Last updated Sep 18, 2023

Leaf collection protocol:

Materials:

We supply:

1. This protocol (also attached to email confirming kit was in the mail and on website https://github.com/continentalgallproject/website)
2. 50 tea bags
3. 1 gallon ziploc with 250 g of silica desiccant beads (or multiple bags if you have told us you plan to collect from multiple sites)
4. 1 return label
5. 10 2 mL microcentrifuge tubes with 95% ethanol (for optional collection of dissected out insects)

You supply:

1. Sharpie/permanent marker
2. Clippers or scissors for field
3. Packing tape for mailing the samples back in

Site selection:

Sites should have high enough density of *Eurosta* galls (see bottom of page for diagram of Eurosta galls vs other goldenrod galls) to collect, measure, and dissect at least 200 galls this Spring. Sites should have low risk of mowing, so you can visit it this Fall and this Spring (and ideally again in spring 2025, but that is flexible).

Leaf collection:

1. Sample a minimum of 20 plants (30 is even better). Make sure these selected plants have *Eurosta* galls growing on them, so we can be sure they are Eurosta's host plants.
2. Sampled plants should be spaced at least 2 meters apart to reduce the risk repeated sampling from clones
3. From each plant, collect 5 fresh leaves ideally without herbivore damage (see diagram at bottom of protocol to differentiate between gall types) and place the leaves from each plant in a separate tea bag
4. Put tea bags into gallon ziploc bag with silica gel
5. Label the ziploc bag with Collector, Site ID, and date. For example:

   Collector: Olivia Bronzo-Munich
   Site ID: NHJ
   Date: 18/09/2023

Collector: Olivia Bronzo-Munich	Full name of person (or people) who collected samples

Site ID: NHJ	Three letter uppercase site code you make. Before sending your samples back to us, you will fill out a form that will ask for your site(s) coordinates and three letter code(s)
Date: 18/09/2023	Day/Month/Year formatt DD/MM/YYYY

You do not need to mark plants that you sampled from, as we aren't tracking individual plants but just surveying your site.

Optional extension, Fall gall dissection:

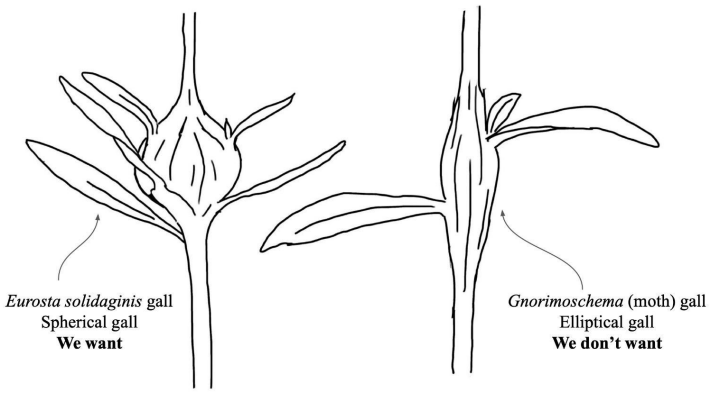
If you are interested and have time, we would love if you dissected galls and sent us the insects

1. Collect a few (5 to 30) galls
2. Dissect them using clippers, scalpel, razor, or other sharp implement to reveal the inner chamber
3. Remove the insect (may be larva or pupa, we are interested in both) inside the gall and place in a microcentrifuge tube (1.5 or 2 mL) with 95% ethanol. Don't worry about species ID, we will do that.
4. Place microcentrifuge tube into a quart sized bag (we provided) and label with site info as for leaf sample bag. Please do not place the quart sized bag inside the gallon zip lock bag in case a leak of ethanol occurs.
5. Place this bag into the shipping envelope

Sending samples back:

1. Fill out and submit sample submission form https://forms.gle/3nUdLsZXQrFpKVRX9 (also linked in your kit confirmation email).
2. Tape prepaid return label over label on envelope used to send kit and drop off at FedEx or UPS
3. Expect an email letting you know when we've received your samples

We really appreciate your interest and involvement in this project! Again, please email o.bronzomunich@gwu.edu with any questions.



For this project, we are interested in the spherical galls formed by *Eurosta solidaginis,* known as ball galls. We are not interested in the galls formed by the goldenrod moth, which forms elliptical galls (football shaped). Make sure to select a site where the ball galls are common, and to dissect and measure ball galls and not the elliptical galls.