

"Knotweeds"

NUTLET STARTER

DG Fuller 14.xii.2006

POLYGONACEAE: large size range (small to large)

← hard acute apex

← pericarp hard + smooth  
very minute roundish cells

← truncate base w/ continuous stalk

← thin pericarp often cracks revealing embryo which runs whole length internal seed resilient

POLYGONUM (sensu stricto)

PERSICARIA (in Polygonum in older sources)

RUMEX

good starting place: Martini + Barkley 1946

"Sedges" good starting place: Berggren 1969 Atlas of Seeds Part 2

CYPERACEAE: small to large, large diverse family

Scirpus/Carex/Juncellus

Eleocharis big "hat"

FIBRISTYLIS RUBRISTYLIS little hat/stub

Cyperus long, thin, usually small

The "basic sedge"

ladder like ridges

ridged/pitted/banded

"hat"-like base

often silicified pericarp

thick pericarp internal seed epibornal

basal plug-like embryo

"Rushes" JUNACEAE: very small

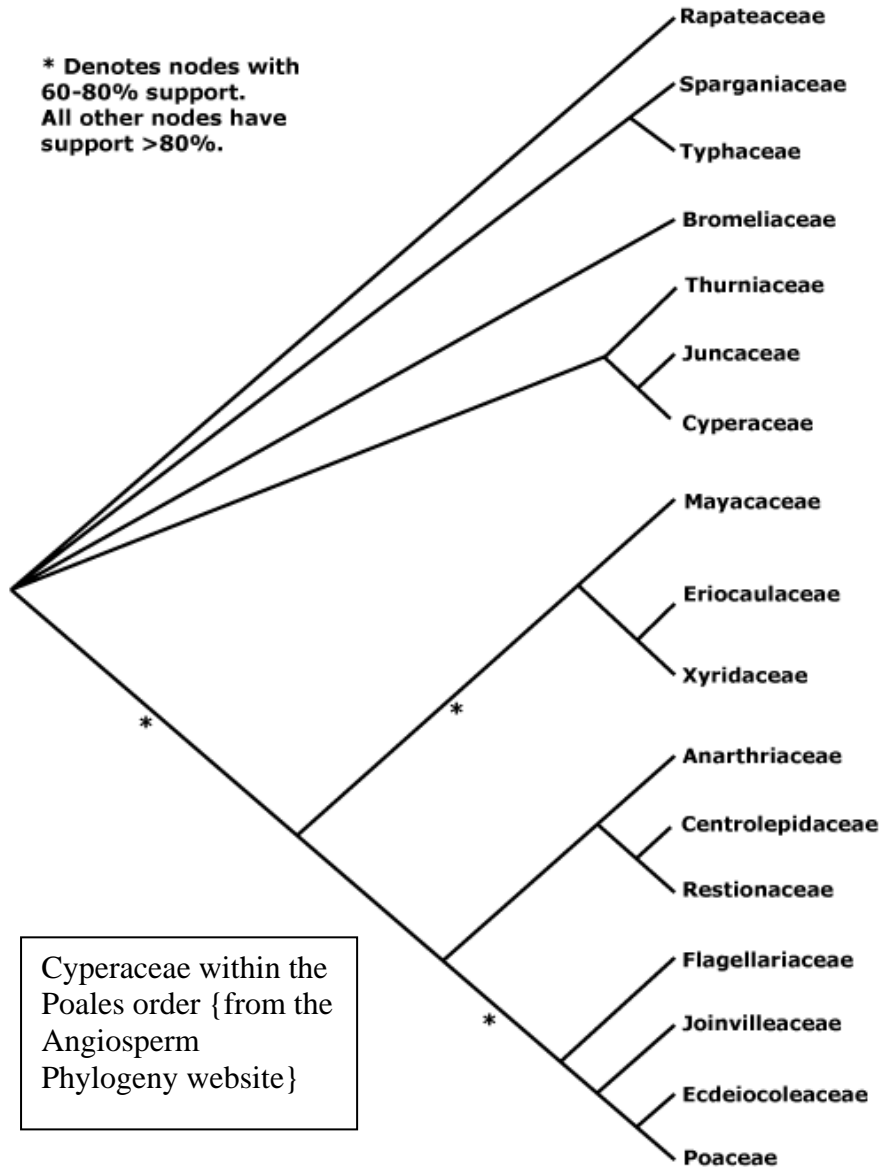
← blunt cylindrical/conical tip

← grid-like surface pattern of ridges squarish.

← blunt/broken flat base or with stalk

← round cross-section

← basal embryo only



**Traditional subfamily groups:**

**SCIRPOIDEAE / CYPEROIDEAE**

*Cyperus, Eriophorum, Scirpus* (incl. *Isolepis*), *Bulboschoenus* *Eleocharis*, *Fimbristylis*, *Bulbostylis*

Many flowered spikelets, always bisexual

**RHYNCHOSPOROIDEAE**

*Rhynchospora, Scirpodendron, Cladium, Scleria, Schleria & Mapania*

One or two-flowered racemes in small heads

[includes oddly shaped & extra hard nutlets]

[*Mapania* is now separated from the rest in a separate subfamily based on genetics]

**CARICOIDEAE**

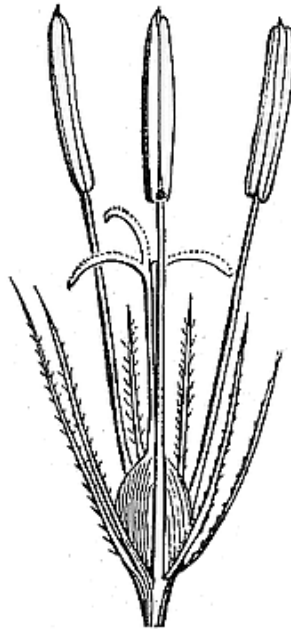
*Carex, Uncinia, Kobresia, Cymophyllus*

Flowers usually unisexual, naked in many flowered spikes

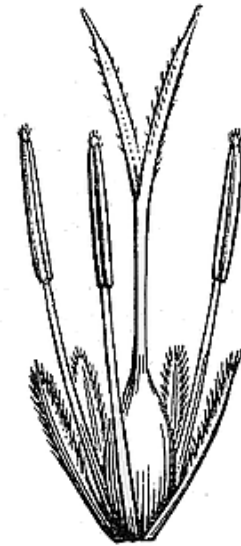
Basic sedge flowers & fruit (from Le Maout & Decaisne *System of Botany*, English translation by Hooker & Hooker 1873)



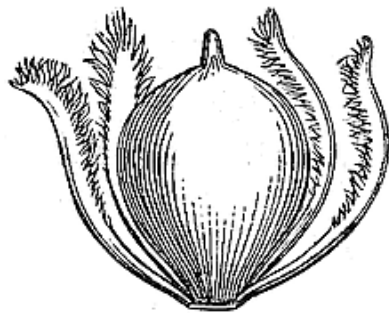
*Blasmus.*  
Flower (mag.).



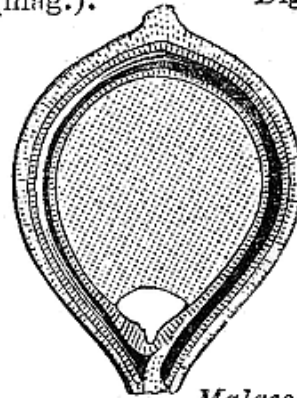
*Scirpus lacustris.*  
Flower (mag.).



*Malacochaete littoralis.*  
Digynous flower  
(mag.).



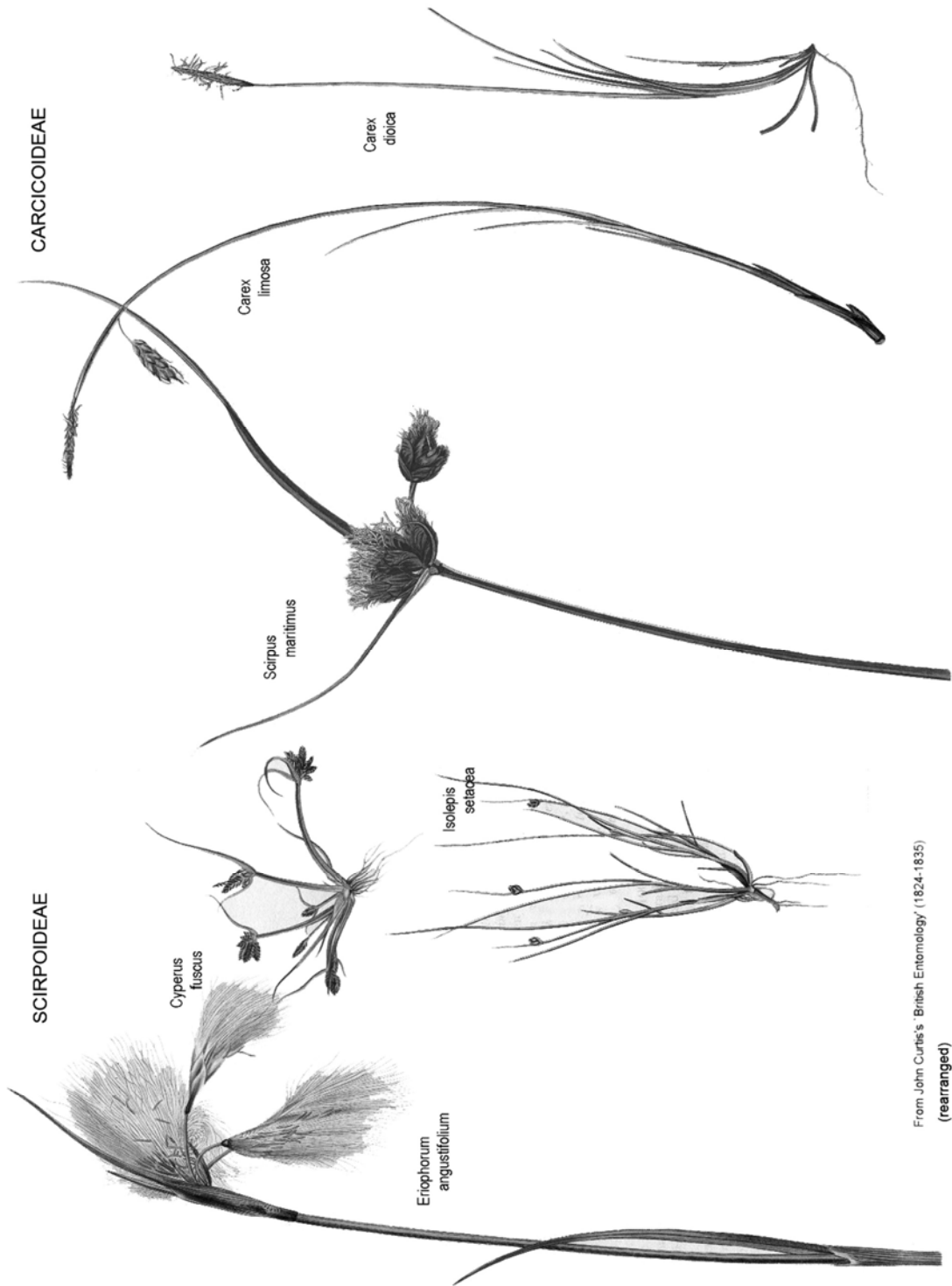
*Malacochaete littoralis.*  
Ripe fruit (mag.).



*Malacochaete littoralis.*  
Achene cut vertically  
(mag.).

all *Scirpus* (old synonyms include *Blasmus* & *Malacochaete*)

Scirpoideae & Caricoideae gestalt morphology



From John Curtis's 'British Entomology' (1824-1835)  
(rearranged)