

Hemlock Woolly Adelgid Survey Protocol



Thanks for your interest in surveying for hemlock woolly adelgid!

This document is double-sided, and provides tips for preparing to survey, the equipment you'll need, and the survey protocol.

Before heading out:

- Make sure you have a detailed map of the area with you.
- Know any survey concerns or limitations, such as terrain, property boundaries, trail closures/conditions, etc.
- HWA is most visible from late November to April, and is most often discovered in areas close to water or waterfalls and in areas frequented by humans or birds. Be sure to check these areas carefully when surveying – while staying safe!

Safety:

- Avoid steep slopes, cliffs, and otherwise rough or hazardous terrain.
- Dress appropriately. Bring extra layers and a warm drink. You may get a lot colder than you expect. Educate yourself on winter outdoor safety and frostbite.
- Use common sense. Tell someone your plan for the day. Use the buddy system and make sure you can make eye contact with your other group members while surveying.
- Ticks are especially active in the spring and fall, and are active any day above 45°F. Check yourself often, especially after walking through an area with undergrowth vegetation. Lyme Disease is no joke! It is on the rise in NYS, can be difficult to treat, and if left untreated can lead to permanent life changes.

Equipment:

- GPS, if possible (or Smartphone with GPS capability)
- A good map of your survey area
- Data collection form **or** Smartphone with iMapInvasives app*
- In Cold Weather:
 - Warm lunch and warm drinks
 - Appropriate footwear: Snowshoes, X-country skis, micro-spikes
- Hand lens, if possible
- Clipboard
- Whistle
- Camera, if possible

*Visit <https://blogs.cornell.edu/nyshemlockinitiative/report-hwa-finding/> to learn more about how to record and report your survey results.

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Survey Protocol:

- Start your survey in an easily accessible location.
- Begin at a random hemlock tree with branches within arm's reach.
- Examine the underside of branches - closest to the tips - for HWA's white woolly egg sacs. Check 3 branches per tree.
- Continue to survey by moving randomly from one hemlock to the next, ideally selecting a tree 10-15 feet from the previous tree surveyed.
- Survey as many trees as time, weather, and safety permit. It is okay if there are not many hemlock in the area you are surveying.
- Large stands should be surveyed in several locations, especially if HWA is detected.
- Complete the survey form after each stand survey; draw surveyed area on a map and indicate HWA presence/absence in the drawn area.
- Be sure to clearly indicate the location and area of your survey on the survey form so the survey site can be found again.
- Take notes on conditions that may be stressing the hemlock other than HWA, including other insect pests, past injuries, presence of grapevines, etc. Note adjacent points of reference, invasive plants and other things you think would be good for us to know.

Tips:

- Hemlocks branches can be found on the ground at certain times of year after being clipped off by porcupines or strong winds; these branchlets provide a good way to check on what may be going on further up in the canopy. Also, check hemlock bark for woolly masses after rain storms.
- HWA crawlers begin emerging around **April 10th**, so we recommend you complete your survey activities before then to reduce the chance of accidentally spreading HWA.
- If you are unsure about a possible detection, take several good quality photos and send to nyshemlockinitiative@cornell.edu.

If you visit an area with hemlocks and you *DO NOT* find HWA, please report the non-finding, so we know which areas have been checked.

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