



Santa Monica Mountains Bad Beetle Watch

Become a detection detective

We need your help! Contribute valuable data on the distribution and spread of the Invasive Shot Hole Borers (Polyphagous and Kuroshio) and the Goldspotted Oak Borer!

Get Started:

1. Focus on six species. It does not matter where they are located.

Download a plant ID guide at www.rcdsmm.org .

- Box elder (*Acer negundo*) -Arroyo willow (*Salix lasiolepis*)
- Red willow (*Salix laevigata*) -California or western sycamore (*Platanus racemosa*)
- London plane sycamore (*Platanus x acerifolia*) -Coast live oak (*Quercus agrifolia*)

2. Take the ISHB online training at www.pshb.org

3. Download the iNaturalist app. Join the "Santa Monica Mountains Bad Beetle Watch" project. (Won't work unless you have cell service)

4. Be safe! Watch your step, look up, look down.

5. IMPORTANT: Turn on location services for your phone, iNaturalist app, and camera.

6. Find a tree from the above list. One tree or more (in a stand)? You choose! Pick trees with at least a 4" diameter. No evidence of infestation? We want this data too!

7. You are ready to make your first observation!!



Collect Data (Make an observation)

1. Click the OBSERVE button in iNaturalist
2. Walk around the tree. Look up, look down. Take 4 photos for each tree (examples on back).
3. What do you see? Enter your species
4. Geoprivacy- open or obscured.
5. Projects-Santa Monica Mountains Bad Beetle Watch
6. These data fields:

For 1st visit if monitoring the same tree, multiple times. *Tree Circumference at Breast Height - In inches. *Number of Stems - Only for a multi-trunk tree.

Every visit

*Infestation Level - 0, 1-50, 50-150, or greater than 150. Required. *Canopy Health - Select yes or no. A healthy canopy is over 75% green. Required. *Crown Dieback - Select the % to the nearest 5%. Required. *Evidence of Staining, Frass, Both, or None. *Presence of Live Beetles - None, live beetles found in hole, climbing on trunks, or in flight. *Direction that Most Beetle Holes are Facing - East, West, North or South.

You are done! Thank you!



Photo 1 – Close-up of the hole with a pen or pencil. The first image should be of the beetle hole and include the point of a pen or pencil for scale and to point out the exact location of the suspected or known beetle hole. Make sure not to cover the hole itself but be within $\frac{1}{4}$ inch of the hole. In some cases, you may be able to see a black roundish thing poking out of the hole; this is a beetle abdomen. If no holes are found and the tree is absent of beetles, skip this photo. Beetle-free trees will only contain three photos.



Photo 2 – Photo of the tree trunk showing distribution of holes on trunk and/or branches. Place a piece of brightly colored flagging or tape with the reference number at the highest and lowest point of distribution. This will be the second tree in your series if your first photo contained a beetle hole. If this tree is absent of beetles, take a picture of the tree's trunk.



Photo 3 – IMPORTANT: Photo of leaves, flowers, and/or fruit to identify tree species.



Photo 4 – Photo of entire tree canopy. This will be the hardest photo to take. Step back far enough from the tree to see the entire tree canopy. For the best photo, aim to have the sun behind you. Watch your step.