

“Save the Johannesburg Urban Forest”

A tiny beetle and its deadly fungus is threatening South Africa's trees

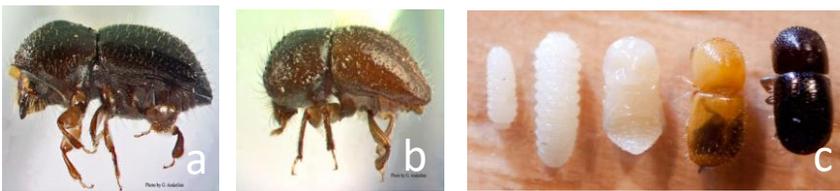
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What is the Polyphagous Shot Hole Borer (PSHB)?

The Polyphagous Shot Hole Borer (PSHB), *Euwallacea* sp., is an invasive beetle that vectors three fungi: *Fusarium euwallaceae*, *Graphium* sp., and *Acremonium* sp. Adult females attack a wide variety of host species, tunnelling galleries in which to lay their eggs and grow the fungi. Both adults and larvae feed on this fungus, which spreads from the galleries to attack the tree's vascular tissue. This causes a disease called Fusarium Dieback (FD), which has been found to interrupt the transport of water and nutrients. PSHB has been observed attacking over 300 tree species. At least 138 of those species are susceptible to Fusarium Dieback.



Adult females (a) are black in color and 1.8-2.5 mm long. Adult males (b) are brown and smaller than females at 1.5 mm long. (c) Life stages from larva to adult (female).

*Recognition:
Information
and photos
obtained
from UCCE
Field
Identification
Guide*



Recognise the Signs & Symptoms

External Symptoms

Attack symptoms, a host tree's visible response to stress, vary among species.

(a) Gumming, (b) staining, (c) sugary exudates, and/or (d) frass, (e) entry and exit holes may be noticeable before the beetle itself.



Internal Symptoms

Fusarium euwallaceae causes brown to black discoloration in infected wood.

Scrape away bark around the entry/exit hole to reveal dark staining surrounding the gallery (a, b).

Cross-sections of cut branches (c) show the extent of infection.



For details on all known species affected check www.crebus.co.za

How can you be part of the solution?

A Multidisciplinary Team is currently defining the scope and magnitude of the infestation by gathering data and populating a Dynamic Risk Profile. We need all stakeholders participation.

Report an infected tree

To send a WhatsApp Location Pin

Turn on phone location

Open WhatsApp

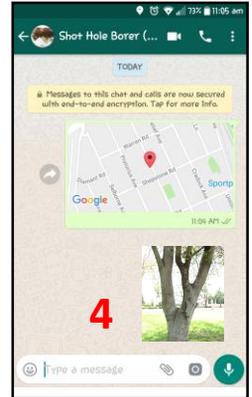
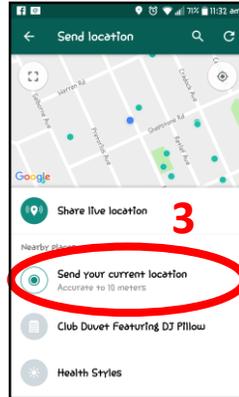
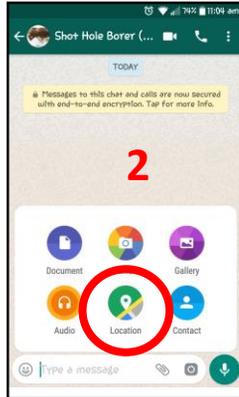
1. Select Attach
2. Select Location
3. Select Send Your Current Location
4. Send photos

Contribute to update the PSHB

Dynamic Risk Profile

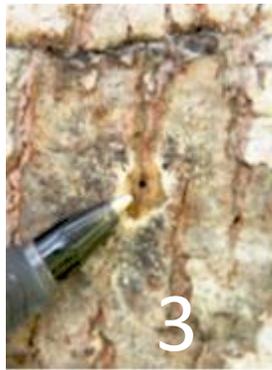
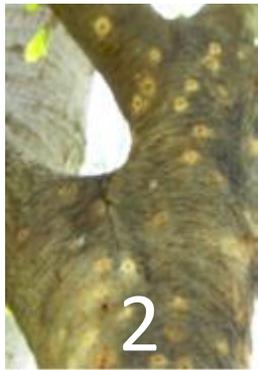
Follow the reporting procedure and use WhatsApp to send your observation to: **064 756 2736**

View Dynamic Risk Profile on www.crebus.co.za



Take photos of suspect trees from several distances (Step 2). Include photos of:

1. The trunk or symptomatic branches
2. The symptoms (close-up)
3. The entry/exit hole, if visible, with a ballpoint pen for scale (remove gumming or exudate if necessary)
4. If Fusarium dieback is observed, include a picture of the entire tree.



Next steps:

1. To determine the extent of the problem in and around Johannesburg, JCPZ and partners urge you to report any infected trees by using the WhatsApp as describe above.
2. We are busy populating the Dynamic Risk Profile with the assistance of all stakeholders
3. We are also busy to engage and consult with all stakeholders to share information and obtain inputs to develop a clear picture of the magnitude of the infestation
4. For more info **WhatsApp** your name and contact details (e-mail) to **064 756 2736** or visit the PSHB Landing Page <https://www.crebus.co.za/pshb/index.html>