

A Guide to Collecting, Pressing, and Mounting Plants



Krista Ehlert, Assistant Professor & SDSU Extension Range Specialist
Emily Rohrer, Rangeland Management Specialist, USDA-NRCS South Dakota

August 2023

South Dakota is home to a wide variety of plants. From grasslands to wetlands to forests, there is an extensive assortment of species to identify and learn across the state. Plants are important parts of the ecosystem and help support human and animal life. Plants provide habitat, in the forms of food and cover for wildlife and livestock alike. Plants can also help conserve soil and water, provide food and medicine, as well as provide marketable products. Plants can be visually pleasing or can be poisonous in some cases.

Thus, plant identification is an important skill to have! You can start to develop your own library of known plants to use for personal use or to teach others. The best way to do this is by collecting, pressing, mounting, and storing plants correctly.

Collecting Plants

1. Select a complete, representative plant specimen for pressing. Make sure the specimen includes the roots, leaves, stems, flowers, and seeds.
 - For grasses and forbs (flowering plants), wait until the plant has all the above parts before collection. This will allow for proper identification of the plant, as sometimes specific flower or seed characteristics can help identify certain species.
 - Tree and woody specimens should include a twig with leaves, bark, flowers, fruits, or seeds. You may need to collect various parts of the plants at different times of the year for the best

specimen. Some shrubs flower prior to leafing out, so collecting early in the spring and later in the summer will help with collecting all the plant parts.

2. Use a shovel to dig up the grasses and forbs. Make sure to get as much root as possible for proper identification. Gently wash any soil from the root system and blot dry with a towel or paper towel before pressing.
 - If you collect several plants at once, place them in a garbage or plastic bag to keep plants fresh and green prior to pressing. Semi-dried-out plants aren't as easy to press and won't keep their color as well as fresh plants.
 - NOTE: You will not want to collect the plants and keep them for a long period of time in a garbage or plastic bag as they will start to rot and mold from moisture accumulation. It is best to collect plants and immediately press them.
3. Plants flower during various times of the year, so plants need to be collected throughout the growing season to capture a broad assortment of species.

Constructing a Plant Press

Plant presses can be purchased from various field supply stores. Plant presses can also be creating using supplies such as lathe or other wood strips nailed or stapled together.

Supplies:

- 4 strips of wood cut into 18-inch lengths (thickness of ½-1" and width of 1-2")
- 6 strips of wood cut into 12-inch lengths (thickness of ½-1" and width of 1-2")
- Nails or staples
- Straps (2)
- Cardboard cut the same size as your plant press dimensions.
- Blotter paper (can also use shooting sports target paper – it's a little thicker and will help absorb excess moisture)

Instructions:

1. Assemble your strips in a grid like in Figure 1. Position the pieces so they are equally spaced from each other. Nail or staple strips together. You will need two of these frames assembled to create an entire plant press.

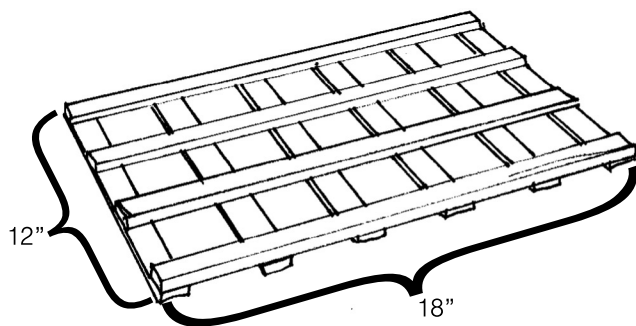


Figure 1. One side of a plant press, assembled by using strips of wood and nails or staples. The press is 18 inches long by 12 inches in width.

2. Use two straps to firmly press plants together. When not in use, it is recommended to use the straps to keep your plant press together, so you don't lose any pieces.
 - Straps can either include sliding buckles or spring buckles. These can be purchased online, through Amazon, for example. Alternatively, you could use old (or new) belts to keep the presses together.

Pressing Plants

1. Bend and fold the plant to the proper size to fit the paper you will be using. You may need to cut thick stems. Bend the plant in a U or zig-zag shape to fit the size you need like in Figure 2.
 - You can use either 8½" x 11" or 11" x 16" paper as a sizing guide.

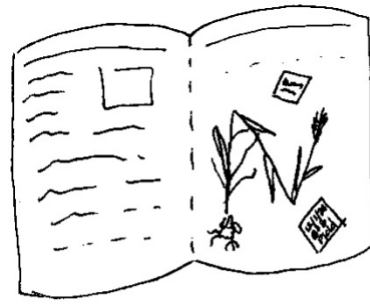


Figure 2. An example of how to bend the plant in a zig-zag pattern so that it fits onto the size of paper you will be using.

2. Place the bent plant between a folded single newspaper page and place it in the plant press to dry. Again, be sure to include all identifying plant parts on the specimen.
 - You may need to slice thick taproots in half to allow the plant to properly press. Carefully do so with a knife (with proper adult supervision, if needed).
3. Add a note – you could use a Sticky Note - with the following: name, date of collection, location collected, and collector (if multiple people are using the same press).
 - Alternatively, create your own field notebook with all of the above information, and number your specimens. Include the number with the plant specimen for easy review later.
4. Use either blotting paper, paper towels or target paper between the newspaper and cardboard to allow for ventilation.
5. Only place one plant per newspaper.
6. Layer cardboard, blotter/dryer paper, newspaper with plant, blotter/dryer paper, cardboard, etc for best results like in Figure 3.

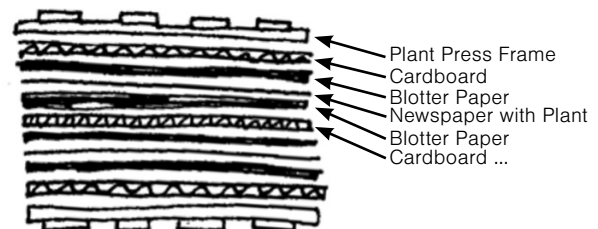


Figure 3. The multiple layers of a plant press, with the frame, cardboard, blotter paper, newspaper with the plant, and additional blotter paper and cardboard. You repeat this for each specimen.

7. Leave your plant press in a warm, well-ventilated location until plants are dry. This usually takes 7-10 days.

- If plants are fleshy or have excess moisture you may need to change out the blotting papers to reduce the chances of mold growth.

8. Most plant presses have straps that keep the plants pressed under pressure. If using alternative methods, make sure to place some heavy books, bricks, or something similar to provide enough pressure to press the plants thoroughly.

Mounting Plants

1. Once the plants are dry, they can be attached to mounting paper.
 - Use thick, heavy paper in either 11" x 16" or 8 ½" x 11" size.
 - If creating herbarium quality plant mounts, you must use acid-free paper. If you Google "herbarium paper" several options will come up for places to buy this paper from.
2. Arrange the dried, pressed plants on the paper with the seed heads/flowers towards the top of the paper, and the roots towards the bottom of the paper.
3. Carefully attach the plants to the paper using white glue that dries clear (such as Elmer's or other brands of school glue).
 - Carefully place small dots of glue along portions of the stems and leaves in order to adhere the plant to the paper.
 - Use weights such as large washers to help maintain the plant's contact with the glue while it dries as shown in Figure 4.
 - You could also use acid-free gummed cloth to attach stems and plants to the paper.
4. Add a label in the bottom right-hand corner of the paper (try to not overlap the plant with the label or the label with the plant).

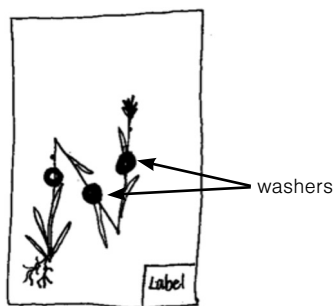


Figure 4. A plant mounted onto paper, using heavy washers to keep the plant in contact with the paper while glue dries.

- The Label should consist of the following information:
 - Collector name
 - Date collected
 - Common name
 - Scientific name
 - Collection location: County, State; Location of Collection (GPS coordinates or Section/Township/Range); Elevation (if known), Aspect (if known); Verified by (not necessary, but can be helpful)
- Labels should be neatly written or typed.
- A label sheet is provided at the end of this document that you can copy and use for your labels.

Storage of Plants Specimens

1. Once the glue has dried, store the plant mounts in a dry, cool location away from moisture, dust, and insects. This could be a cabinet, case, or storage container of some sort.
2. You could place the plant mounts inside protective covers or for teaching purposes have them laminated.
 - If you plan on submitting plants to an herbarium or other plant collection, ask if it is okay to laminate them.
3. File your plant specimens in a way that is easy to understand.
 - For example, you might have all the grasses together, then forbs, then shrubs.
 - Or you might have all your cool season grasses, then the warm season grasses, then forbs, then shrubs.
 - This will make it easy for you to find specimens and it also facilitates judging at county and state fairs.
4. If you are storing plants for a long period, moth balls can help protect plants from insect damage.

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	

Collector name:	
Date collected:	
Location:	
Common name:	
Scientific name:	



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

**SOUTH DAKOTA STATE UNIVERSITY®
NATURAL RESOURCE MANAGEMENT DEPARTMENT**

SDSU Extension is an equal opportunity provider and employer in accordance with the nondiscrimination policies of South Dakota State University, the South Dakota Board of Regents and the United States Department of Agriculture.

Learn more at extension.sdstate.edu.

© 2023, South Dakota Board of Regents