

KNOTWEED

DETAILED PROTOCOL AND DATASHEET



Ecosystem
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Team Name: _____ Date: _____ Time: _____

Coordinates (Decimal Degrees):

Latitude: _____ Longitude: - _____

Materials	
<p>For the whole group:</p> <ul style="list-style-type: none"> • 1 transect tape <p>Recommended</p> <ul style="list-style-type: none"> • Sunglasses or safety goggles • Flagging tape 	<p>For each fieldwork team:</p> <ul style="list-style-type: none"> • 1 meter squared quadrat • Meter stick • Ruler • Species ID cards for Japanese and giant knotweed • Clipboard and pencils • Camera (smartphone camera is fine)

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>
Study Site (same information for all teams)	
<p>1. As a group, estimate the size of the knotweed patch.</p> <ul style="list-style-type: none"> • Estimate the length of the patch • Estimate the width of the patch • Multiply to estimate the full patch size 	<p>Knotweed population (choose one):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Less than 50 square meters <input type="checkbox"/> 51 to 100 square meters <input type="checkbox"/> 101 to 200 square meters <input type="checkbox"/> More than 200 square meters
<p>2. Determine the type of habitat</p>	<p>Habitat type (choose one):</p> <ul style="list-style-type: none"> <input type="checkbox"/> developed area <input type="checkbox"/> forest <input type="checkbox"/> banks of a stream or river
<p>3. Work together to lay a study transect.</p> <ul style="list-style-type: none"> • If the patch is too dense to walk through safely, run the transect along the edge of the patch • Record the total length of the transect 	<p>Transect Placement (choose one):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Through the middle <input type="checkbox"/> Along the edge <p>Total length of transect: _____</p>

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<p>4. Take a photo of the full patch or as much of the site as you can capture</p>	<p><input type="checkbox"/> Photo of the field site taken</p>
<p>Species found</p>	
<p>5. Walk to your assigned spot on the transect tape, and place the quadrat on the other, untrampled side of the transect.</p> <ul style="list-style-type: none"> • Each fieldwork team should be evenly spread along the transect • Record the location of the quadrat along the transect. 	<p><input type="checkbox"/> Location on transect: ____ meters</p>
<p>6. Scan the same plant for ants.</p> <ul style="list-style-type: none"> • Look where the leaves attach to the main stem. Knotweed often releases nectar there to attract ants. • Record whether you see ants crawling on the knotweed plants. 	<p>Do you see ants on the knotweed? (choose one):</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>7. Determine which species of knotweed is present at your field site:</p> <ul style="list-style-type: none"> • Use your ID guides • Find at least 3 pieces of supporting evidence for your identification • Consider the leaf size and shape, height of the plant, and hairs underneath the leaf • Remember that a hybrid will have characteristics of both Japanese and giant knotweed 	<p>Knotweed Species (choose one):</p> <p><input type="checkbox"/> Japanese knotweed</p> <p><input type="checkbox"/> Giant knotweed</p> <p><input type="checkbox"/> Hybrid/other</p>
<p>8. Check in with another fieldwork team to peer review the identification.</p>	<p><input type="checkbox"/> We shared three pieces of evidence our team used to identify the knotweed species.</p> <p><input type="checkbox"/> The other team has correctly identified the knotweed species.</p>

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<p>9. Take photos that show you have identified the knotweed species.</p> <ul style="list-style-type: none"> • For the close up of a leaf, lay the leaf on top of a piece of paper, and take the photo from above. • Make sure the bottom of the leaf is included in the picture, where the leaf meets the stem. 	<ul style="list-style-type: none"> <input type="checkbox"/> Close up of the leaf with ruler taken <input type="checkbox"/> Close up of the underside of the leaf taken <input type="checkbox"/> Close up of the flowers or seeds taken (if present) <input type="checkbox"/> one foot-long section of the stem taken (including where leaves attach)
<p>Knotweed measurements</p>	
<p>10. Count and record the total number of LIVE stems in the quadrat.</p> <ul style="list-style-type: none"> • Keep track of the stems that have been counted. • Have one member of your fieldwork team hold counted stems or tie flagging tape around each stem that has been counted. • Do not count old, dead stems 	<ul style="list-style-type: none"> <input type="checkbox"/> Number of LIVE stems in the quadrat: ____
<p>11. Find the height of the tallest stem</p> <ul style="list-style-type: none"> • If the tallest stem is more than 1m, use the flagging tape to mark each meter on the stem. • Measurements do not need to be exact. 	<ul style="list-style-type: none"> <input type="checkbox"/> Estimated knotweed height: ____m
<p>12. Look for evidence of flowers and seeds</p> <ul style="list-style-type: none"> • dry or dead flowers are considered evidence of flowers • Knotweed seeds are surrounded by a white papery material 	<p>Evidence of flowers?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>Evidence of seeds?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Field Notes (optional)</p>	
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Checklist	
I certify that I: followed the quadrat placement protocol completed peer review in the field	<input type="checkbox"/> Checklist complete? (Circle one) Yes No <input type="checkbox"/> Signature: <hr/>