

## FIELD BOTANY 2023

### PLANT COLLECTION & iNATURALIST OBSERVATIONS

A physical collection of 10 dried, pressed and identified plant specimens is required from each student. (The requirements for the **40 iNaturalist observations** are provided in a separate document.) The physical collection will be graded on the basis of (1) correctness of identification, (2) proper preparation of material (especially presence of flowers or fruits; pressing; and drying), and (3) adequate labeling. The collection should include only wild plants — native, introduced, and weeds — but not cultivated plants. **Do not collect in state parks or preserves (e.g., Nature Conservancy areas).** Collecting in these places require special permits, without which fines can be issued. Practice plant conservation in your collecting! Also, **do not collect on the Au Sable campus.** The collection will not be returned but will be used if possible to build up and maintain the Au Sable Herbarium. Species learned in class **can not** be included in the collection, unless they were collected prior to their mention in class. You will have opportunities to collect at many, but not all, of the sites you go to in this and other classes or on your own time. At least one of your plants will be mounted onto herbarium sheets towards the end of the course for you to learn the basic technique — more info on that later.

#### Guide to Making Scientifically Acceptable and Useful Plant Specimens

1. Plants should be **collected in flower or fruit (or other reproductive features)**. Specimens without these reproductive organs are termed "sterile", and are not worth collecting.
2. For small herbs, the entire plant should be collected. For professional collectors, the underground parts are also collected. For large herbs, a part of the stem with attached leaves plus the inflorescence can make up the sample.
3. For woody plants, branches or twigs bearing leaves and flowers (fruits) are sampled.

#### Keying or identification

**All plants will ultimately be identified and properly named according to the *Field Manual of Michigan Flora*** and accompanying website (binomial plus author). You can use Newcomb's *Wildflower Guide*, but its scope is limited and you will have to verify species with *Field Manual of Michigan Flora*. Please use the Herbarium to check your ID and to determine whether your specimen should be mounted (if not there or few in number).

#### Labels

Notes should be taken in a field notebook at the time the collection is made (**not** done from memory, days later at home). Each plant specimen (that is, a particular species collected at a given time and place) is given a separate number in the book. This field information is later transferred to labels that are handed in with the specimens. **Labels should be printed out with the use of a label template file that will be provided.**

**Locality:** Designate this by county and site, accurately enough so that someone else could find the exact place later. Mileage along a highway, distance from a town or from some geographical feature like a mountain or lake is a way of expressing this. Please include **lat/long coordinates** — these are mandatory (GPS, cell phones, or find your location sites on Google Earth, etc.). Township, range, and section are optional (maps for counties with townships are available). The study/collection site handout with geographic information will be periodically updated and made available via email.

**Habitat:** Designate this in general terms, describing the nature of the site where the plant grew. Examples are: roadside banks, open pasture, boggy meadow, shrubby thicket, shaded woods, rock slide, river bank, cliff, sand dune, etc. Important factors in plant distribution are the amount of light at the site, available moisture, nature of the soil, density of other plant growth, steepness of slope, etc.

**Species name:** The correct name (according to *Field Manual of Michigan Flora*) should include the genus, specific epithet, and authority. Add a **common name** to the label. The **family name** should be also indicated. If you key out the species using other sources, always use the *Manual of Vascular Plants* as the final source for names of species and family.

**Other necessary data:** Designate the form of the plant (herb, shrub, tree, height, etc.) if this cannot be told from your specimen. Give the original flower color, if this was changed during drying. Optional information includes the names of other species growing with this one, the soil type, the plant community, abundance of the species, altitude above sea level, etc. The date of the collection, and its number, are musts.

Example of a typical label:

PLANTAGINACEAE

*Penstemon digitalis* Nutt.

Tall white bear-tongue

**MICHIGAN, Kalkaska County** Clearwater Township

Seven Bridges Natural Area. 2 mi SE of Kellogg Rd. on Valley Rd. NW (Co. Rd. 593) and ca. 4 mi SE of Rapid City.

Occasional at edge of path through riparian forests. Flowers white.

**T 28 N R 08 E Sec 24 NE ¼**      44°48'57.35"N    85°13'05.83"W

June 27, 2010

Sytsma 7380

**Plant collections & iNaturalist observations are due by the evening of July 4, Tuesday (final is July 6, Thursday)**