

Montana Native Plant Society's *Plant Collection Guidelines* *For Teachers*



Native Plants as a Learning Tool

Native wildflowers are a special gift of nature. Much can be learned about the biology of plants by observing their beautiful blossoms and foliage. The **Montana Native Plant Society** encourages students to learn botany through studying native plants. There is no substitute for encountering and observing plants in their natural habitat.

In order to protect native plants in the wild, the MNPS suggests alternative methods to collecting, such as **photography, drawing and describing plants**, as well as studying them from **books and websites**. Planting **schoolyard native plant gardens** is another way to appreciate and learn from living plants. The “Natives Are Nice” **curriculum** for grades 3-5 has several projects to help kids learn about native plants, and can be obtained through the MNPS.

There is also value in collecting plants and studying them in the classroom. If you choose to use this teaching method, the MNPS offers the following guidelines to help direct you and your students in the appropriate way to gather plants from the wild, while minimizing impacts to wildflower populations. We do so in the hope that these precious gifts of nature will be preserved for future generations of students.

Collection Guidelines

- Limit the number of plants each student collects. The entire class as a whole can build a reference collection that can be shared by all students.
- Students should collect only above ground plant parts if the roots are not needed for identification. Do not waste any plant material. Collecting healthy looking plants will make identification easier.
- Wild plants are fragile and perishable. Make sure students take proper care of collections and preserve them using the collecting tips in this brochure to obtain pressed specimens that retain their shape and color.
- Collecting can cause significant stress to plant populations. Vary collection sites so the same species is not collected from the same area repeatedly. We suggest collecting from sites that are slated for development or other alterations.
- Avoid collecting in areas that receive a lot of human use or may be viewed by many people. If taking students out as a group, see that they are dispersed to avoid trampling, especially on fragile soil where weeds are likely to invade/
- Obtain permission from the land owner before collecting. Some areas, such as National Parks and Missoula's Open Space Lands (e.g., Mt. Jumbo, Mt. Sentinel and Waterworks Hill) are off limits to plant collecting.
- Collect only common species from large populations (one out of 20 is a good rule-of-thumb). It is a good idea for the teacher to have a list of common plants to help students know which species are more resilient to collecting.



- Teach students which plants are RARE so they do not collect them. To obtain a list of rare plants in your area, contact the Montana Natural Heritage Program at 406-444-5353 or <http://nhp.nris.state.mt.us>
- Know which plants are noxious weeds and discourage their collection. For information on noxious weeds contact your local County Extension Office.
- For more assistance in locating good collection sites and generating a list of species for collection, contact your local MNPS chapter (www.umt.edu/mnps)

Plant Collecting Tips

Collecting plants is an art in itself. Proper collection methods not only result in beautiful plant specimens, but also prevent damage to sites from which they were collected. Here are some suggestions for making high quality pressed plants.

- When collecting above ground parts, leave some leaves or stems intact to help the plant recover. When the root is needed for identification, disturb the soils as little as possible. Do your best to fill the hole and cover it with dead leaf material and duff. Collecting small branches is all that is necessary to identify shrubs or trees, thus having less impact than collecting herbs or grasses.
- For immediate storage, use plastic bags large enough to hold one or several plants without crushing them. Put in a moist paper towel and close. Protect the bag from direct sun and heat.
- It's best to press the plant the same day. If this is not possible, store the bag in a refrigerator or cool place overnight.
- For each specimen, take notes on the location, growing site, and habitat. After the plant is dry, label each specimen with this information along with your name and the collection date.
- Drying can be done by different methods. It is best to use a standard plant press. If one is not available, a telephone-book press, with reinforced covers and additional pressure is a good alternative. Pressing is done to remove all moisture from the plant so it can be preserved for many years.



- Arrange the specimen flat in the press, carefully bending plant parts to fit the sheet without breaking. Avoid overlapping the leaves or other plant parts. Make sure the flowering parts are exposed. Thin specimens dry faster. Replace the wet specimen sheets and blotters daily to help the plant dry as quickly as possible. This helps retain the plant's color and prevents rotting.

Recommended reference:

T. Christopher Brayshaw, *Plant Collecting for the Amateur*, Royal British Columbia Museum, 675 Belleville Street, Victoria, B.C., V8V 1X4, Canada.

For more information contact:

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