

Notes from Biocriteria meeting, September 18, 2008

Plant tips

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Panicum

P. repens: **Perennial**, usually in shallow water. **Has a rhizome**. There are soft hairs on the top (dorsal) of the leaf blade. Open seedhead, **white seeds, each seed on an individual stalk**.

P. hematomon: **Perennial**, usually in deeper water. **Has a rhizome**. Leaves either have no hairs or are completely covered with hair, top and bottom, but not top alone. **Spikelike seedhead, seeds green**.

P. dichotomiflorum: **Annual**, creeping growth form, **stems lean down, root at the nodes, & the next segment shelves upward**. Has fibrous roots. **Wide-branching, open seedhead, seeds green**.

P. rigidulum: **Perennial**, grows straight up, **clumping**. Open seedhead, **or sometimes branches ascending**. **First scale of seed is tightly clasping**. Seeds tend to be reddish or purplish.

Fuirena

F. **scirpoidea**: Underground runners, **leaf sheaths, but no blades**.

F. **breviseta** & F. **pumila**: **Don't have runners, have leaf sheaths with blades**.

Eleocharis

Need roots/**rhizomes** to identify

E. elongata: has red runner/**rhizome, thin stem & rhizome**. No "partitions"(not septate)

E. cellulosa: No partitions, **sheath lacks knotty cells, thick** runner, not red

E. interstincta: Partitions. Septae become closer together towards tip. Seeds: perianth bristles exceed the achene body.

E. equisetoides: Partitions. All septae are equidistant. Seed perianth bristles shorter than achene body.

Cyperus

C. haspan: stem is very triangular, sharp angled. **Common name is Sharpedge Sedge**.

C. surinamensis: flat clusters of seedheads. **Nearly round stem - run fingers up stem and it feels like sandpaper, minute teeth point down**.

C. virens: flat clusters of seed heads. Triangular stem. **Minute teeth point up**.

C. odoratus: Rusty sedge. Each individual scale within a spikelet is connected by "cartilaginous" thick tissue. Pull off an individual scale and see the thick "collar" between.

P. strigosus: Not rusty color and no cartilaginous collar, otherwise looks similar to odoratus

C. polystachyos: **Two common forms, one has** tight, short spikelets, **the other has open branching**. Seeds are gray and **roundly** 3-sided

Juncus

Many tiny seeds within **a capsule**. All species of Juncus have 6, tiny, sharply pointed, flower parts.

J. scirpoides: Seedheads **are lobed**.

Rattleboxes

Sesbania:

S. herbacea **or exaltata or emerus or macrocarpa** (all are valid names for this species, depends on the expert): yellow to red flowers, long thin bean pod. Common names is Hemp Sesbania.

S. vesicaria: yellow to red flowers, short wide bean pod, usually with 2 seeds. Common name is Bagpod.

S. punicea: bright orange-red flowers (exotic), fruit a 4-winged bean pod. Common name is Spanish Gold.

Aeschynomene: Segmented beans (pods)

A. indica: small yellow flowers that look like tiny yellow cow peas. Fruit is a segmented pod with rounded segments.

Egeria densa

Looks a lot like Hydrilla with 3 leaves at a node and teeth on the margins, but doesn't have the spines on the midrib. However, note that spines can be absent in very young Hydrilla, in which case *Egeria* can be identified by having leaves aggregated at the tip giving a bushy appearance.

Leersia

L. hexandra: This could be confused with *P. repens*, especially if no seed head. *Leersia* seeds are hairy and there are tight hairs around nodes. Leaves also sharp edged (hence the nickname cut grass). *Leersia* also has a membranous ligule. *P. repens* has a ligule that is a tiny rim of hairs.

Hatpins

Need roots to separate genera when flowers/heads not present.

Eriocaulon: White, striate roots. Lower leaves have air pockets (*Eriocaulon* resembles a young *Sagittaria* and *Vallisneria* when growing under water and when no flowers are present, check air pockets in base of leaves).

E. compressum: soft white head.

E. decangulare: hard white head.

Lachnocaulon: fibrous roots, brown, not striate

L. engleri: heads dark brown.

Syngonanthus: heads pale brown, bottom of head yellowish, thickened fleshy roots.

Vines

Sarcostema: white milkweed vine. Large, white, waxy flowers, clustered in leaf axils, common name is White Vine.

Vigna lutiola: Vine with yellow flowers resembling poison ivy (it has leaves of 3), fruit a linear hairy pod.

Polygonum

P. punctatum: "punctated" with golden-yellow-sometimes pink dots. Easily seen with hand lens.

P. hydropiperoides: also is "punctated" but not golden-yellow-pink when seen with hand lens.

Micranthemum

M. umbrosum: leaves opposite, round

M. glomeratum: leaves opposite, elliptical, smaller

***Ludwigia*, with long capsules**

Number of petals is not always reliable in identification, but it is for the long capsule species

L. octovalvis: 4 sepals, stem is usually hairy

L. leptocarpa: 5 or 6 sepals. Stem is usually hairy.

Other Ludwigia

L. repens: leaves always opposite. Flower sessile in leaf axil, with 4 petals (that fall off very quickly, usually do not see them) & 4 sepals.

L. palustris: leaves always opposite. Flower sessile in leaf axil, no petals. Leaves often have tiny little dots on the upper margins.

L. linearis: Erect, solitary small "bush". Capsule linear, with no or a very short stalk, flowers in leaf axils, very small, with 4 petals

Sagittaria

S. lancifolia: blades very leathery, lance-shaped.

S. graminea: leaves not leathery, grass-like, thin, sometimes an expanded portion at the top.

Typha

T. domingensis: Double hotdogger. Male flowers (the thin cylindrical 'hot dog' at the top of the stem) separated from the lower 'fat hot dog' cylindrical cluster of female flowers by at least 1 cm.

T. latifolia: Single hotdogger. Male flowers (thin 'hot dog') at the top of the stem not separated from the female flowers (fat 'hot dog') below.

Hydrocotyl

Must have flower to identify, so should leave at species if no flower. Except for

H. ranunculoides: there is a slit in leaf and stem therefore attaches at the margin rather than the middle as in the other 3 Hydrocotyles (Pennyworts).

Scirpus

S. validus (tabernaemontani): Stems round or very slightly 3-angled. Flower clusters somewhat pointed. Seed perianth bristles white, longer than fruit, barbs point down. Seeds grayish white, fruit is 2-sided.

S. californicus: Stems roundly 3-angled. Flower clusters more rounded at the tip. Seed perianth bristles red, with feathery hairs. Seeds gray-brown, fruit is 2-sided.

Utricularia

Flowers are usually necessary for identification:

U. foliosa: Main stem is thick and flat.

U. purpurea: this is the common one with a purple flower (most others are yellow)

Rhynchospora

R. inundata and R. corniculata look identical, must look at seeds

R. inundata: Bristles longer than achene body

R. corniculata: Bristles shorter than achene body.

Echinocloa

E. walteri: Long hairs on leaf sheaths. Long awns.

E. crusgali: No hairs on leaf sheaths. Long awns. Fruits covered with short thick bristles.

E. muricata: No hairs on leaf sheaths. Long awns. Fruits covered with short thick bristles, but also have a tiny crown of bristles at tip.

Taxodium

Differences in bark are the best features in identification

Pluchea

Pink flowers:

P. camphorate: leaves stalked. Outer flower bunches are shorter than inner.

P. odorata: leaves stalked. Outer flower bunches are longer than inner.

P. rosea: sessile leaves, but not “clasping”

White flowers:

P. longifolia: Sessile, leaves somewhat clasping. Leaves at top of stem (near flower head) are nearly the same length as at bottom of the stem.

P. foetida: Sessile, leaves somewhat clasping. Leaves at top of the stem are much shorter than those at bottom of the stem.

Peltandra virginica : Resembles *Sagittaria*, but leaves have fine nerves and “design” around leave. (see drawing from USDA below)



PRESERVATION TYPES:

Write description of flowers and fruits before preservation (Shape, color). On herbarium sheet or label.
For delicate flowers or wet/juicy fruits use wax paper or, glossy magazine paper.

Good Books: (in addition to what we have in the lab)

Gil Nelson:

-Trees, - Shrubs and -Ferns