Ethnobotany lab 1.
Seeds

January 13th, 2011

Background There are 15 different seed types: (1) pumpkin (*Cucurbita pepo*, Cucurbitaceae); (2) pansy (*Viola tricolor*, Violaceae); (3) dill (*Anethum graveolens*, Umbelliferae); (4) broccoli (*Brassica oleracea*, Cruciferae); (5) marigold (*Tagetes erecta*, Compositae); (6) black-eyed susan vine (*Thunbergia alata*, Acanthaceae); (7) eggplant (*Solanum melongena*, Solanaceae); (8) basil (*Ocimum basilicum*, Labiatae); (9) beet (*Beta vulgaris*, Amatanthaceae); (10) green beans (*Phaseolus vulgaris*, Leguminosae); (11) red pepper (*Capsicum annuum*, Solanaceae); (12) spinach (*Spinacia oleraceae*, Amaranthaceae); (13) sunflower (*Helianthus annuus*, Compositae); (14) lettuce (*Lactuca oleraceae*, Compositae); (15) common onion (*Allium cepa*, Amaryllidaceae).

Every seed, despite of small size, has multiple characteristics: (a) form (geometry), (b) length (maximal length), (c) color, (d) character / texture of surface, (e) hilum (see Fig. 1 below), (f) appendages (hairs, "knots" and others), (g) consistence (hard / soft etc.), (h) guessed type of distribution in nature (wind, animals etc.).

Make drawings Using dissectoscope, draw one picture for every seed. Picture should show main visual features of the seed. Please also measure the size and put a scale ruler (typically 1 mm) on each picture. Label every picture with scientific name of plant and name of family.

Make table For every family represented in the collection (there are 11 families), choose one seed and create a table like:

Name	Family	Character 1	Character 2	Character 3	Character 4	Character 5
Name 1	Family 1	...	...	...	...	...

Replace "Character ..." with a name of real character. Use **not less than four** characters. As a goal, the table should help to distinguish seeds of listed plants.

Plant seeds Choose one plant species, take seeds and plan them in pots (7 pots per species). Mark every pot with: (1) today's date, (2) your name; (3) plant scientific name; (4) number of pot. For big (> 3 mm) try 3 seeds per pod, for smaller seeds 5 seeds per pot. Distribute seeds evenly. Place seeds on the depth not larger than seed size $\times$ 2 (e.g., for the seed of 2 mm length the depth is ≈ 4 mm). Water the whole pot slightly.

Wait We need now to wait for Lab 3 (February 10th) to see germination and seedlings.

Figures

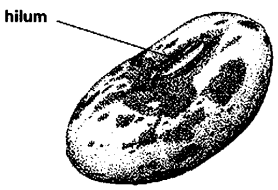

Fig. 1. Hilum—the place where ovule (young seed) was attached to pistil wall.