



Cooperative Extension Service

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COLLECTING, PRESSING, MOUNTING AND STORING PLANTS



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SERIALS DEPT.
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Native vegetation is one of the most extensive, important and renewable resources in North Dakota. These plants conserve water and soil, provide food for livestock, furnish food and cover for wildlife and even produce some timber products.

While some of the state's flora is poisonous to livestock and some of it is worthless, many plants are valuable as ornamentals. The large number of North Dakota plants (over 1,200) make it necessary to know the name of plants. That is why it is important to know how to collect, press, mount and store plants for correct identification. Besides it is fun and can become a rewarding hobby.

MAKING A PLANT PRESS

A plant press can be made from 1- to 2-inch strips of 1/4 inch plywood, ordinary lath or other light material such as wood from an apple box or crate. First make a frame 13 x 18 inches which is standard size for presses. Then on the inside of each

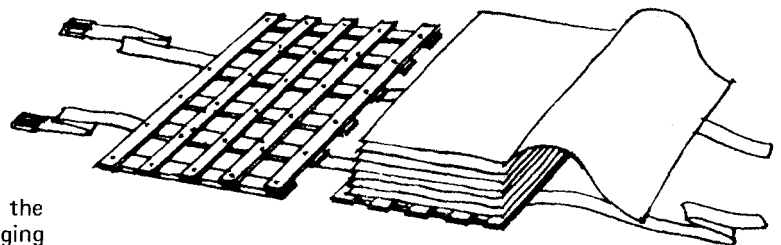
frame place the strips both ways from 1 to 2 inches apart. Eight to 12 wooden strips are needed to complete the press. Secure the strips to the frame with nails or screws. The slatted construction allows maximum ventilation so that plant specimens can dry properly.

The press may be held together firmly with two canvas, web or leather belts.

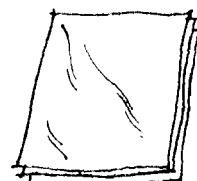
COLLECTING PLANTS

Choose a complete, representative plant. Include the roots, stems, leaves and flowers and seeds if present. Plants in the blossom stage are most desirable. Avoid collecting unusual, abnormal or diseased plants for identification.

Collect specimens of grasses, legumes, weeds and aquatic plants as complete plants because generally it is necessary to have all parts in order to make positive identification.



Prepare the press with folds of newspaper to receive the specimens and gather tools and supplies—cutting and digging tools and plastic bags to hold collected plants.

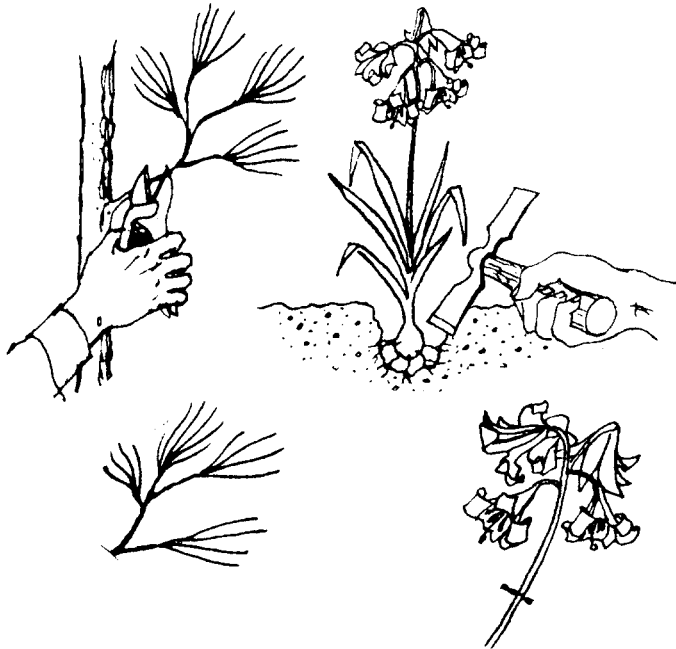


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Specimens of trees, shrubs or other woody plants should include a twig or small branch with 10 to 20 leaves, bark and flowers or fruits or seeds.

Dig grasses, weeds or legumes with a sturdy trowel, shovel or other tool.



Survey the plants to be collected and find the most representative specimens. Cut or dig the selected plant parts.

A plastic bag of suitable size with three or four moistened paper towels in the bottom makes a handy device for use in collecting plants. Use a rubber band or a twist tie to fasten the bag, if necessary. Plastic bags with zippers used as pillow protectors are convenient to use when making large collections at one time or while collecting during a long trip.

Press the plants as soon as possible after collecting. However, in an emergency, plants in a plastic bag can be kept reasonably well in a refrigerator overnight or for a few days.

Collect two specimens of each plant, one to submit for identification and one for your collection.

PREPARATIONS BEFORE PRESSING

Remove all soil from the roots by shaking or washing. If the roots are washed, blot well with paper towels and allow to dry somewhat before pressing. Remove some of the stems, leaves, flowers, branches or roots if necessary to prevent crowding.

Bend or cut the plant to the proper size, 8 1/2 x 11 inches or 11 1/2 x 16 inches, to fit herbarium

paper for mounting if such is to be used. Straighten and smooth the plant so that all parts show a natural shape.

Then place it between a folded single newspaper page and place in the press to dry. Be sure to include all identifying plant parts with the specimen.

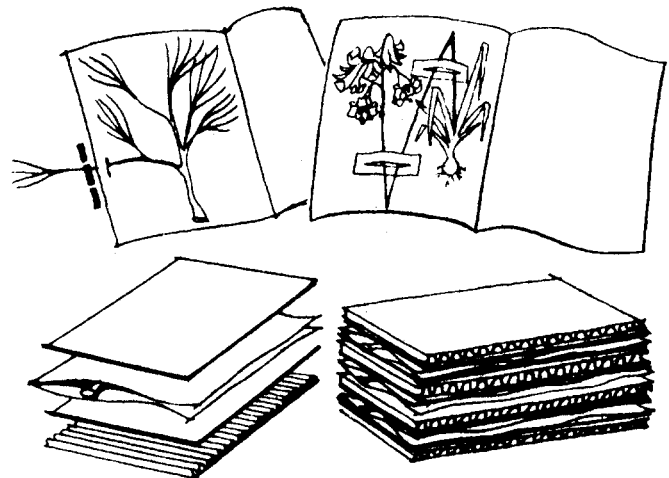
If the plant root, stem or other part is thick, split it and discard half, or at least cut and discard a portion of the thickened part. This reduces bulk and enhances drying. The drying process of such plants also can be improved by using three or four folded newspapers per specimen and adding several pieces of paper towel as well.

PRESSING THE PLANTS

Plants that are pressed soon after collecting make the best specimens for mounting.

Place plants in single newspaper sheets folded the same size as the press. Place only one plant in each folded newspaper.

Dryers to go between each specimen should be the same size as the press. They can be made from building felt, blotter paper or corrugated cardboard.



Cut away excess parts and arrange leaves and flowers. Place specimens in newspaper fold and put between dryers.

Change the dryers and newspaper daily for three or four days and even longer for thick, leafy, or succulent plants. Any misshapen or awkwardly bent leaves or other parts can be smoothed carefully the second day so they will dry in a natural shape. Rapid drying will preserve the color. Plants left too long in damp newspapers and dryers will turn brown. Plants can be removed from the press in 7 to 10 days. Retain the plants in folded newspaper until ready for mounting.



A bag filled with coarse gravel and placed on the press will improve the pressing operation, as the gravel may be shifted to equalize the pressure.

MOUNTING THE PLANTS

Mount the specimens for convenience in studying, displaying and filing them.

Standard herbarium mounting sheets are made of moderately heavy, white paper 8 1/2 x 11 inches or 11 1/2 x 16 inches. Cakeboard available from bakeries or any heavy, white paper also is suitable for mounting plants.

There are several ways to mount a specimen, but an easy, practical way is to use narrow transparent tape. Place the tape across the large stems and branches to hold the plant firmly. The tape should not cover the flowers or other parts to be observed for identification. Or the mount can be covered with a transparent plastic film such as "Saran Wrap" and secured on the back with transparent or masking tape. For permanency and durability, cover the mounts with a self-adhesive trans-

parent film like "Con-Tact" which costs about 50 cents per yard.

STORING THE PLANTS

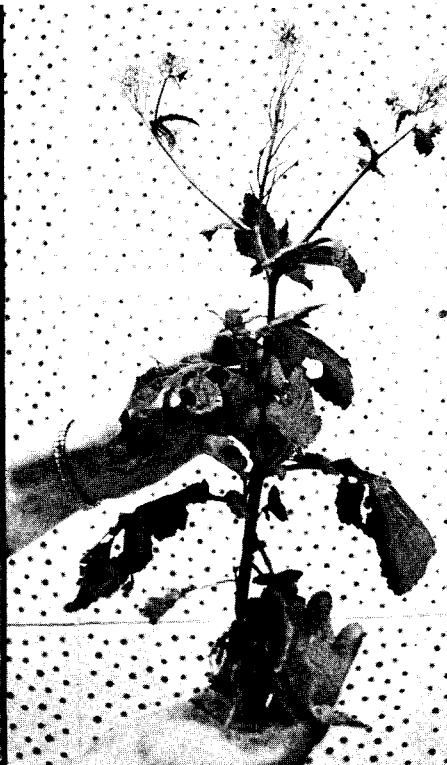
Make plant folders for filing the mounted specimens. Such folders usually are of moderately heavy manila pycard and are about 12 x 17 inches. Several specimens may be placed in a folder with the plant names indicated on the outside. In most herbarium collections, specimens are treated to prevent insects from destroying them, but this is impractical for a small collection. However, an occasional treatment with naphthalene (mothball) flakes repels or kills insects and preserves a collection for many years. Store the plant mounts in a dark place such as a cupboard, drawer or closet and they will retain their green color indefinitely. Mounts fade rapidly in sunlight.

OBTAINING SUPPLIES

Biological supply houses sell collecting equipment, plant presses, dryers, mounting sheets and labels. But local supplies and materials can be used for considerably less expense.



Digging a plant (wild mustard).



A specimen with roots, stem, leaves and flowers.



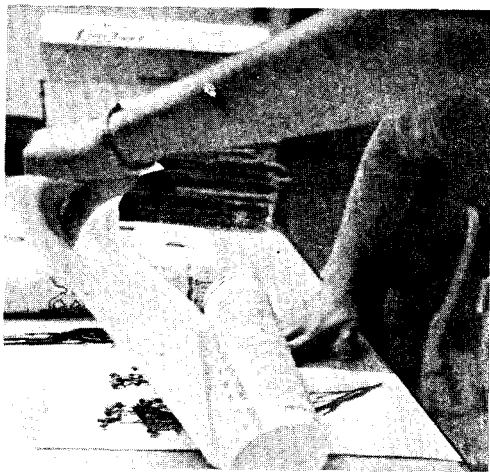
Arranging the specimen in the plant press.



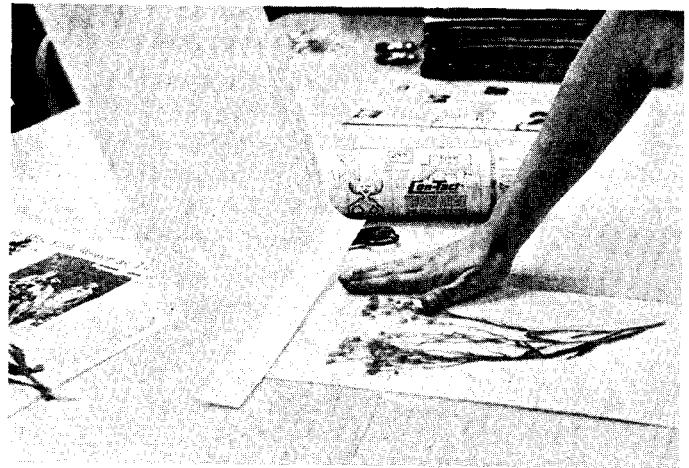
A tall plant (biennial wormwood) requires cutting before pressing.



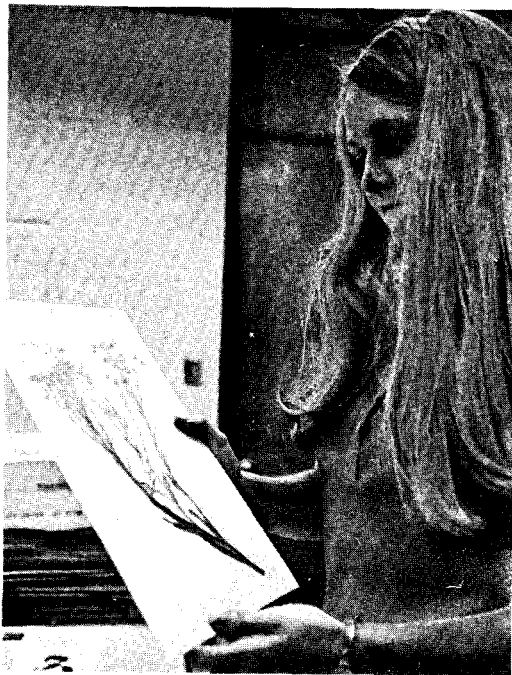
The specimen is cut into three sections to fit the plant press.



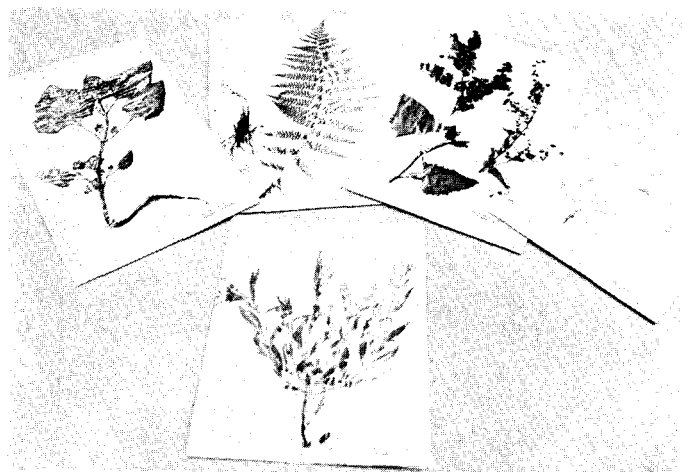
Covering a pressed plant with a transparent, self-adhesive plastic film.



Completing the covering operation.



The finished mount ready for labeling.



Examples of mounted specimens covered with self-adhesive plastic film.