



DEAR Field Keys

Submersed Aquatic Plants

Submersed aquatic plant

Whorled, or appear-whorled leaves



Proceed to Page 2

Slender stems, thin leaves



Proceed to Page 6

Strap-leaves



Proceed to Page 8

Opposite leaves (Misc.)



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Spikerushes



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Bladderworts



Proceed to *Utricularia* Key

Submersed aquatic with
whorled, or appear-
whorled, leaves

Whorled,
dissected
leaves



Proceed to Page 3

Whorled,
simple
leaves



Proceed to Page 4

Branches/branchlets
whorled, stems appear
translucent, no true
leaves or sheaths
(macroalgae)

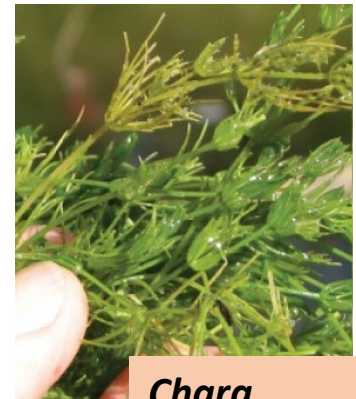


Smooth,
translucent
stems, no
odor



Nitella

Rough
feeling,
garlic-y odor



Chara

**Submersed aquatic
with whorled,
dissected leaves**



Opposite, palmately
branched (fan
shaped)

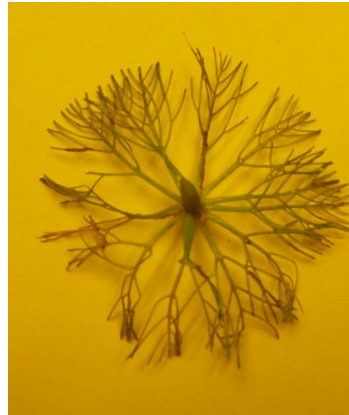


Purple/red stems,
plant loses shape out
of water; flowers
light pink, showy



Cabomba caroliniana

Whorled, tree
branching;
submersed finely
divided & feathery;
emergent leaves,
lance-shaped, wider



Flowers single pink,
violet, or blue



Limnophila sessiflora

Whorled, forked
(tuning fork)



Green stems, plant
holds shape out of
water, teeth on
midribs (rough
feeling)



Ceratophyllum demersum

Whorled, pinnately
branched (like a
feather)



***Myriophyllum* sp.**

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Whorled, simple leaves



Leaves in whorls of 4 to 8, saw-toothed leaf margins, teeth along underside of midrib



Stems slender, branched, up to 25 ft. long; flowers tiny, white on long stalks.

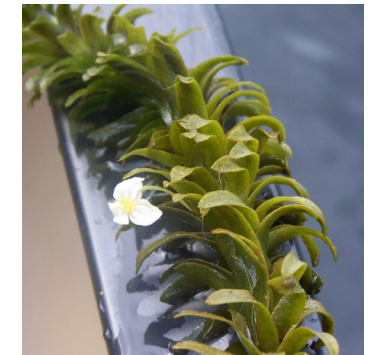


Hydrilla verticillata

Leaves in whorls of 3 to 6, toothed leaf margins, smooth midrib



Stems slender; flowers short stalks 1" above water, 3 white petals



Egeria densa

Leaves densely arranged in spirals on stem, emergent leaves mossy, submersed leaves thread-like, can form emergent mats

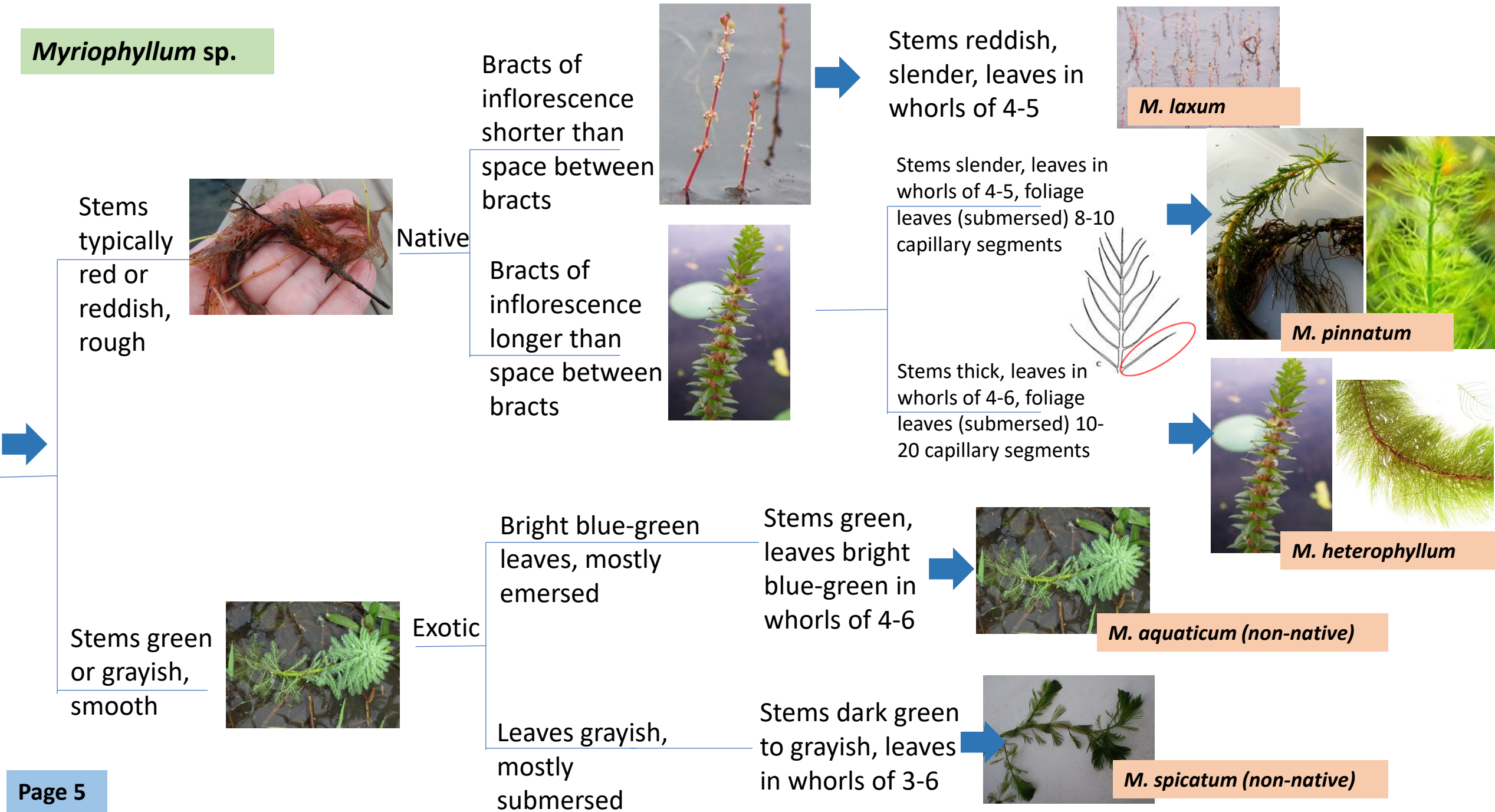


Stems whitish-green, flexible; flowers solitary, on stalks 2" long, small, 3 whitish to pink petals



Mayaca fluviatilis

***Myriophyllum* sp.**



Slender stems,
thin leaves

Opposite
leaves



Narrow leaves (1-3.4 mm wide), small teeth on leaf margins



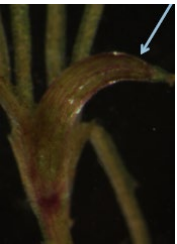
Najas guadalupensis

Thin leaves (0.1-1.2 mm), coarse teeth on leaf margins, 7-15 per side, fruits not recurved



Najas minor

Fine leaves (0.1-0.7 mm wide), minute teeth, 5-9 per side, curved fruit



Najas filifolia

Alternate
leaves



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Slender stems, thin leaves; alternate leaves



Plant has both floating and submersed leaves



Floating & submersed leaves same, elliptic in shape, flower greenish on spike (1-3" long)



Potamogeton illinoensis

Floating & submersed leaves different, small elliptic floating, thin threadlike submersed, fruits on tight spike

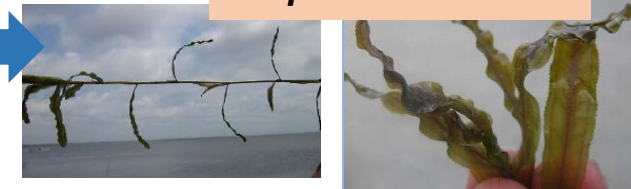


Potamogeton diversifolius

Only submersed leaves

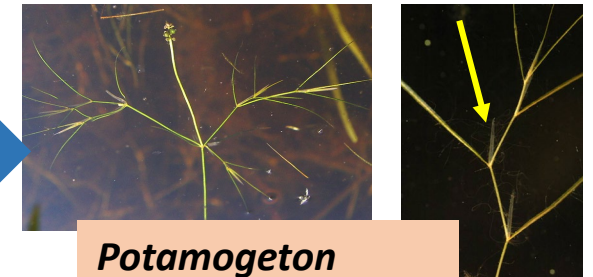


Only one style of leaf, submersed, leaf has teeth



Potamogeton crispus

Linear, submersed leaves, stipules free from leaf base, appear to stick out in leaf axils



Potamogeton pusillus

Strap-leaves

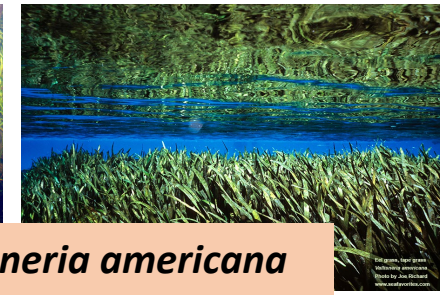
Smooth leaves, no ridges, rounded tips



Thick leaf midsection, flowers on spiral peduncle



Vallisneria americana



Leaves have ridges, pointed tips



Fruiting heads ascending

Strap-like submersed leaves or small, narrow emergent leaves on short plant



Sagittaria isoetiformis

Fruiting heads recurved

No floating leaves, 5 distinct ridges, grows in spring runs



Sagittaria kurziana



Two types of leaves, both floating and strap-like, grows in ponds and lakes



Sagittaria filiformis



Opposite leaves



Stems square

Stems are square, flowers at leaf axis are bluish-white with two lips, found in streams and slow-moving water



Hygrophila polysperma

Stems NOT square

Flowers minute, usually not perceptible to unaided eye

Leaves oblanceolate, leaves usually 2-4 mm



Micranthemum glomeratum

Flowers visible to unaided eye

Leaves round, leaves usually 4-9 mm



Micranthemum umbrosum

Yellow flower

Reddish, narrow leaves, no teeth, yellow flowers stalked and in four parts



Ludwigia arcuata

Pink-white flower

Leaves not clasping, stems not hairy, non-aromatic, flowers pink-white



Bacopa monnieri

Purple-blue flower

Leaves clasping, stems hairy, lemon smell (when leaves crushed), purple-blue flowers



Bacopa caroliniana

Spikerushes

Both submersed &
emergent form



Proceed to *Eleocharis*
Key (IN PROGRESS)

Completely
submersed

Wiry stems (hair-
like), produce
new plantlets at
their tips



Eleocharis submersed
viviparous