

# HEMLOCK WOOLLY ADELGID DATA SHEET WITH INSTRUCTIONS



**Ecosystem Investigation Network**

Team Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Coordinates (Decimal Degrees):

Latitude: \_\_\_\_\_ Longitude: - \_\_\_\_\_

Materials	
<p>For the whole group:</p> <ul style="list-style-type: none"> <li>● Flagging tape</li> <li>● 1 measuring stick or measuring tape (optional)</li> </ul>	<p>For each fieldwork team:</p> <ul style="list-style-type: none"> <li>● Datasheet</li> <li>● Species ID card for eastern hemlock</li> <li>● Species ID card for balsam fir</li> <li>● Species ID card for hemlock woolly adelgid</li> <li>● Species ID card for elongate hemlock scale</li> <li>● Camera (smartphone camera is fine)</li> <li>● Clipboard and pencils</li> </ul>

Protocols	Data and Photos to Collect
<p><i>The instructions in this column specify how to answer the questions on the right-hand side of the page.</i></p>	<p><i>Questions are required unless otherwise marked. Each question has a " " beside it to help you track your progress.</i></p>
<p>1. Find a hemlock tree to examine closely</p> <p>2. Record the habitat</p>	<p><input type="checkbox"/> Habitat (Circle one):</p> <p>In a forest</p> <p>In a developed area</p>
<p>3. Check with another fieldwork team to make sure your tree is a hemlock, peer reviewing the tree identification.</p>	<p><input type="checkbox"/> We shared at least three pieces of evidence we used to identify the tree as eastern hemlock.</p> <p><input type="checkbox"/> The other team has correctly identified an eastern hemlock tree</p>
<p>4. Take four pictures of the tree that show the tree is an eastern hemlock.</p>	<p><input type="checkbox"/> Clear photo taken of entire tree</p> <p><input type="checkbox"/> Close up taken of the trunk</p> <p><input type="checkbox"/> Clear photo taken of the underside of the needle</p> <p><input type="checkbox"/> Clear photo taken of the attachment of the needle to the branch</p>

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5. Mark your tree with flagging tape	<input type="checkbox"/> Tree flagged and labeled.																						
<b>Branches</b>																							
<p>6. Search 10 unique branches that are at least 1 meter long.</p> <p>Each unique branch should start at the trunk.</p> <p>If you cannot reach 10 branches, check as many branches as you can reach.</p> <p>7. For each branch, record whether you found or did not find hemlock woolly adelgid.</p>	<table border="1"> <thead> <tr> <th data-bbox="818 543 943 638">Branch (1m)</th> <th data-bbox="943 543 1425 638">Hemlock woolly adelgid present? (Circle one):</th> </tr> </thead> <tbody> <tr><td data-bbox="818 638 943 701">1</td><td data-bbox="943 638 1425 701">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 701 943 764">2</td><td data-bbox="943 701 1425 764">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 764 943 827">3</td><td data-bbox="943 764 1425 827">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 827 943 890">4</td><td data-bbox="943 827 1425 890">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 890 943 953">5</td><td data-bbox="943 890 1425 953">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 953 943 1016">6</td><td data-bbox="943 953 1425 1016">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 1016 943 1079">7</td><td data-bbox="943 1016 1425 1079">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 1079 943 1142">8</td><td data-bbox="943 1079 1425 1142">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 1142 943 1205">9</td><td data-bbox="943 1142 1425 1205">Found / Not Found / Can't reach</td></tr> <tr><td data-bbox="818 1205 943 1268">10</td><td data-bbox="943 1205 1425 1268">Found / Not Found / Can't reach</td></tr> </tbody> </table>	Branch (1m)	Hemlock woolly adelgid present? (Circle one):	1	Found / Not Found / Can't reach	2	Found / Not Found / Can't reach	3	Found / Not Found / Can't reach	4	Found / Not Found / Can't reach	5	Found / Not Found / Can't reach	6	Found / Not Found / Can't reach	7	Found / Not Found / Can't reach	8	Found / Not Found / Can't reach	9	Found / Not Found / Can't reach	10	Found / Not Found / Can't reach
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<p>8. If you think you found hemlock woolly adelgid, check with another field team, peer reviewing your identification.</p> <p>Take 3 clear photos to show that you found hemlock woolly adelgid</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> We shared 3 pieces of evidence we used to identify hemlock woolly adelgid.</li> <li><input type="checkbox"/> Three clear photos of hemlock woolly adelgid taken.</li> </ul>																						
<b>Summary</b>																							
9. Record the total number of branches that you searched for hemlock woolly adelgid.	<input type="checkbox"/> Number of branches surveyed: ____																						
10. Record the total number of branches with hemlock woolly adelgid.	<input type="checkbox"/> Number of branches infested: ____																						

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11. Record whether hemlock woolly adelgid was found on the tree.	<input type="checkbox"/> Did you find hemlock woolly adelgid? (Circle one):  Found Not found
Field Notes	
If you think you found elongate hemlock scale write it here in your fieldnotes:	
Checklist	
I certify that I: Checked at least 10 branches, or as many as I could reach.  completed peer review in the field	<input type="checkbox"/> Checklist complete? (Circle one): Yes No  <input type="checkbox"/> Signature: <hr/>