

Collecting a plant tissue sample

This protocol details the steps for collecting a plant tissue sample that is associated with an herbarium specimen. There are two periods during which you could collect tissue samples: 1) in the field at the time the specimen is collected, or 2) later when specimens are being placed into a wooden press. Data can be recorded using a tablet with Survey123 or a paper field book. This protocol includes methods for each scenario, 4 total.

Supplies Required – available in the FNC Prep Room

- White coin envelopes pre-labeled with Material Sample ID (barcode)
- Silica gel beads in a resealable plastic bag
- Mechanical pencil
- All other equipment for specimen collecting (see [Field Collecting Protocol for Vascular Plants](#))



Tablet Troubleshooting

If the 2D data matrix code on the envelope is not scanning, press the settings “cogwheel” at the top right corner of the screen and be sure to have Data Matrix checked.



When using a field tablet with Survey123 and Collecting tissue sample in the field

Method 1



IN THE FIELD

- The person recording data with the tablet should have the tissue envelopes.
- Near the end of the Survey123 form select the “Tissue Barcode” field.
- Select 1 envelope.
- Using the tablet’s camera scan in the Material Sample ID (barcode)
- Be sure to select the applicable Tissue Sample Provenance in the Survey123 form.
- Give the envelope to the person with the field press. Remove about a quarter-dollar size piece of leaf material from the plant.
 - More is encouraged, but not so much that the envelope is overly stuffed, or the quality of the specimen is reduced.
 - If there is insufficient leaf material to take a sample do not make one.
- Place the sample inside the envelope. Do not seal the envelope.
- Using pencil, record the primary collector’s initials and the collector number for the specimen on the envelope.
 - You may also record the date, site, or project.
- If you collected multiple individual plants, tie a jewelry tag around the individual from which the tissue sample was collected.
- Place the labeled envelope with the sample inside into a resealable plastic bag filled with silica gel beads.

IN THE PREP ROOM

- Place all labeled envelopes with the samples inside the plastic tub designated for your samples (on the south wall of the FNC Prep Room) filled with silica gel beads.



Prep Room

When using a field tablet with Survey123 and Collecting tissue sample while pressing specimens



IN THE FIELD

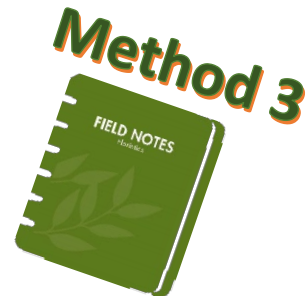
- The person recording data with the tablet should have the tissue envelopes.
- Near the end of the Survey123 form select the “Tissue Barcode” field.
- Select 1 envelope.
- Using the tablet’s camera scan in the Material Sample ID (barcode).
- Be sure to select the applicable Tissue Sample Provenance in the Survey123 form.
- Give the envelope to the person with the field press.
- Place the empty envelope inside the sheaf of newspaper along with the specimen.

WHILE TRANSFERRING SPECIMENS INTO WOODEN PRESSES

- While arranging a specimen for its final pressing, remove about a quarter-dollar size piece of leaf material from the plant.
 - More is encouraged, but not so much that the envelope is overly stuffed, or the quality of the specimen is reduced.
 - If there is insufficient leaf material to make a tissue sample do not make one.
- Place the sample inside the envelope. Do not seal the envelope.
- Using pencil, record the primary collector’s initials and the collector number for the specimen on the envelope.
 - You may also record the date or project.
- If you collected multiple individual plants, tie a jewelry tag around the individual from which the tissue sample was collected.
- Place the labeled envelope with the sample inside into the plastic tub designated for your samples (on the south wall of the FNC Prep Room) filled with silica gel beads.



When using a paper field book and Collecting tissue sample in the field



IN THE FIELD

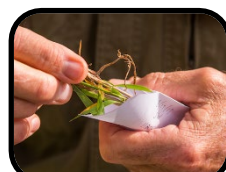
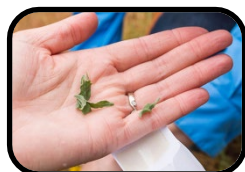
- The person with the field press should have the tissue envelopes.
- Select 1 envelope.
- Verbally relay to the data recorder that you are collecting a tissue sample and if the tissue is coming from the same plant that is being vouchered, or from another individual so they may note it in the field book.
- Remove about a quarter-dollar size piece of leaf material from the plant.
 - More is encouraged, but not so much that the envelope is overly stuffed, or the quality of the specimen is reduced.
 - If there is insufficient leaf material to make a tissue sample do not make one.
- Place the sample inside the envelope. Do not seal the envelope.
- Using pencil, record the primary collector's initials and the collector number for the specimen on the envelope.
 - You may also record the date, site, or project.
- If you collected multiple individual plants, tie a jewelry tag around the individual from which the tissue sample was collected.
- Place the labeled envelope with the sample inside into a resealable plastic bag filled with silica gel beads.

IN THE PREP ROOM

- Place all labeled envelopes with the samples inside the plastic tub designated for your samples (on the south wall of the FNC Prep Room) filled with silica gel beads.

Field

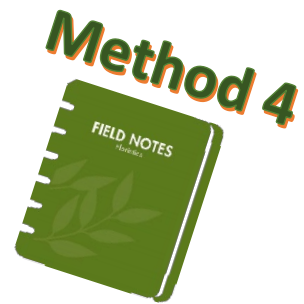
Within viewshed
<input type="checkbox"/> Abundant >500
<input type="checkbox"/> Common 101-500
<input checked="" type="checkbox"/> Frequent 11-100
<input type="checkbox"/> Occasional 6-10
<input type="checkbox"/> Rare 1-5
<input checked="" type="checkbox"/> Tissue Sample



Prep Room



When using a paper field book and Collecting tissue sample while pressing specimens



IN THE FIELD

- The person with the field press should have the tissue envelopes.
- Select 1 envelope.
- Place the empty envelope inside the sheaf of newspaper along with the specimen.

WHILE TRANSFERRING SPECIMENS INTO WOODEN PRESSES

- While arranging a specimen for its final pressing, remove about a quarter-dollar size piece of leaf material from the plant.
 - More is encouraged, but not so much that the envelope is overly stuffed, or the quality of the specimen is reduced.
 - If there is insufficient leaf material to make a tissue sample do not make one.
- Place the sample inside the envelope. Do not seal the envelope.
- If you collected multiple individual plants, tie a jewelry tag around the individual from which the tissue sample was collected.
- Using pencil, record the primary collector's initials and the collector number for the specimen on the envelope.
 - You may also record the date, site, or project.
- In the field book, record the creation of the tissue sample and if the tissue is coming from the same plant that is being vouchered, or from another individual.
- Place the labeled envelope with the sample inside into the plastic tub designated for your samples (on the south wall of the FNC Prep Room) filled with silica gel beads.

Field



Prep Room

