 2025 citing Hughes et al., 2015).

Avocado production in Florida has suffered losses, but with the disease-induced population decline of wild tree hosts, removal of abandoned groves, and the adoption of phytosanitary measures in managed groves, local laurel wilt pressure has decreased. Many farmers continue to replant avocado trees lost to the disease (EPPO, 2025 citing Carrillo, 2023).

Laurus nobilis has proven to be a host of both *H. lauricola* and *X. glabratus* (EPPO, 2025 citing Hughes et al., 2014). The host record was made in the USA following attack of one 6-m high tree close to an avocado that had died (complement, 2025-10 from Hughes et al., 2014). However, *L. nobilis* is uncommon in the USA (EPPO, 2025) and data on impact on this species is therefore lacking (complement, 2025-10).

Control. There are no cost-effective options for treating plants infected with *H. lauricola*. Individual trees of special interest have been protected prophylactically through regular administration of propiconazole in the USA (EPPO, 2025 citing Mayfield et al., 2008). Propiconazole is not presently approved for this use in some EPPO countries e.g. the European Union (EPPO, 2025). Efforts to develop chemical control or biological control methods (primarily entomopathogenic fungi) have not been successful (EPPO, 2025).

In infected groves, preventing introduction along with the use of cultural controls are the most viable options for slowing further spread of infection such as removing and destroying infected trees (EPPO, 2025; EPPO, 2020). In avocado orchards, some publications also recommend pruning to increase light exposure (EPPO, 2025 citing others).

2.2.3. Potential impact within the EPPO region

The primary threat by *H. lauricola* would be to naïve Lauraceae (EPPO, 2025). Potential impacts would depend on the susceptibility of Lauraceae species to *H. lauricola* and *X. glabratus* (EPPO, 2020 citing others). In particular limited information is available to date on *L. nobilis* (see above). Impact may occur on primary natural protected Lauraceae forests in Macaronesia and Morocco, which are subject to conservation and some being classified as World Heritage Sites by UNESCO¹, as well as *Laurus nobilis* in natural environments (EPPO, 2025). *X. glabratus* has caused considerable impact on new Lauraceae hosts in the USA, and this may also happen for the hosts native to EPPO in natural environments of Macaronesia (see *Hosts*).

Laurel wilt would also threaten avocado (EPPO, 2025). However, the role of *X. glabratus* in laurel wilt on avocado is not clear. In the EPPO region the potential impact on avocado may arise from other vectors carrying the fungus. Until these vectors are known, *X. glabratus* is the only species that can be targeted to try and avoid the introduction and impacts by *R. lauricola* on avocado (EPPO, 2020).

H. lauricola and *X. glabratus* would also have impact on hosts planted as amenity plants or in gardens (complement, 2025-10). There is no evidence that *X. glabratus* would have impact on its non-Lauraceae hosts (complement, 2025-10).

Control options are lacking (see *Control*).

¹ e.g. Garajonay National Park (<https://whc.unesco.org/en/list/380>) and Macizo de Anaga Biosphere Reserve (<https://www.unesco.org/en/mab/macizo-de-anaga>) both in Canary Islands

In conclusion, potential impact of *H. lauricola* and *X. glabratus* on native Lauraceae and avocado in the area of potential establishment was rated as very high with a moderate uncertainty (related to susceptibility of various Lauraceae and role of potential additional vectors).

2.2.4. Conclusions

H. lauricola and *X. glabratus* meet the criteria to be recommended by EPPO for regulation as quarantine pests. They are absent from the EPPO region, could enter, establish, spread and cause impact to Lauraceae. Phytosanitary risk management measures are recommended to reduce the risk.

Stage 3: Pest Risk Management

Considering that plant species belonging to genera with at least one reported host species were more likely to be hosts and considering the risk of misidentification of host species, phytosanitary measures are recommended at minimum genus level.

3.1. Pathways Identification

Pathways studied in the pest risk management

The most likely pathways identified for the introduction of *H. lauricola* and *X. glabratus* are:

- Plants for planting
- Round wood and sawn wood
- Cut branches
- Harvesting wood residues, processing wood residues (except sawdust and shavings), wood chips, and hogwood

3.2. Identification of Potential Measures

Because of the risk of entry, measures are recommended at least for :

- plants for planting of *H. lauricola* host genera. Measures on Lauraceae other than host genera would increase the level of protection. Due to the lower risk, measures against other potential vectors on *H. lauricola* non-hosts were not recommended in the present report, but the risk these species represent on their own was not assessed. It is noted that treatments against *X. glabratus* on wood commodities would also target other ambrosia beetles.
- Round wood and sawn wood of *H. lauricola* hosts
- Cut branches of *H. lauricola* hosts
- Harvesting wood residues, processing wood residues (except sawdust and shavings), wood chips, and hogwood
- Wood packaging material

For wood commodities, the horizontal measures recommended against bark and ambrosia beetles (EPPO, 2020) were used, but were adjusted to remove measures that apply only to bark beetles

(debarking of wood, and measures for isolated bark) and options against reinfestation for wood chips (see *Entry*).

Requirements to avoid infestation during transport and storage were kept as *X. glabratus* can infested recently felled wood.

For plants for planting, measures mentioned in EPPO (2025) and in other EPPO PRAs and PRA reports were used. Similar measures can be recommended for cut branches; although production under protected conditions was considered too theoretical for this commodity.

Table 2. Potential measures and justification for the pathways identified.

Pathways	Measures identified for the exporting country
Plants for planting of <i>H. lauricola</i> host genera <i>Remark applicable to all pathways: measures also on Lauraceae other than host genera would increase the level of protection</i>	Pest free area (PFA) for <i>H. lauricola</i> and <i>X. glabratus</i> (ISPM 4, ISPM 29) (see requirements below) and Stored in conditions to prevent infestation prior to export and transported closed, to prevent infestation OR Pest-free place/site¹ of production for <i>H. lauricola</i> and <i>X. glabratus</i> established according to EPPO Standard PM 5/8 <i>Guidelines on the phytosanitary measure ‘Plants grown under physical isolation’</i> and Stored in conditions to prevent infestation prior to export and transported closed, to prevent infestation OR Import under post-entry quarantine (in the framework of a bilateral agreement)
Round wood with or without bark and sawn wood of <i>H. lauricola</i> host genera	Pest free area (PFA) for <i>H. lauricola</i> and <i>X. glabratus</i> (ISPM 4, ISPM 29) (see requirements below) or Heat treatment according to EPPO Standard PM 10/6 or Treated with ionizing radiation according to EPPO Standard PM 10/8 or Appropriate fumigation according to ISPM 43, details to be specified on the phytosanitary certificate². AND Stored in conditions to prevent infestation prior to export and transported closed, to prevent infestation Remark: additional systems approaches according to Annex 1 of ISPM 39 may be developed in the framework of a bilateral agreement.
Harvesting wood residues, processing wood residues (except sawdust and shavings), wood chips, and hogwood of <i>H. lauricola</i> host genera	Heat treatment (until the core temperature reaches at least 56 °C for at least 30 min). OR Appropriate fumigation, details to be specified on the phytosanitary certificate².

Cut branches of <i>H. lauricola</i> host genera	Pest free area (PFA) for <i>H. lauricola</i> and <i>X. glabratus</i> (ISPM 4, ISPM 29) (see requirements below)
Wood packaging material made of <i>H. lauricola</i> host genera	ISPM 15

¹: The choice between PFPP and PFPS is a decision to be taken by the NPPO based on the operational capacities of the producers and biological elements.

²: Even though no publications are available for this pest, experts considered that fumigation should be effective on this commodity: any schedule proven to be effective could be applied. Experts reported that fumigation is sometimes performed after import (e.g. in Italy) but this should be performed under bilateral agreement.

Requirements for establishing a PFA

- To establish and maintain the PFA for *H. lauricola* and *X. glabratus* (ISPM 4, ISPM 29), a general surveillance in the area prior to establishment of the PFA and continued every year may be sufficient.
- In specific cases, specific surveillance should also be carried out in a zone of minimum 40 km between the PFA and known infestation area to demonstrate pest freedom. The detection surveys to establish and maintain the PFA should be targeted for *H. lauricola* and *X. glabratus*, and should be based on appropriate combination of trapping of *X. glabratus*, visual examination and testing of host plants.
- Because *X. glabratus* has one generation per year or more (most likely having multiple overlapping generations a year in the United States; Hanula *et al.*, 2008) with a seasonal activity, surveillance should be carried out in Lauraceae growing areas for at least 2 growing seasons. *X. glabratus* may seemingly disappear after the spring, and be absent from the landscape from the summer through winter, but then re-emerge the next spring. A second-year follow-up surveillance before establishing a PFA would allow population to build-up and improve pest reporting.
- There should be restrictions on the movement of host material in particular unprocessed wood (originating from areas where the pest is known to be present) into the PFA, and into the area surrounding the PFA, especially the area between the PFA and the closest area of known infestation.
- Systematic public outreach efforts should be made.

Uncertainties in the management

- Which Lauraceae species are host in the EPPO region (see Section 2.1.1.2 and Annex 2).

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Annex 1. Potential vectors of *H. lauricola* (complement, 2025-10)

In all cases : transmission not confirmed

species	EPPO code	family	Distribution / EPPO	Comments and references
<i>Ambrosiodmus lecontei</i>	AMBDLC	Curculionidae , Scolytinae	Americas (Atkinson, 2025) EPPO: no record to date	<i>H. lauricola</i> recovered from 1 out of 3 individuals reared or trapped from a laurel wilt affected stand of redbay (<i>P. borbonia</i>), not found in 41 individuals reared from <i>P. palustris</i> (Ploetz et al., 2017)
<i>Apteromechus ferratus</i>	APTMFE	Curculionidae , Cryptorhynchinae	Symbiont (for ambrosia beetles) North America (Wikipedia) EPPO: no record to date	From specimens on sassafras, <i>H. lauricola</i> found (internal) in 4.2% or 1 of 24 specimens Knutsen & Rieske (2023)
<i>Xyleborinus gracilis</i>	XYBIGR	Curculionidae , Scolytinae	Americas (Atkinson, 2025) Azores in Atkinson (1 mention, not checked further) EPPO: no record to date	<i>H. lauricola</i> detected on 26 out of 52 (50%) individuals reared from laurel wilt-affected swamp bay (<i>P. palustris</i>) (Ploetz et al., 2017) Present in <i>X. affinis</i> and <i>X. gracilis</i> from swamp bay but not avocado (Ploetz et al., 2016)
<i>Xyleborinus andrewesi</i>		Curculionidae , Scolytinae	Africa, Asia, USA (https://idtools.org/sea_ambrosia/index.cfm?packageID=1161&entityID=6521) EPPO: no record to date	<i>H. lauricola</i> detected on 2 out of 15 (13%) individuals captured in flight (Ploetz et al., 2017)
<i>Xyleborinus saxesenii</i>	XYLBSA	Curculionidae , Scolytinae	Ambrosiella sulphurea (CABI CPC) Palaeartic origin (incl. North Africa), introduced to the Americas, Oceania, other parts of Africa (CABI CPC) EPPO: Widespread (CABI CPC).	<i>H. lauricola</i> detected in 2 out of 68 (2%) individuals reared from laurel wilt-affected swamp bay (<i>P. palustris</i>) (and not from <i>P. borbonia</i>) (Ploetz et al., 2017) Infrequently in two of the most common species in swamp bay and avocado, <i>X. crassiusculus</i> and <i>X. saxesenii</i> (Ploetz et al., 2016) Some association from avocado reported in Cruz et al. (2021)
<i>Xyleborus affinis</i>	XYLBAF	Curculionidae , Scolytinae	Americas, Africa, Asia, Oceania (Atkinson) EPPO : few records in Atkinson : Austria, Hungary, Israel (records not checked)	present in <i>X. affinis</i> and <i>X. gracilis</i> from swamp bay but not avocado (Ploetz et al., 2016) <i>H. lauricola</i> detected in 8 out of 61 (13%) individuals reared or trapped from a laurel wilt affected stand of redbay (<i>P. borbonia</i>), reared from <i>P. palustris</i> or captured in flight (Ploetz et al., 2017). Some association from avocado reported in Cruz et al. (2021)
<i>Xyleborus bispinatus</i>	XYLBBI	Curculionidae , Scolytinae	Not fully known (separated from <i>X. ferrugineus</i> in 2006). Native to tropical/subtropical regions of the Americas, introduced to some Eastern USA states (EPPO, 2020 citing others) EPPO: Confirmed in Sicily (IT), France (Nice) (EPPO, 2020)	Recovered consistently from <i>X. ferrugineus</i> , <i>X. bispinatus</i> , <i>X. volvulus</i> reared from swamp bay and avocado (Ploetz et al., 2016) <i>H. lauricola</i> detected in 10 out of 16 (63%) individuals captured in flight (Ploetz et al., 2017) Some association from avocado reported in Cruz et al. (2021)

species	EPPO code	family	Distribution / EPPO	Comments and references
<i>Xyleborus ferrugineus</i>	XYLBFE	Curculionidae , Scolytinae	Americas, Africa, Asia (CABI CPC; EPPO, 2026) EPPO: no record to date	Recovered consistently from <i>X. ferrugineus</i> , <i>X. bispinatus</i> , <i>X. volvulus</i> reared from swamp bay and avocado (Ploetz et al., 2016) <i>H. lauricola</i> detected in 72 out of 127 (57%) individuals reared or trapped from a laurel wilt affected stand of redbay (<i>P. borbonia</i>), reared from <i>P. palustris</i> (Ploetz et al., 2017)
<i>Xyleborus volvulus</i>	XYLBTO	Curculionidae , Scolytinae		Recovered consistently from <i>X. ferrugineus</i> , <i>X. bispinatus</i> , <i>X. volvulus</i> reared from swamp bay and avocado. For <i>X. volvulus</i> , appreciable amounts of the pathogen from avocado (Ploetz et al., 2016) Some association from avocado reported in Cruz et al. (2021)
<i>Xylosandrus crassiuscullus</i>	XYLBCR	Curculionidae , Scolytinae	Africa, Americas, Asia, Oceania. EPPO: Restricted distribution in France, Italy, Malta, Russian Fed., Slovenia, Spain ; few occurrences in Switzerland (EPPO, 2026)	Infrequently in two of the most common species in swamp bay and avocado, <i>X. crassiuscullus</i> and <i>X. saxesenii</i> (Ploetz et al., 2016) <i>H. lauricola</i> found (internal) in 25% or 2 of 8 specimens from sassafras (Knudsen & Rieske, 2023) Some association from avocado reported in Cruz et al. (2021)

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Annex 2. Host plants of *H. lauricola* and *X. glabratus*

From EPPO Global Database at 2025-07-29.

Plant family/species	<i>H. lauricola</i>	<i>X. glabratus</i>
Lauraceae hosts		
<i>Cinnamomum camphora</i>	✓	✓
<i>Cinnamomum jensenianum</i>	✓	
<i>Cinnamomum osmophloeum</i>	✓	✓
<i>Laurus nobilis</i>	✓	✓
<i>Licaria triandra</i>	✓	
<i>Lindera benzoin</i>	✓	✓
<i>Lindera latifolia</i>		✓
<i>Lindera melissifolia</i>	✓	doubtful (host status not confirmed)
<i>Litsea aestivalis</i>	✓	✓
<i>Litsea elongata</i>		✓
<i>Machilus nanmu</i>		✓
<i>Persea americana</i>	✓	✓
<i>Persea borbonia</i>	✓	✓
<i>Persea humilis</i>	✓	doubtful (host status not confirmed)
<i>Persea palustris</i>	✓	✓
<i>Sassafras albidum</i>	✓	✓
Lauraceae Experimental hosts		
<i>Lindera aggregata</i>	✓	
<i>Machilus thunbergii</i>	✓	
<i>Machilus zuihoensis</i>	✓	
<i>Ocotea heribertoii</i>		✓
<i>Persea indica</i>	✓	
<i>Persea liebmannii</i>	✓	
<i>Umbellularia californica</i>	✓	
Non-Lauraceae hosts		
<i>Leucaena</i> sp.		✓
<i>Lithocarpus edulis</i>		✓
<i>Phoebe lanceolata</i>		✓
<i>Phoebe</i> sp.	✓	
<i>Picea asperata</i>		✓
<i>Schima superba</i>		✓
<i>Shorea robusta</i>		✓

Annex 3 Isefor data for Lauraceae from Asia and the USA

In grey, *H. lauricola* or *X. glabratus* not recorded to date (EPPO Global Database at 2025-07-29)

Genus	Year	Quantity	Origin.country
Cinnamomum	2000	1	China
Cinnamomum	2000	2	Sri Lanka
Cinnamomum	2001	206	Taiwan
Cinnamomum	2003	300	United States of America
Cinnamomum	2004	251	United States of America
Cinnamomum	2008	130	China
Cinnamomum	2009	3750	China
Cinnamomum	2010	5	Sri Lanka
Cinnamomum zeylanicum	2010	40	Thailand
Lindera	2000	15	United States of America
Lindera	2001	100	Costa Rica
Lindera	2001	4000	India
Lindera	2001	30	Singapore
Lindera	2002	5	Japan
Lindera	2003	100	Malaysia
Lindera	2004	200	Singapore
Lindera	2006	6	Japan
Persea	2003	4	United States of America
Persea	2010	10	China (as budsticks)
Sassafras	2010	7	United States of America
Umbellularia	2000	10	United States of America
Umbellularia	2010	55	Sri Lanka