

HOW-TO-MAKE VOUCHER SPECIMENS OF TARGET PLANTS

A voucher is a physical entity or image that is proof of an occurrence. The Colorado Department of Agriculture needs vouchers as proof that a target species has been seen. Vouchers have a variety of uses, such as documenting occurrence or revealing the geographic spread of invaders over time. Once received by a herbarium (a plant specimen "library"), vouchers may be mounted, labeled and kept for future reference and research. Providing some type of voucher is important because it allows verifiers to confirm the correct identification before data is entered into the database and because a positive target species id will then trigger rapid response plans to be put into place.

This document contains instructions for making a pressed plant voucher. However, for purposes of the Colorado Department of Agriculture's EDRR program, other kinds of vouchers are acceptable. If you cannot provide a physical specimen, then CDA will accept digital photos, which may be emailed with the Sample Collection Form. Prints will be accepted if digital imagery is not an option. Prints can be sent directly to CDA, with a copy of your completed sample collection sheet.

Plant Voucher

Equipment needed

1. **Plant Press** (or any device in which to flatten and dry specimens. Instructions below.)
2. **Colorado Department of Agriculture (CDA) Sample Collection Form** (or equivalent listing of specimen-related data.)

Basic steps for preparing target plant vouchers

1. **Take a photo of the plant.**
2. Collect plant in the field. Include as much of the plant as possible, even if you have to fold or cut into sections. Put it into plastic bag and keep it cool to prevent wilting if you are unable to press right away. Be careful of seed spread when seeds are present.
3. Record specimen data on CDA Sample Collection Form.
4. Press and dry plant as quickly and completely as possible at room temperature with good air circulation (see pressing instructions below).
5. Send pressed specimen between cardboard and newspaper in a large envelope with a copy of the CDA Sample Collection Form to: Colorado Department of Agriculture, Noxious Weed Management Program, 700 Kipling St. STE 4000, Lakewood, CO 80215-8000, Attn: Patty York

What To Collect

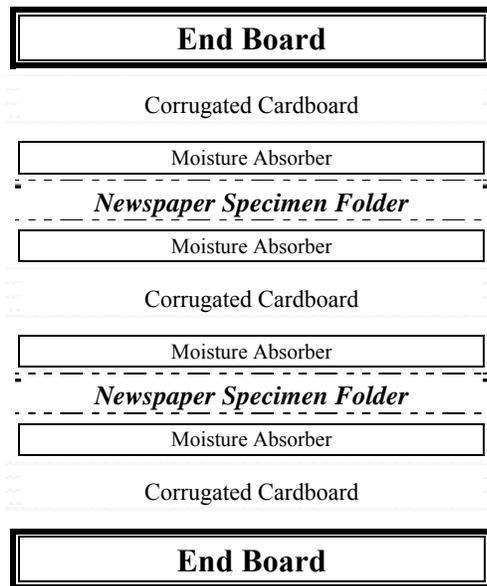
Select one or more healthy plants that look typical of the population. Take samples of the whole plant, if possible, or enough **leaves and stems** to show leaf shape and size, opposite or alternate **branching**, and **buds**. If possible, include **flowers and/or fruits**, which may be needed to confirm a plant's precise identity. For grasses and grass-like plants, try to include roots. For large specimens, fold stems into a V or N shape. Thick stems may be cut in half lengthwise. For small plants, collect several and press together. Show upper and lower surfaces of leaves and flowers. Press flowers with the blossom open, and if possible slice one in half lengthwise to show internal structures. Be sure to press the plant before it wilts.

Pressing Plants

Use a standard-sized (12 x 18 inch) plant press, if you have one, or make your own. You can even use heavy books to press specimen between newsprint. Herbarium specimens are mounted (glued) on standard 11.5 x 16.5 inch sheets of heavy paper. Specimens must not exceed this size (though large plants often are divided up and glued to multiple sheets). For portability, plant press dimensions can be as small as **9 x 12 inches**. This makes it easy to carry the press in a backpack, as well as to send specimens by mail (in large, business-size envelopes).

Making Your Own Portable Plant Press

- **End Boards.** Prepare two 9 X 12 inch rectangles of a rigid material. Use plywood, masonite, pegboard, the backs of two clipboards, the covers from a 3-ring binder, or even cardboard (several sheets glued together for rigidity). Between the end boards – and cut to the same dimensions -- place alternating layers of corrugated cardboard, moisture absorbers, and newspaper specimen "folders." See diagram below.
- **Corrugated Cardboard.** Cut from corrugated boxes, having the lines of corrugation run across the shortest distance. This will enhance air flow through the press.
- **Moisture Absorber.** To wick moisture away from the drying specimens, use sheets of newspaper or paper-toweling. Sheets of thick blotter paper work well, if available.
- **Newspaper Specimen "Folder."** Specimens are arranged carefully within a folded piece of newspaper (like placing a document in a file folder).
- **Assembling the press.** When putting plants in the press, each newspaper specimen folder is sandwiched between moisture-absorbing layers and cardboard. For bulky specimens, extra layers of moisture absorber and cardboard may be needed. Tie the press together tightly with rope, bungee cords, large rubber bands, or buckle straps. You may need to adjust tightness as plants dry and flatten out. To quicken drying for high-moisture plants, change the folder and moisture absorbing layers at least once. Include 5 to 10 (or more) specimen folders – and surrounding layers – in your press, or as many as you can comfortably carry.



Specimen Information

For each specimen or field observation, basic information about the occurrence is needed (see Sample Collection Form). For all specimens collected, make sure that all documentation stays with, or can be linked to, the sample. We suggest putting a temporary number on the newspaper specimen folder. For example, you can number your CDA Data Collection Forms consecutively and use the same number as a temporary placeholder in the plant folder to link location information with the specimen. However, you must send in a copy of the CDA Sample Collection Form with each voucher.

Mail specimen(s), with the CDA reporting form to:

Colorado Department of Agriculture
Noxious Weed Program
Attn: Patty York
700 Kipling St. Ste 4000
Lakewood, CO 80215-8000

OR EMAIL FORM AND DIGITAL PHOTOS to: patty.york@state.co.us