

**PLNTSOIL 310**  
**WEED SCIENCE HERBARIUM**  
**Plant, Soil and Insect Sciences, University of Massachusetts**

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**THE COLLECTING OF WEED SPECIMENS**

A scientifically useful and properly collected specimen of a flowering plant, a herbarium specimen, consists of two equally important parts: a sample of the plant itself, and the label data to go with it.

**The Specimen**

The specimen should include a **complete plant** if at all possible. Roots are extremely important and should never be omitted except in the case of shrubs, trees or vines. If too large to place in a single fold of newspaper, the plant **may be divided into 2, 3, or more sections**, each pressed separately. (Use Roman numerals to indicate which sheets go together -- as 57-I for all of collection no. 57 belonging to one plant. 57-II for all sheets of a second plant of the same collection). In case of woody plants or vines, if there is a difference between leaves of old and new shoots, samples of both should be taken.

It is best to collect plants that are well along in flower, if possible with a few flowers going to seed, rather than plants barely out of the bud stage. Last years fruiting stalks still attached are often valuable. Member of the sedge (Cyperaceae), carrot (Apiaceae), and a few other families should be collected when some mature fruit is present to insure positive identification. Specimens should not be collected without either flowers or fruit.

**Plants should be neatly pressed and fit well inside the limits of a folded sheet of newspaper**, allowing room for label and packet when eventually mounted. The collector's number (referring to data kept in a notebook) should be put on every sheet, or the information written in pencil on the margin of the newspaper. The sheet should be well filled. If the plants are very small, several or many specimens of the same species should be pressed.

A stem too long to fit within a fold of newspaper may be broken and bent into a **V**, **N**, or **W**, but should not be doubled back in such a way as to lie across itself. Excess branches or leaves may be removed, provided enough of the base is left to show where they were. If leaves vary greatly in size or shape between top and base of the plant, leave enough to show whether the transition is gradual or abrupt. Never discard sections of stem, even though no leaves; size, number, and variation of internodes are often important diagnostic features. Large leaves need to be cut in half, with one side discarded, but with a portion of the discarded side still remaining on

the specimen. It may take 2 or 3 sheets to collect one large leaf.

Leaves should lie beneath everything else, spread out flat, with some turned so that both surfaces will show when the specimen is mounted. If necessary, flowers may lie over leaves, and stems or branches, if necessary, on top of everything else. If possible, extra flowers from the same plant should be pressed for dissection.

### The Label

Label data, recorded in a notebook with the same reference number as written on the newspaper at the time the plant is collected, preferably before it is put into press, or (less preferable) written legibly on the edge of the newspaper **should include all useful information available to the collector in the field** which will not be accessible in the herbarium after the plant is mounted. Most important points are:

**1. Exact map locality.** The locality where the collection was made that can be found in a standard atlas by anyone not familiar with the region. Local names of roads, ranches, farms, and other information need to be included. The most convenient way of stating localities is in miles or kilometers by highway from the center of a fairly large town in the same county, provided the distance is not very great (preferably less than 20 miles), and there are not many bends in the road. Such distances are assumed to be no more than 90% correct. County maps or books are often useful. Range, township, and section may be obtained from these and are the most exact, but should be given in conjunction with distances from the nearest town.

**2. Exact date (day, month and year).** Month should be written out in full (Aug. 15, 1943) or designated by a Roman numeral, not an Arabic one. A date written 5/7/43 could mean May 7, 1943, or 5 July 1943.

**3. Habitat.** The following information is critical for habitat: **Specific place** (as roadside, field, pasture, woods, hillside with prairie plants); **soil or rock type** (gravel, sand, silt, clay, limestone, chalk, sandstone, etc.); **exposure** (sun or shade) unless this is obvious from the place of collection; **moisture conditions** (wet, moist, dry); and **density of community** (bare ground, dense thickets).

**4. Abundance and associated plants.** Abundance can be described only roughly, and is relative, but is often worth recording. The following are five terms which furnish a convenient though arbitrary scale of comparison: rare, occasional, frequent, common, abundant. The word locally may be added before the last two if a plant is found in few places, but abundant where it is found.

**5. Non-permanent features of the plant itself.** Color and fragrance (if any) of the

flowers should be recorded, if only roughly. If distinctive, color and odor, stickiness, presence of stinging hairs, bloom, milky juice, or other features of stems or leaves may be included. Growth habit (trailing, erect, climbing, bush, etc.) is very important information. For woody plants, size, branching, and bark should be noted. If all have gone to seed but only the one you collected is in bloom, this should be indicated.

**6. Incidental points of interest.** Preference of insects for flowers or other parts (pollination information, and the actual collection of insects is highly desirable). Utilization by grazing animals could be of interest. Local name or use of the species is very important. If the specimen selected for pressing is much smaller or larger than average, or if extremes in leaf variation cannot be shown by one specimen, this should be stated and the extreme described.

### LABEL

**State:**  
**County:**  
**Common name:**  
**Scientific name:**  
**Description:**

**Collector:**  
**Date:**  
    No.

### Example

**State:** Massachusetts  
**County:** Hampshire County  
**Common name:** Velvetleaf  
**Scientific name:** *Abutilon theophrasti* Medik.  
**Description:**  
    - Annual, reproduces by seed  
    - Leaves large, heart-shaped  
    - Flowers yellow  
    - Sandy loam soil, corn field, 7 1/2 miles SE of Amherst

**Collector:** Indrani Sutton  
**Date:** September 15, 2005                      No. 100