

SRT AQUATICS COURSE NOTES					
Ceratophyllum demersum	Rigid Hornwort	SU	Rigid plant with whorls of fine hornlike leaves	Leaves forked and toothed	Can be hard to ID in winter and in shade when plants are more flaccid. CF. <i>Myriophyllum</i> which has softer, more feathery leaves.
<i>Elodea canadensis</i>	Canadian Waterweed	SU	Dark green leaves in whorls of three , widest in middle	Leaves 3mm wide	CF <i>Elodea nuttallii</i> with leaves tapering to fine points
Groenlandia densa	Opposite-leaved Pondweed	SU	Large dark green ovate opposite leaves	Leaves 13mm wide	
<i>Lagarosiphon major</i>	Curled Waterweed	SU	Dense leaves spiral up stem and arch backwards	Leaves 2mm wide	
Myriophyllum spicatum	Spiked Water-milfoil	SU	Soft plant with feathery leaves in whorls of 3-5	Upper flowers alternate (not leaves)	If the leaves are longer than the internodes it is likely to be <i>Myriophyllum verticillatum</i>
Potamogeton crispus	Curled Pondweed	SU	Oblong leaves with curled margins	Grooved stems	
<i>Azolla filiculoides</i>	Water-fern	FL	Dense floating fronds, turning red	Dark roots trail below	Turns red with sun and phosphorous deficiency
Callitriche stagnalis	Common Water-starwort	FL	Floating stems or on wet mud, ends on water's surface	Leaves opposite, often with terminal rosette	Difficult genus to take to species level
<i>Crassula helmsii</i>	New Zealand Pigmyweed	FL	Erect or trailing with fleshy pointed leaves	Pink flowers on long staks	
Lemna gibba	Fat Duckweed	FL	Convex leaves (with 4-5 veins) with long single root	Can be white and spongy below	Hard to confirm ID in winter
Lemna minor	Common Duckweed	FL	Flat leaves with single root	3 veins on leaf	
Lemna trisulca	Ivy-leaved Duckweed	FL	Submerged with translucent lanceolate leaves	Join on right angles forming colonies	
Nasturtium officinale	Water-cress	FL	Deep green with separate terminal leaflet (sometimes large)	Roots from stem	Leafs can have purple tinge
Nuphar lutea	Yellow Water-lily	FL	Large oval leaves with 'tuning fork' parallel veins	Weird cabbagey underwater leaves	Flowers often held above water
Nymphaea alba	White Water-lily	FL	Large round leaves with network of veins (c. 45cm)	Wild form typically white	
Nymphoides peltata	Fringed Water-lily	FL	Small lily-shaped leaves (c. 5cm)	Yellow flowers with fringed lobes	
Potamogeton natans	Broad-leaved Pondweed	FL	Dark green floating oval to elliptical leaves	Translucent veins	Pale kink in stem below leaf
Ranunculus aquatilis	Common Water-crowfoot	FL	Large floating mat-forming plants with white flowers	Laminar and capillary leaves	Laminar and capillary leaves
Ranunculus fluitans	River Water-crowfoot	FL	Large floating mat-forming plants with white flowers	Only capillary leaves	
Butomus umbellatus	Flowering-rush	ER	Leaves 3-angled and twisted	Pink flowers in umbel at differing lengths	
Carex acutiformis	Lesser Pond-sedge	ER	Leaves thin and glaucous	Pointy ligule. Sheath breaks up to form filaments	Distinctive black fruits
Carex riparia	Greater Pond-sedge	ER	Broad erect glaucous leaves, brick-like pattern above domed ligule	Sheath does not split into filaments	Distinctive black fruits
Glyceria maxima	Reed Sweet-grass	ER	Huge with wide reed-like folded leaves	Very branched large flowerhead, stripy spikelets	
Iris pseudacorus	Yellow Iris	ER	Glaucous leaves arranged on flat plain, stiffly erect	Large yellow flower	Seed pods packed with brown cuboid seeds
Phalaris arundinacea	Reed Canary-grass	ER	Reed-like rough leaves up to 2cm wide, up to 2m tall	Membranous ligule	Clumpy flowerhead, like Cock's-foot when closed
Phragmites australis	Common Reed	ER	Tall reed (2m). Wide grey-green leaves with restricted band	Ligule dense fringe of hairs	Loose nodding glossy purple panicle
Sparganium emersum	Unbranched Bur-reed	ER	Smaller, sometimes entirely submerged	Floating ribbon leaves, keeled at base	Unbranched inflorescence
Sparganium erectum	Branched Bur-reed	ER	Erect reed with keeled upper leaves		Branched inflorescence
Typha latifolia	Bulrush	ER	Stout reed, leaves on opposite sides of stem	Large reed with wide leaves (c. 17mm wide)	No gap in inflorescence
Typha angustifolia	Lesser Bulrush	ER	Smaller reed, leaves on opposite sides of stem	Smaller than <i>latifolia</i> (leaves c. 5mm wide)	Gap between male and female flowers
Eleocharis palustris	Common Spike-rush	EG	Tubular dark green stems with single infl. on tip, up to 3m!!	Far-creeping rhizomes	Lowest glumes do not encircle base of spikelet

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Glyceria fluitans	Floating Sweet-grass	EG	Tramlines and keels, big raggedy ligules	Lying flat on water or in mud as well as erect. Folded leaves.	Glume edge translucent and simple
Juncus effusus	Soft-rush	EG	Glossy green smooth stems (sometimes yellow)	Continuous spongy pith in stem	Inflorescence can be closed or open
Juncus inflexus	Hard Rush	EG	Grey-green matt thin ridged stems	Interrupted pith inside stem; v. strong	Inflorescences very open
Schoenoplectus lacustris	Common Club-rush	EG	Stout rounded dark green stems, spongy on inside	Inflorescence clusters of deep brown heads	
Alisma plantago-aquatica	Water-plantain	EF	Long-stalked erect oval leaves with parallel veins	Inflorescence has several tiers of flowers	Small pink flowers ripening to tight hard nuts
Apium nodiflorum	Fool's-water-cress	EF	Toothed leaves, with single terminal leaflet	Flowers at base of inflated leaf stalks	CF <i>Berula erecta</i> - has a ring on stem above where leaf joins
Hippuris vulgaris	Mare's-tail	EF	Erect feathery heads arising from water	Thick stems with leaves in whorls	Also has trailing submerged stems
Menyanthes trifoliata	Bogbean	EF	Large erect trifoliate leaves	White shaggy flowers with pink on outer lips	
Myriophyllum aquaticum	Parrot's-feather	EF	Emergent shoots with feathery leaves	Leaves in whorls of 4-6	
Sagittaria sagittifolia	Arrowhead	EF	Arrow-shaped emergent leaves	Also has submerged linear and floating oval-lanceolate leaves	Submerged leaves unkeeled
Caltha palustris	Marsh Marigold	MA	Fleshy kidney-shaped leaves	Show large yellow flowers	Pointy seed pods
Impatiens glandulifera	Indian Balsam	MA	Red stems with leaves in whorls	Unusual pink flowers with curved spurs	
Lycopus europaeus	Gypsywort	MA	Opposite deeply pinnate leaves	Flowers in whorls in axis	Can look a bit like Nettle
Lythrum salicaria	Purple-loosestrife	MA	Leaves stalkless, slightly downy and untoothed on square stem	Inflorescence dense purple spike	Persistent seed pods
Mentha aquatica	Water Mint	MA	Opposite toothed aromatic leaves	Dense light purple inflorescent, terminal and in axes	
Myosotis scorpioides	Water Forget-me-not	MA	Oblong pale green hairy leaves	Bright blue flowers, can be on long racemes	
Oenanthe crocata	Hemlock Water-dropwort	MA	Triangular and very pinnate leaves	Grooved stems with rounded umbels	Tuberous roots
Ranunculus flammula	Lesser Spearwort	MA	Straplike pointed leaves, basal leaves more rounded	Flowers delicate and yellow	Stalk furrowed
Ranunculus lingua	Greater Spearwort	MA	Larger version of above	Large bright yellow flowers	Stalk unfurrowed
Ranunculus sceleratus	Celery-leaved Buttercup	MA	3-lobed divided basal leaves	Fruits in elongated heads	
Veronica anagallis-aquatica	Blue Water-Speedwell	MA	Fleshy stems with casting lanceolate leaves	Flowers pale blue in tall spikes from leaf junctions	
Veronica beccabunga	Brooklime	MA	Hairless, shiny stems	Blunt, short stalked toothed leaves	Largish dark-blue flowers
Veronica catenata	Pink Water-Speedwell	MA	Similar to V a-a but usually pink flowers	Flower-stalks shorter than bracts	
	SUBMERGED	SU			
	FLOATING	FL			
	EMERGENT - REEDY	ER			
	EMERGENT - GRASSY	EG			
	EMERGENT - FLOWER	EF			
	MARGINAL	MA			