



# Polyphagous Shot Hole Borer + Fusarium Dieback How to Sample a Suspect Tree

## WHY SAMPLE?

Suspected infestations of Polyphagous Shot Hole Borer/ Fusarium Dieback can be verified by lab tests. Signs and symptoms of PSHB/FD (multiple entry holes about the size of the tip of a ball point pen with staining/gumming/sugar exudate) can look very similar to those caused by other pests and may occur on the same hosts.

This is the process for properly collecting a sample from a suspect tree. Species pictured is Goldenrain tree (*Koelreuteria paniculata*).

Photos provided by Akif Eskalen, Ph.D (UC Riverside).



## DISINFECT YOUR TOOLS!

Any sampling tools that come into contact with potentially infected wood must be disinfected to prevent spreading the fungi to other plants. Used tools can be sprayed with or soaked in one of the following solutions:

- 5% bleach
- 70% ethyl alcohol
- Lysol® spray



## UNCOMFORTABLE WITH SAMPLING?

You may also report suspected tree infestations in Orange County to [pshb.uce.oc@gmail.com](mailto:pshb.uce.oc@gmail.com). Outside of Orange County, report trees to UC Riverside at [eskalenlab@gmail.com](mailto:eskalenlab@gmail.com). Submit the following information:

- Your contact info (name, city, phone number, email)
- Suspect tree species
- Description of suspect tree's location (and/or GPS coordinates)
- Description of suspect tree's symptoms
- Photos of suspect tree and close-up photos of symptoms

UC will use symptom photos and descriptions to decide whether a field assessment is needed.

## CONTACT

Questions or suggestions? Please contact the Eskalen Lab at [eskalenlab@gmail.com](mailto:eskalenlab@gmail.com).

Printed 12/2014

## THE PROCESS



**1** Remove any sap or powdery exudate covering the entry/exit hole of the beetle gallery.

If the beetle is trapped in the sap, you can include it in your sample. Do not include live beetles.



**2** Carefully remove the bark surrounding the entry/exit hole with a clean knife. You do not need to include the bark in your sample. This reduces the number of contaminants and increases the chances of detecting the fungi in the lab.



**3** Make a box-shaped incision around the entry/exit hole. The box should be at least 1 cm deep and include both dead and living tissue.

Dead or diseased tissue is often stained brown or black.



**4** Carefully pry the sample out with a sturdy knife or chisel.



**5** Place the sample in a sealed plastic bag and fill out the Specimen Submission form at [eskalenlab.ucr.edu](http://eskalenlab.ucr.edu).