

Polyphagous shot-hole borer (PSHB)

(*Euwallacea fornicatus*)

Host List

The Polyphagous Shot-Hole Borer (PSHB) is an ambrosia beetle native to Southeast Asia.

PSHB attack a wide range of trees and woody shrubs across urban, agricultural and natural landscapes. More than 400 plant species are reported as hosts of PSHB, with some of these hosts also capable of supporting the *Fusarium* fungus that the beetles carry to serve as a food source.

PSHB is not able to complete its life cycle on all plant species it attacks.

Reproductive hosts are susceptible plants in which both the beetle and the fungus establish galleries and reproduce. More than 100 reproductive hosts of PSHB have been recorded to date. This includes high-risk species that have been preferred hosts of the beetle, as observed in California, Israel and South Africa. The highest risk host is box elder maple (*Acer negundo*). Other high-risk hosts include species of maple/sycamore (*Acer*), willow (*Salix*), plane (*Platanus*), oak (*Quercus*), coral (*Erythrina*), avocado (*Persea*), acacia (*Acacia*) and castor oil (*Ricinus*).

Non-reproductive hosts are attacked by the beetle, but PSHB are not reported as able to establish galleries and complete their lifecycle on these species. While the fungus may be present in these hosts the disease does not establish and these hosts are not expected to die. Non-reproductive hosts include citrus (*Citrus*), grapes (*Vitis*) and Eucalypts (*Eucalyptus*).

When some plants are under stress or are attacked by large numbers of beetles, they may present as reproductive or non-reproductive hosts of PSHB. This is important, as preferred hosts of PSHB can typically become infested while healthy. It is important to consider this when assessing the following list of plant genera which have been listed as hosts of PSHB, as the risk to the plant genera listed below may vary greatly.

As PSHB is introduced to novel areas, it is also expected new species of hosts will be uncovered, as the beetles are highly polyphagous (i.e. infest many host plants) and new hosts have been found in each location it has invaded.

Our observations of PSHB in Western Australia are still under investigation, but to date we have recorded PSHB on numerous hosts, including the following species:

- Box elder maple (*Acer negundo*)
- Coral tree (*Erythrina* sp.)
- Sophora (*Sapindus* sp.)
- Poinciana (*Delonix regia*)
- Mango (*Mangifera indica*)*
- Sea hibiscus/cotton wood (*Talipariti tiliaceum*, synonym: *Hibiscus tiliaceus*)*

*To the best of our knowledge, mango and sea hibiscus/cottonwood are new additions to the global host list for PSHB.

The above list will be updated as the identity of new host plants in Western Australia are confirmed. Please note, the reproductive status of many of these hosts has not yet been confirmed. At this time however, DPIRD can confirm that box elder maples are a reproductive host of PSHB in Western Australia

The following list of PSHB host genera have been generated from numerous sources (Gomez et al. 2019; PHA 2019; EPPO 2021; Lynch et al. 2021; Mendel et al. 2021; van Rooyen et al. 2021), and includes observations made in Western Australia.

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Acacia</i>	Wattles
<i>Acer</i>	Maples, Box elder
<i>Adansonia</i>	Baobab
<i>Afrocarpus</i>	Yellowwood
<i>Afzelia</i>	
<i>Aglaia</i>	Mahogany
<i>Ailanthus</i>	Tree of heaven
<i>Alangium</i>	Muskwood, muskheart
<i>Albizia</i>	Silk tree, siris tree, pink mimosa, persian silk tree
<i>Alectryon</i>	New Zealand ash, Titoki
<i>Allophylus</i>	
<i>Alnus</i>	Alders, ontano napoletano, Japanese elder
<i>Aloysia</i>	Beebrush
<i>Alstonia</i>	Milkwood, bitterbark, quinine tree, Australian fever bark
<i>Amalocalyx</i>	
<i>Anisodontea</i>	Cape mallow, African mallow, anisodontea
<i>Aralia</i>	Spikenard, Japanese aralia
<i>Arbutus</i>	Strawberry tree, madroño, mandrone
<i>Archidendron</i>	Pink laceflower
<i>Archontophoenix</i>	Alexandra palm, king palm, Bangalow palm
<i>Arthrophyllum</i>	
<i>Artocarpus</i>	Jackfruit, breadfruit, monkeyfruit, pingan
<i>Bambusa</i>	Bamboo
<i>Banksia</i>	Banksias
<i>Bauhinia</i>	Orchid tree, mountain ebony, butterfly tree
<i>Beilschmiedia</i>	Brown walnut, dogwood, blush walnut, canary ash
<i>Betula</i>	Birch
<i>Bischofia</i>	Bishop wood
<i>Bixa</i>	Lubenga
<i>Bocconia</i>	
<i>Bombax</i>	Silk cotton, red silk cotton tree, shavingbrush tree
<i>Bougainvillea</i>	Bougainvillea
<i>Brachychiton</i>	Kurrajong, hat tree, Queensland bottle tree
<i>Brachylaena</i>	
<i>Brahea</i>	Fan palm, rock palm, blue palm
<i>Brosimum</i>	Snakewood, breadnut tree, Jamaican bread nut
<i>Broussonetia</i>	Apa-cloth-tree, paper-mulberry
<i>Buddleja</i>	Butterfly bush
<i>Bunchosia</i>	Peanut butter tree
<i>Bursera</i>	Elephant tree
<i>Butia</i>	Wine or jelly Palm, butiá da serra
<i>Caesalpinia</i>	Ride of Barbados, flowerfence, Barbados pride
<i>Callerya</i>	Native wisteria
<i>Calliandra</i>	Stickpea, red powder puff, powder puff bush

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Callistemon</i>	Bottlebrush, weeping bottlebrush
<i>Calodendrum</i>	Cape chestnut
<i>Calpurnia</i>	
<i>Camellia</i>	Camellia, tea plant
<i>Camptotheca</i>	
<i>Cananga</i>	Ylang ylang, ilang ilang
<i>Canarium</i>	Mango bark, scrub terpine
<i>Carica</i>	Pawpaw, papaya
<i>Carya</i>	Pecan
<i>Caryota</i>	Toddy palm, fistail palm
<i>Cascabela</i>	Dogbane
<i>Cassia</i>	Purging Cassia, golden shower, golden rain tree
<i>Castanea</i>	Sweet chestnut, American chestnut
<i>Castanopsis</i>	White oak, New Guinea oak
<i>Castanospermum</i>	Puupapu, Morten Bay chestnut
<i>Casuarina</i>	Toa, small cone ironwood, river sheoak, swamp oak
<i>Catalpa</i>	Western catalpa
<i>Ceanothus</i>	Lilacs
<i>Cedrela</i>	Cigar box cedar, Spanish cedar, Mexican cedar, Indian cedar
<i>Cedrus</i>	Cedar
<i>Ceiba</i>	Palo borracho
<i>Celtis</i>	Nettle tree, European hackberry, lote tree
<i>Cercidium</i>	
<i>Cercis</i>	Redbud
<i>Cestrum</i>	Orange flowering jessamine, willowleaf jessamine, green poisonberry
<i>Chamaedorea</i>	Pacaya, climbing palm, parlour palm, good-luck palm
<i>Chionanthus</i>	Fringe tree
<i>Chiranthodendron</i>	
<i>Chorisia</i>	Silk floss tree
<i>Cinchona</i>	
<i>Cinnamomum</i>	Camphor laurel, camphor tree
<i>Citharexylum</i>	Fiddlewood
<i>Citrus</i>	Orange, lime, lemon, mandarine, tangelo, grapefruit
<i>Cladrastis</i>	Yellow wood, Kentucky yellow wood, American yellow wood
<i>Clerodendrum</i>	Tube flower, glory flower
<i>Cleyera</i>	Sakaki
<i>Cocculus</i>	
<i>Colletia</i>	
<i>Combretum</i>	
<i>Commiphora</i>	
<i>Cordia</i>	Bocote
<i>Cornus</i>	Giant dogwood, flowering dogwood
<i>Corylus</i>	Hazel
<i>Corymbia</i>	Red-flowering gum, gum trees

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Crataegus</i>	Hawthorn
<i>Crinodendron</i>	Chilean lantern tree
<i>Crotalaria</i>	Rattlepods
<i>Cunninghamella</i>	
<i>Cunonia</i>	Red alder
<i>Cupaniopsis</i>	Carrotwood
<i>Cussonia</i>	
<i>Dahlstedtia</i>	
<i>Dalbergia</i>	Indian rosewood, tulipwood
<i>Davidia</i>	Pocket-handkerchief tree
<i>Delonix</i>	Flame tree, poinciana
<i>Dendrolobium</i>	
<i>Derris</i>	
<i>Desmodium</i>	
<i>Dimocarpus</i>	Longan, litchi
<i>Diospyros</i>	Persimmon tree
<i>Diploglottis</i>	Australian tamarind, tamarind
<i>Dombeya</i>	
<i>Dovyalis</i>	Kei apple
<i>Dracaena</i>	Dracaena
<i>Durio</i>	Durian
<i>Ebenopsis</i>	
<i>Ehretia</i>	
<i>Ekebergia</i>	Cape ash
<i>Elaeocarpus</i>	Quandong
<i>Embelia</i>	
<i>Enterolobium</i>	TimbÓ, monkeysoap
<i>Eriobotrya</i>	Loquat
<i>Erythrina</i>	Coral tree
<i>Eucalyptus</i>	Rooibloekom, Gippsland Mallee, Spinning Gum, redbox
<i>Fagus</i>	Beech trees
<i>Faidherbia</i>	White acacia
<i>Falcataria</i>	
<i>Fatsia</i>	Japanese aralia
<i>Ficus</i>	Fig, Moreton-bay Fig, weeping fig
<i>Firmiana</i>	Chinese parasol tree
<i>Frangula</i>	
<i>Fraxinus</i>	Ash trees
<i>Geijera</i>	Wilga
<i>Gleditsia</i>	Honey locust
<i>Gliricidia</i>	Mother of cacao
<i>Gmelina</i>	Beechwood, goomar teak, Kashmir tree
<i>Grevillea</i>	Spider flower, grevillea
<i>Grewia</i>	

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Gymnosporia</i>	
<i>Hakea</i>	Hakea
<i>Halleria</i>	
<i>Handroanthus</i>	Trumpet trees
<i>Harpephyllum</i>	
<i>Harpullia</i>	Tulip wood
<i>Hauya</i>	
<i>Heliocarpus</i>	
<i>Heteropterys</i>	
<i>Hevea</i>	Rubber tree
<i>Hibiscus</i>	Hibiscus
<i>Hovenia</i>	
<i>Howea</i>	Sentry palm, kentia palm
<i>Hymenosporum</i>	Wollum Wollum, native frangipani
<i>Ilex</i>	Holly
<i>Inga</i>	
<i>Intsia</i>	
<i>Ixora</i>	
<i>Jacaranda</i>	Jacaranda tree
<i>Jatropha</i>	Bellyache bush
<i>Juglans</i>	Walnut
<i>Juniperus</i>	Juniper, Chinese juniper, eastern redcedar
<i>Keteleeria</i>	
<i>Kiggelaria</i>	Wild peach
<i>Koelreuteria</i>	Golden rain tree, Chinese rain tree, Chinese flame tree
<i>Kopsia</i>	
<i>Lagunaria</i>	Norfolk Island hibiscus
<i>Lannea</i>	
<i>Lansium</i>	Langsat
<i>Lantana</i>	Lantana
<i>Leonotis</i>	Lion's ear
<i>Leucaena</i>	
<i>Ligustrum</i>	Privets
<i>Liquidambar</i>	Liquidambar, Sweet Gum
<i>Liriodendron</i>	Tuliptree
<i>Litchi</i>	Lychee
<i>Litsea</i>	
<i>Livistona</i>	Cabbage palm
<i>Lonchocarpus</i>	
<i>Luehea</i>	
<i>Lysiloma</i>	
<i>Lysiphyllum</i>	
<i>Macadamia</i>	Macadamia nut
<i>Machilus</i>	

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Magnolia</i>	Lily tree, magnolia
<i>Mallotus</i>	
<i>Malus</i>	Apple, crabapple
<i>Malva</i>	Tree-mallow
<i>Mangifera</i>	Mango
<i>Manglietia</i>	
<i>Manihot</i>	Bitter cassava, tapioca
<i>Manilkara</i>	Sapodilla
<i>Maniltoa</i>	
<i>Melaleuca</i>	paperbarks, honey-myrtles or tea-trees
<i>Melastoma</i>	
<i>Melia</i>	Cape lilac, neem
<i>Melianthus</i>	Honey flower
<i>Metasequoia</i>	Redwood
<i>Mezoneuron</i>	
<i>Milicia</i>	
<i>Mimosa</i>	
<i>Mitrella</i>	
<i>Montanoa</i>	Tree daisy
<i>Moringa</i>	
<i>Morus</i>	Mulberry
<i>Myristica</i>	Nutmeg
<i>Myrsine</i>	
<i>Nauclea</i>	
<i>Neolamarckia</i>	
<i>Neolitsea</i>	Bollywood
<i>Neomirandea</i>	
<i>Nuxia</i>	Forest Nuxia
<i>Nyssa</i>	
<i>Ochroma</i>	Corkwood, balsa, West Indian balsa
<i>Olea</i>	Olive
<i>Olinia</i>	
<i>Olneya</i>	
<i>Oreocnide</i>	
<i>Osmanthus</i>	Sweet osmanthus
<i>Osteospermum</i>	African daisies
<i>Pajanelia</i>	
<i>Pararchidendron</i>	Stinkwood
<i>Parasenegalia</i>	
<i>Parkia</i>	
<i>Parkinsonia</i>	Palo verde
<i>Peltophorum</i>	Yellow poinciana
<i>Persea</i>	Avocado
<i>Peumus</i>	Boldo

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Phellodendron</i>	Amur corktree
<i>Phoebe</i>	
<i>Photinia</i>	Christmas berry
<i>Phyllanthus</i>	Indian gooseberry, myrobalan
<i>Pinus</i>	Pines, Japanese red pine
<i>Pipturus</i>	
<i>Pistacia</i>	Pistachio
<i>Pithecellobium</i>	
<i>Pittosporum</i>	
<i>Planchonia</i>	
<i>Platanus</i>	Plane trees, sycamore
<i>Plumeria</i>	Frangipani
<i>Podalyria</i>	
<i>Podocarpus</i>	Plum pine
<i>Poincianella</i>	
<i>Polyscias</i>	
<i>Populus</i>	Poplar, cottonwood
<i>Pouteria</i>	
<i>Prosopis</i>	Mesquite
<i>Protea</i>	Proteas, sugarbushes
<i>Protium</i>	
<i>Prunus</i>	Stonefruit - plum, apricot, peach, cherry
<i>Pseudobombax</i>	Shaving brush tree
<i>Pseudocydonia</i>	Flowering quince
<i>Psidium</i>	Guava
<i>Psoralea</i>	
<i>Pterocarya</i>	Chinese wingnut
<i>Pterocymbium</i>	
<i>Pyrus</i>	Pear
<i>Quararibea</i>	
<i>Quercus</i>	Oaks
<i>Rapanea</i>	Cape beech, Kaapse boekenhout
<i>Rhamnus</i>	Buckthorns
<i>Rhaphiolepis</i>	
<i>Ricinus</i>	Castor oil bush
<i>Robinia</i>	Locust tree
<i>Robinsonella</i>	
<i>Rosa</i>	Rose
<i>Roystonea</i>	Cuban royalk palm
<i>Salix</i>	weeping willow, willows
<i>Sambucus</i>	
<i>Sapindus</i>	Soapberry
<i>Saurauia</i>	
<i>Scaphium</i>	

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Schima</i>	
<i>Schinus</i>	Brazilian pepper, pepper tree
<i>Schleichera</i>	
<i>Schotia</i>	Boerboon
<i>Searsia</i>	
<i>Senegalia</i>	
<i>Senna</i>	Candle bush, cassod tree, casia amarilla
<i>Shorea</i>	
<i>Sindora</i>	
<i>Solanum</i>	Nightshade
<i>Sparrmannia</i>	African hemp
<i>Spondias</i>	
<i>Styphnolobium</i>	
<i>Swietenia</i>	Mahogany
<i>Syzygium</i>	
<i>Talipariti</i>	Hibiscus tiliaceus, sea hibiscus, native hibiscus
<i>Tamarindus</i>	Tamarind
<i>Tara</i>	
<i>Taxodium</i>	Swamp cypress
<i>Tectona</i>	Teak
<i>Tephrosia</i>	
<i>Terminalia</i>	Indian almond
<i>Theobroma</i>	
<i>Thevetia</i>	
<i>Tilia</i>	Tilo americano
<i>Tipuana</i>	Rosewood
<i>Tocoyena</i>	
<i>Toona</i>	Australian red cedar, toon tree
<i>Trema</i>	
<i>Triadica</i>	
<i>Trichilia</i>	Natal mahogany
<i>Ulmus</i>	Elms
<i>Umbellularia</i>	
<i>Ungnadia</i>	
<i>Vachellia</i>	
<i>Vepris</i>	
<i>Verbesina</i>	
<i>Vernicia</i>	Candlenut, sakan
<i>Viburnum</i>	Sweet viburnum
<i>Virgilia</i>	Choice tree, keurboom
<i>Vitex</i>	
<i>Vitis</i>	Grapevine
<i>Washingtonia</i>	Cotton palm
<i>Wigandia</i>	Caracus wigandia

SCIENTIFIC NAME - GENUS	COMMON NAME/S
<i>Wisteria</i>	Wisteria
<i>Xylia</i>	
<i>Xylosma</i>	Shiny xylosma
<i>Zelkova</i>	
<i>Zenia</i>	
<i>Ziziphus</i>	Jujube

Key host range references for PSHB

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