A) Pre-fieldwork checklist/GGI–Garden voucher collection equipment list

Ensure all of the following equipment is available and in good condition before you begin sampling.

I) Voucher collection equipment (Figures 1 and 2, below)

A. Resealable bag filled with silica gel desiccant
   i. Envelopes for tissue dried in silica gel
B. Camera
C. Pens, pencils, and markers
D. Scannable biorepository barcode stickers
E. Pruning shears
F. Printed collection sheets
G. Cryovials (8 mL) for liquid nitrogen
   i. Aluminum foil squares to wrap around cryovial
H. Plant press (Fig. 2, below)
I. Liquid nitrogen dewar, (Fig. 2, below)
J. Newsprint (Not shown)
K. Butane torch (Not shown)

II) Personal protective equipment (PPE) in the field

A. Long pants
B. Insect spray
C. Sunscreen
D. At least 1 liter of water
E. Snacks and/or lunch
F. Hat
G. Appropriate clothing for weather
(long pants, closed toed shoes)

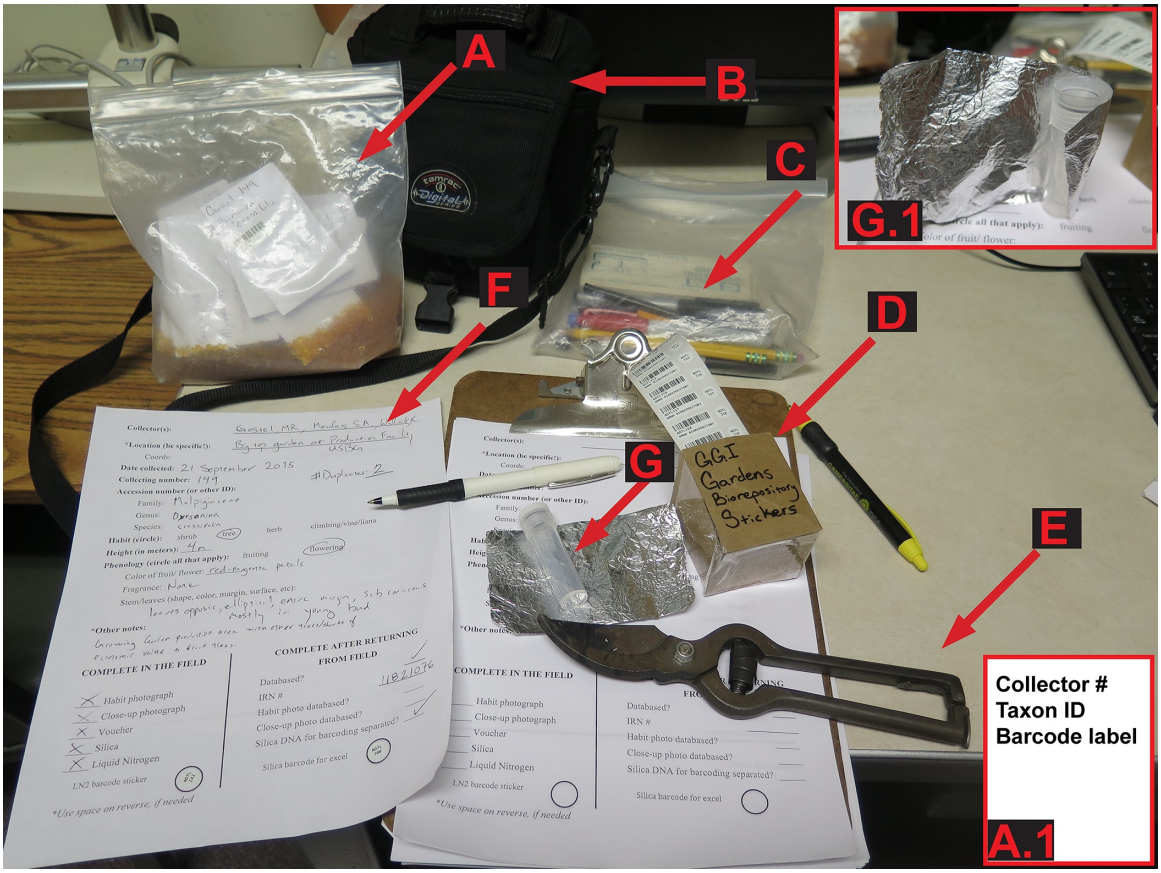

Figure 1. Necessary Field equipment for GGI Gardens voucher collection (items (H-K, not shown).

Figure 2 Demonstration of field collection team preparing living collection vouchers, with plant press (H) and liquid nitrogen dewar (I).

B) GGI Gardens Fieldwork protocol

Utilize the following protocol for making collections in the field.

I) Plant pressing
   a. Fill the entire sheet of newsprint. Refer to best practices guide for difficult or unusual plant specimens.
   b. Do not mix a pressed collection with multiple plants
   c. Collect all important characteristics (e.g., flowers, fruit, and leaves if possible).
   d. Be sure to flip one leaf over so that the underside is showing.
   e. When splitting large collections into multiple sheets, **do not** label these multiple sheets "A, B, C…", but use a hyphen (–) after your collection number, followed by sequential numbers "1, 2, 3…"

II) DNA collection
   a. Silica: Cut leaf tissue with sterilized pruning shears into strips before putting into the envelope. Include an amount of leaf tissue at least as much as the area of the envelope itself. Tear into pieces so that it all fits. Don't overfill the envelope and be sure to write the collector number and silica barcode sticker.
   b. Immediately add corresponding circular barcode stickers to each collection data sheet in the appropriate place for DNA samples.
   c. Use young (but not too young), fresh, undamaged leaves.
   d. Sterilize each collection instrument with torch after each collection, whenever the cutting device will be used. Apply flame for 8–10 seconds to each cutting surface.

III) Field Inventory Management (Collection sheets or iNaturalist)
   a. Fill out each empty line on the sheet.
   b. Record detailed descriptions.

c. Always include a plant name – if you are not sure, ask a garden staff and/or use your smart phone (if you have one) to confirm the genus or family indicated on garden signs. If you still don't know, email photographs to staff and ask.
d. Note the specific location of each collection. (e.g., Greenhouse room number and section, display number or name, GPS coordinates, etc.).

IV) Photographs
a. Take three pictures
    i. Label/tag that identifies the collection (with living collection ID for provenance).
    ii. Habit photo with the entire plant and some of the surroundings.
    iii. Close-up picture of vegetative and fertile material (flowers, fruit, spores of a fern, etc).

V) If a mistake is made
a. Make a note of the mistake on the collection sheet, what the mistake was, and any corresponding information.
b. If you forget to cover a liquid nitrogen tube with aluminum foil, VOID that barcode number and collect another.
c. It's always better to collect more if you forget than to miss a collection! Recollect something if you aren't sure.

C) Post-collection specimen handling protocol

After returning from the field, immediately complete the following steps

I) Adjust specimens in the plant press Be sure corrugates and blotter sheets are placed between each newsprint-bound specimen that is stored in the press.
II) Place Field Inventory collection sheets in the correct location so they can be databased as quickly as possible. Confirm that all collection numbers have a corresponding barcode sticker on the collecting sheet.
III) Place all photos onto a designated computer into a folder for GGI–Gardens. Record the photo file name/number in a spreadsheet that is linked with each collection number.
IV) Print or make copies of more collection data sheets if needed and WRITE THE NEXT COLLECTOR NUMBER on the first sheet for the following day.
V) Store all equipment in the appropriate designated place.
VI) Managing the plant press and dryer
a. Tighten straps of the plant press
b. Ensure the press is placed in the dryer so that air can flow through efficiently.
c. After ca. 10 days (depending on specimens) in the dryer, transfer them immediately to a -80 freezer in a well-labeled box for pest management.