

Handling Instructions

Sasajiscymnus tsugae

On Receipt of Shipment

- Open the box to provide fresh air then you can re-close the box. Keep contents inside. Store box in a cool, dark place. **(50°-60° is recommended)**
- Beetles should be released on the day of receipt, if possible. The honey strips inside the containers should sustain the predators for up to 24 hours after receipt.

Transport to the Field and Release

- Keep the shipping box with the beetles cool and out of direct sunlight. Containers may be removed from boxes to be walked to the release station.
- Avoid releasing in snow, rain, high wind, or freezing temperatures.
- Select release sites by identifying the healthiest, most dense patches of HWA.

Option 1: Clothespins

Materials: Box or bag with beetle containers, 1 clothespin per container, White T-shirt or light-colored clothing, artist brush and/or wooden pencil

- At the release site, drop containers a few times on a flat surface to dislodge any beetles clinging to the lid. Gently peel back lid.
- Clothespin the container securely to branch.
- The beetles will transfer themselves to the vegetation over time. They may be a little sluggish from being kept cool.
- **Caution:** During flight, beetles often seek the nearest surface, which may be the clothing of the releaser. Carefully inspect clothing for beetles. Gently remove with an artist brush or the point of a pencil.
- Wait one day or more before you re-collect the containers. Examine them for any beetles. Gently tap container to flick any remaining beetles onto the hemlock foliage.



Option 2: Thumbtacks (Use this method if you can't reach affected foliage)*

Materials: Box or bag with beetle containers, 1-2 thumbtacks/container, White T-shirt or light-colored clothing, artist brush and/or wooden pencil

- At the release site, drop containers a few times on a flat surface to dislodge any beetles clinging to the lid. Gently peel back lid.
- Thumbtack container to bark of the tree, careful to maneuver container as close to foliage as possible. The beetles will emerge and fly toward sunlight and land on foliage in this general direction.
- **Caution:** During flight, beetles often seek the nearest surface, which may be the clothing of the releaser. Carefully inspect clothing for beetles. Gently remove with an artist brush or the point of a pencil.
- Wait one day or more before you re-collect the containers. Examine them for any beetles. Gently tap container to flick any remaining beetles onto the hemlock.

**Option 3: Extracting beetles and their bedding.
(Use this method if you won't be returning to remove containers)***

Materials: Box or bag with beetle containers, White T-shirt or light-colored clothing, artist brush and/or wooden pencil

- At the release site, drop containers a few times on a flat surface to dislodge any beetles clinging to the lid. Gently peel back lid.
- Very gently, pull out the bedding and "tweeze" raffia material between a few hemlock twigs or leaflets. Try your best to protect from wind.
- **Caution:** During flight, beetles often seek the nearest surface, which may be the clothing of the releaser. Carefully inspect clothing for beetles. Gently remove with an artist brush or the point of a pencil.

