

BOTANY-HABITAT PROTOCOL 0.0

06 APRIL 2008

Habitat divides its data thusly:

- i. **Trees:** plants with:
 - a. stem/trunk diameter > 4cm [~1.5 inches] at 1.5 meters off the ground.
 - b. circumference > 12cm [~4.7 inches] at 1.5 meters off the ground.
- ii. **Grasses:** defined by their morphological characteristics. These include but are limited to the following traits. See Appendix A for more detail.
 - a. non-woody, hollow stems (squeeze it),
 - b. bladed leaves with parallel veins.
 - c. Leaves should be wrapped around the stem.
- iii. **Bushes:** all non-tree, non-grass plants. (*note: this is botanically incorrect*)

Botany Liaisons' Expected Duties for Habitat:

- i. **Identification:** To visually identify the species in Appendix B accurately.
- ii. **Sampling:** To sample all plants they cannot identify.
 - a. Grasses,
 - b. Small plants; small to large bushes
 - c. Trees
 - d. *Note: all samples should be labeled with the date, site, transect, and plant sample # from the Habitat field data sheet.*

Step By Step Sampling Procedure (from spring 2008 botany protocol)

- i. **Collecting Samples:**
 - **Step 1:** While walking along the creek, select a plant sample from your surrounding area. Only pick species that have either more than ten plants or alternatively cover more than an arm's length of coverage.
 - **Step 2:** Before removing the plant, make sure to try and get a photo of the plant in its natural habitat, in front of the marked, white paper used for picture backgrounds. This aids in seeing the plant and also allows us to measure the plant's size before it shrinks while drying.
 - **Step 3:** If possible, try to identify the plant using the field guide ID cards of common species. Tag the plant using a sticky note around the stem with either the name of the plant or the order it was sampled (i.e. 5th plant).
 - **Step 4:** Write what transect and the estimated percentage cover on the sampling sheet.
 - **Step 5:** If the plant is small enough, try to pull it out by the roots. However, if the plant seems to be too large to mount on paper entirely, thorny, part of a bush or tree, or deeply rooted, then take scissors and cut as much of the plant as will fit on 10 x 15 inch paper. Make sure to get the stem, leaves, and flowers (these are especially useful) as well as any other items of interest (bark rubbing, nuts, cones, etc.). This is because it is important to obtain as much of the plant as possible so as to optimize our ability to correctly key the plants. Place the plant gently inside of the paper bag so as to not break the stem.

- **Step 6:** Repeat steps until you have gotten all of the species that fit the criteria. If you do not have ten samples per semester, sample plants that may be slightly rarer. Please avoid getting multiple samples of the same plant in order to later facilitate the identification of plants.
- ii. **Preserving Plant Samples (if done on-site):**
 - **Step 1:** *The day of* collecting the plant samples, place them into the plant press between paper towels. Paper towels are important because they draw the moisture out of the samples so as to preserve them. If the plant sample is very moist, paper towels must be checked everyday and switched out so that moisture does not accumulate within the press and cause mildew. Store the plant press in a dry, cool area for 1 week.

Botany's Data Collection

- i. Habitat members are to assist Botany in taking any measurements they may require. This may include distance and degree measurements, clinometer angles, crown width, trunk circumference, and estimates about foliage masses.

APPENDIX A - Grasses Information

Grasses, the family Poaceae

Grasses are monocots, bladed plants with parallel veined blades, have a fibrous root system, and the 'flowers' are not very recognizable as such (sepals and petals are absent). Stems are normally hollow and round, and enclosed by leaf sheaths. They have alternate leaves with extended blades.

APPENDIX B - Common Plant Species (by Common Name)

interior live oak	mexican tea	rescuegrass
blue oak	miners' lettuce	Spanish broom
valley oak	curly dock	Himalayan blackberry
oregon ash	milk thistle	California blackberry
black walnut	plumeless thistle	Poison oak
California boxelder	California thistle	Red sesbania / wysteria
California buckeye	Lemon balm	Arundo / giant reed
big leaf maple	mints	bull thistle
black willow	blue elderberry	star thistle
nut grass	sweet fennel	tree of heaven
sedge	english ivy	Johnson grass
wild oat	pigmy weed / red carpet	chicory
dallisgrass	monterey cypress	pinapple weed
big leaf periwinkle	dove weed / turkey	hedge parsley
mugwort	mullein	mistletoe
dandelion	floss silk tree	chickweed
wild turnip / field	evergreen currant	spring vetch / common
mustard	bay laurel	vetch
wild radish	Japansese cheesewood	filarees

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