

Knotweed Collection Instructions

Thank you for taking the time to collect knotweed infestations for analysis! Below are detailed instructions on how to collect the plant. If you have any questions, please contact Marijka Haverhals (208-301-1216) or Marijka@uidaho.edu), Dr. Mark Schwarzlaender (markschw@uidaho.edu) or Dr. John Gaskin (john.gaskin@ars.usda.gov).

Purpose:

To understand the distribution of species/genotypes and reproduction strategy of invasive knotweeds in the northwestern USA and British Columbia. This information will help with ongoing Canada/USA biological control research efforts.

Tools Needed:

- *Metric* Measuring tape (50-100 m) If you do not have access to a metric tape you may use an English unit tape
 - *Optional:* Plant press or other method to make an herbarium voucher
 - Permanent marker pen (Sharpie)
 - Plant clippers
 - GPS or best estimate of latitude, longitude
- **If you do not have a GPS, you can zoom in and right click your location on Google maps (<http://maps.google.com/maps>).
1. Click on “center you map here” to center your location in the map
 2. Then paste into your browser/URL address below at the top of the webpage [don’t get rid of semi-colon at end!]:
javascript:void(prompt("",gApplication.getMap().getCenter()));
 3. Hit return. Latitude/longitude will pop up.

Tools Provided:

- 20 Silica bags population/infestation. The silica bags dry tissue quickly so DNA does not degrade. **Store at room temp until shipped.**
- Gallon bags (1 per population)
- Slips of paper for writing site details to be put into bags (writing on outside of bag tends to wear off)
- Morphological key to knotweeds (attached as pdf)
- Return envelope with postage and return address

Collection Process:

1. Find a relatively large patch of Japanese, Giant, Bohemian, or Himalayan knotweed and identify species (see attached pdf of knotweed morphological key for help with ID and taxonomy)
2. Infestation should be 50 to 100m (164 to 328 ft) in length.
3. Patches should be at least 50 miles apart unless they contain different species.

4. Determine if patch is one or multiple species.
5. If you think you have more than one species in your patch, go ahead and collect as instructed, but include a single herbarium specimen for **each** species present, and indicate species name in **each** silica bag. The transect may be a mix of species, which is ok. If not sure what knotweed species are present, collect anyway and we will ID your herbarium specimens.
6. Run a 50 to 100 m transect along or through patch.
7. Collect leaf tissue within 1 meter of transect on either side every 5 m (or within a yard every 15ft if you use an English unit tape)
8. Leaf tissue should be from young, disease/damage free leaf (collect about 4cm x 4cm total leaf tissue max per silica bag, or the silica can't dry the tissue efficiently, and leaves will mold. We only use a hole-punch size of leaf tissue for DNA extraction).
9. Place leaf tissue in silica bag, and place marked slip of paper in each silica bag indicating plant # (1 through 20 max).
10. If there is no plant at a transect point, just send an empty silica bag with a slip indicating that plant #X is missing, then the next plant is X+1. We need to keep track of distance between all plants for analysis.
11. If the last plant is, for example, #12 (because your patch was only ~60 m long), just send us 12 bags and keep the rest.
12. You should end up with 10-20 silica bags to ship back, some of which might be empty.

Optional Herbarium Collection

1. Make one herbarium specimen for each species present. Mature, mid-stem leaves are best for ID, so include this portion of a branch along with some flower/fruit inflorescences if available, and any other plant parts that will help with ID. Dry the pressed herbarium tissue in an oven (~40C or ~104F) or in a window in the sun or send to us as soon as possible and we will dry. If wet for too long will mold.
2. Place all individual small bags in a larger gallon size bag and mark your name, date, location, GPS, and species on the paper slip. Put this information on herbarium specimen also.

Mail materials to:

Center for Research on Invasive Species and Small Populations (CRISSP)
Marijka Haverhals
PO Box 442339
Moscow, ID 83844-2339

Thanks again for your help!

Questions? Please contact:

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