

# POLYPHAGOUS SHOT-HOLE BORER

## IDENTIFICATION + DIAGNOSIS + MANAGEMENT

**Is it PSHB?**  
**START HERE**



Do you observe multiple, small, round **entry-holes** accompanied by (1) wet staining or; (2) gumming; or (3) white powder/frass/sawdust.

YES



Is the entry-hole  $\pm 1$ mm. Scrape away bark to get a better view.

YES



Is the tree on the list of **reproductive hosts**?

NO

NO

NO

YES

Symptoms likely caused by other insect or disease

Consult horticulturist, technical pest control advisor, [Insect ID service \(SU\)](#) or [Disease clinic \(SU\)](#)

- I. **CONFIRM IDENTIFICATION OF INFESTATION**
- II. **HOW TO DISPOSE OF INFESTED MATERIAL**
- III. **DO's AND DONT's**



# HOW TO CONFIRM IDENTIFICATION AND SUBMIT A SAMPLE

**STEP 1:** Take a photo of the entire tree documenting any wilting or dieback.



**STEP 2:** Take a photo to assist in identification of tree, include: bark, leaves, flowers and seeds (if available).



**STEP 3:** Take a photo of a couple of the observed entry-holes.



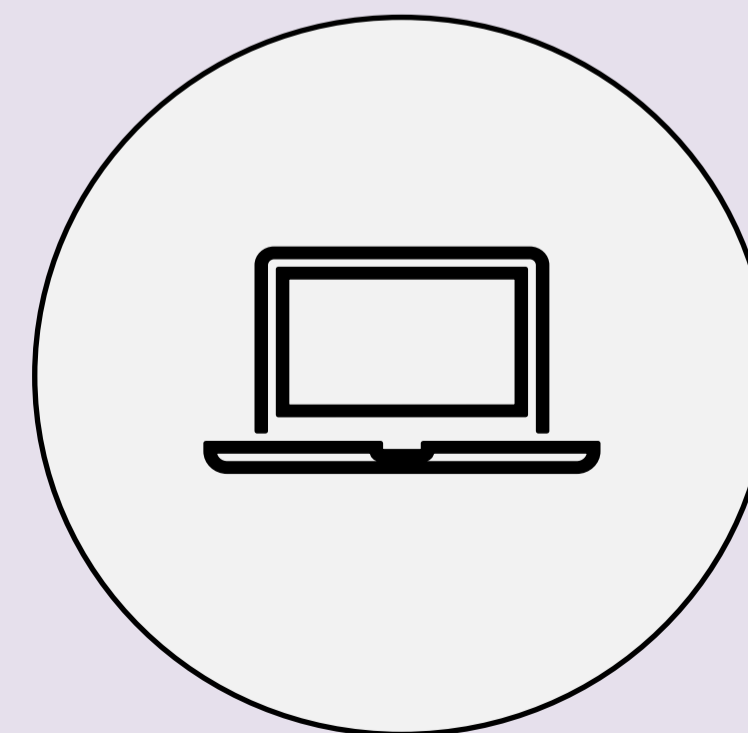
**STEP 4:** Use a knife to remove a square of bark around a single entry-hole and take a photo.



**STEP 5:** If a beetle is collected, place (dead) beetle in a container (ethanol), keep cool and ship to SU.



**STEP 6:** Send images and GPS location information to [pshb@hortgro.co.za](mailto:pshb@hortgro.co.za) prior to shipment of specimen.



# HOW TO DISPOSE OF PSHB INFESTED MATERIAL

PSHB is spread by the transport of infested plant material. The proper disposal and treatment of infested wood is critical in preventing the spread of the insect.

- PSHB infested trees support large populations of beetles. When the trees are cut, beetles will leave the tree. If plant material is left untreated, beetles will continue to breed in the plant material, and this will lead to further infestations in nearby trees.
- Removal of PSHB infested wood and random disposal of the waste could lead to the further spread of the insect. Municipalities have specific dump sites for PSHB infested material.
- The transport of any untreated wood such as firewood and trees (plants in pots, nursery trees and ornamentals), between locations can lead to the introduction of the beetle into areas that are not infested by PSHB.

## STEP 1



Fell highly infested trees as soon as possible.

## STEP 2



Chip as soon as possible after felling, close to felling location.

Material should be chipped as small as practical (< 25mm).

Chips should be left in a pile and covered with a plastic covering/ tarpaulin.

If felled trees cannot be processed immediately cover with plastic or tarpaulin.

Clean + decontaminate chipping machinery & pruning equipment after chipping before machinery is moved to a new location.

## Do's and Don't of PSHB

Do remove primary host trees (trees in which PSHB can breed) before they become infested.

Do treat infested trees and plant material as soon after felling as possible. Infested material should be treated on site.

Don't move infested material to a new location.

Do treat all infested wood and plant material according to the attached recommendations.

Don't move untreated wood and firewood into or out of any area.

Don't move live plants with a stem diameter larger than 20 mm.

Do remove infested branches from secondary host trees (trees in which PSHB cannot breed) to prevent Fusarium die back.

Do monitor ornamental trees, wind breaks and orchards according to the established methods.

Do clean all equipment used to treat PSHB infested material before it is moved to new areas.

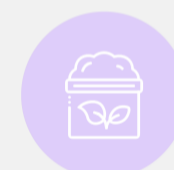
Do report infestations of PSHB to Hortgro. Monitoring and early detection of PSHB is critical.

## STEP 3 — Choose one



### SOLARIZATION

- Cover logs and/or chipped plant material with clear plastic and place in full sun.
- Fully cover logs/chips and secure to prevent PSHB escape.
- Limit chips / logs to ensure even heating of material throughout.
- Material should remain covered for 6 weeks (summer) – 6 months (winter).



### COMPOSTING

- Chipped plant material can be composted and utilised as mulch.



### HEAT TREATMENT

- High temperatures can be used to treat infested plant material.
- Would involve use of purpose-built kiln.