

NRE 436 – Woody Plants

10-Dec-11

- f. Adoxaceae – *Sambucus canadensis* – common elder – opp, pinn (5–11), taco shaped – bark thin warty
- f. Adoxaceae – *S. pubens* – red-berried elder – opp, pinn (~7), serrate – large, purple, lateral buds
- f. Adoxaceae – *Viburnum acerifolium* – mapleleaf viburnum – opp, simple – 4 lat buds, term stalked – twig ridged
- f. Adoxaceae – *V. dentatum* – southern arrow-wood – opp, simple – taller – glabrous beneath – no stipules/fungus
- f. Adoxaceae – *V. lentago* – nannyberry – opp, simple – long terminal bud – cast on twig
- f. Adoxaceae – *V. rafinesquianum* – downy arrow-wood – opp, simple – purple fungus
- f. Adoxaceae – *V. trilobum* – highbush-cranberry – opp, simple – buds plump, lustrous – tall stems

- f. Anacardiaceae – *Rhus aromatica* – frag sumac – alt, pinn (3), lobed, term w/ acum base – catkins like small buds
- f. Anacardiaceae – *R. copallina* – winged sumac – alt, pinnate – rachis winged
- f. Anacardiaceae – *R. glabra* – smooth sumac – alt, pinnate (11–31) – twigs stout, glabrous, green/red
- f. Anacardiaceae – *R. typhina* – staghorn sumac – alt, pinnate – twig pubescent – cluster of fruit
- f. Anacardiaceae – *Toxicodendron radicans* – poison ivy – alt, pinnate (3), often lobed – buds naked – wht berries
- f. Anacardiaceae – *T. vernix* – poison sumac – alt, pinnate (7–13) – twigs stout – buds small – white berries

- f. Annonaceae – *Asimina triloba* – pawpaw – alt, simple, obovate – 5 bundle scars in u-shape – stalked term bud

- f. Aquifoliaceae – *Ilex verticillata* – Michigan holly – alt, simple – bark w/ warty lenticels – gray twig – red berries

- f. Berberidaceae – *Berberis thunbergii* – Japanese barberry – clust, simp, narrow base, small – shrub – nodal spine

- f. Betulaceae – *Alnus glutinosa* – black alder – alt, simple, crenate – clustered catkins 1-2 cm
- f. Betulaceae – *A. rugosa* – speckled alder – alt, simple – bark smooth – buds stalked – catkins
- f. Betulaceae – *B. alleghaniensis* – yellow birch – alt, simple, serrate – peely bark – spur shoots – monster claw bud
- f. Betulaceae – *B. papyrifera* – paper birch – alt, simple, serrate, deltoid – short shoots – white papery bark
- f. Betulaceae – *B. pumila* – bog birch – alt, simple, dentate, rounded – shrub
- f. Betulaceae – *B. x purpusii* – purpus birch – alt, simple, small, serrate, occasionally in pairs
- f. Betulaceae – *Carpinus caroliniana* – musclewood – alt, simple, serrate – trunk wavy – twig slender
- f. Betulaceae – *Corylus americana* – American hazelnut – alt, simple, serrate – shrub – catkins – buds globose
- f. Betulaceae – *Ostrya virginiana* – hop-hornbeam – alt, simple, serrate – narrow shreddy strip bark – buds angled

- f. Bignoniaceae – *Catalpa speciosa* – n. catalpa – opp/whorled, simple – knobby leaf scars – pith white – long pods

- f. Cannabaceae – *Celtis occidentalis* – n. hackberry – alt, simple, cord, acum – terminal bud at 90° – topo-map bark

- f. Caprifoliaceae – *Lonicera dioica* – smooth honeysuckle – opp, simple – internodes long – pith solid
- f. Caprifoliaceae – *L. maackii* – Maack's honeysuckle – opp, simple, tear-drop – pith hollow
- f. Caprifoliaceae – *L. tatarica* – Tartarian honeysuckle – opp, simple, spade-shaped – pith hollow

- f. Celastraceae – *Celastrus orbiculatus* – Oriental bittersweet – alt, simple – lenticels like white flecs
- f. Celastraceae – *Euonymus alatus* – winged wahoo – opp, simple – twig square and winged
- f. Celastraceae – *E. obovatus* – creeping strawberry-bush – opp, simple, sessile, spatulate – twigs square – creeper

- f. Cornaceae – *Cornus alternifolia* – alternate-leaved dogwood – simple, alt, crowded near terminus – buds green
- f. Cornaceae – *C. amomum* – silky dogwood – opp, simple, acum, arc – twig red, pub. – lat buds appressed
- f. Cornaceae – *C. florida* – flowering dogwood – opp, simple, acum, arc, orbicular – bark blocky – pagoda buds
- f. Cornaceae – *C. foemina* – gray dogwood – opp, simple, acum, arc – bark smooth – lenticels prominent
- f. Cornaceae – *C. stolonifera* – red-osier dogwood – opp, simple, acum, arc – red wine twig – fruit white

- f. Cupressaceae – *Juniperus communis var. depressa* – ground juniper – needles, long, lined w/ stomata – shrub
- f. Cupressaceae – *J. virginiana* – eastern redcedar – opp, needles/scales – tree – berries – 2 stomata rows
- f. Cupressaceae – *Thuja occidentalis* – n. white cedar – opp, scales – flat sprays – no berries – swamp habitat

- f. Elaeagnaceae – *Elaeagnus umbellata* – Autumn-olive – alt, simple – speckled leaves, twigs, and red berries

- f. Ericaceae – *Chamaedaphne calyculata* – leatherleaf – opp, simple, smaller at apex – shrub – speckled
- f. Ericaceae – *Gaylussacia baccata* – black huckleberry – alt, simple – shiny yellow resinous dots – twig striped vert
- f. Ericaceae – *Vaccinium angustifolium* – low sweet blueberry – alt, simple, serrulate – twig grooved above buds
- f. Ericaceae – *V. corymbosum* – highbush blueberry – alt, simple, smaller distally – petioles short – buds small
- f. Ericaceae – *V. oxycoccos* – small cranberry – alt, simple, tiny – small – evergreen – bog species

- f. Fabaceae – *Cercis canadensis* – redbud – alt, simple, cordate – twig dark, buds darker – legumes with two points
- f. Fabaceae – *Gleditsia triacanthos* – honey-locust – alt, bipinnate, narrow, small – long curly pods – forked thorns
- f. Fabaceae – *Gymnocladus dioica* – Kentucky coffeetree – alt, bipinnate – leaflets variable, acuminate – twig large
- f. Fabaceae – *Robinia pseudoacacia* – black locust – alt, pinnate, rounded – stipule spines – pods w/ rounded apex

- f. Fagaceae – *Castanea dentata* – American chestnut – alt, simple w/ teeth at each vein – chestnut blight
- f. Fagaceae – *Fagus grandifolia* – American beech – alt, simple – bark smooth – buds sharp, lateral – acorn?
- f. Fagaceae – *Quercus alba* – white oak – alt, simple – light bark, small plates – acorn, 1.5-2cm, 1/4 cap, warty
- f. Fagaceae – *Q. bicolor* – swamp white oak – alt, simple – wavy, shallow lobes – acorn on 2-8cm peduncle
- f. Fagaceae – *Q. ellipsoidalis* – n. pin oak – alt, simple, sharp, deep lobes – acorn oval, 1-1.5cm, top-cup, sessile

- f. Fagaceae – *Q. imbricaria* – shingle oak – alt, simple, unlobed, ovate, entire – acorn 1.5cm, round, 1/2 cup
- f. Fagaceae – *Q. x leana* – Lea oak – alt, simple, shallow round sinuses, sharp lobes – acorn small ?
- f. Fagaceae – *Q. macrocarpa* – bur oak – alt, simple, wasp-waist – bark ropelike – fringed acorn cup
- f. Fagaceae – *Q. muehlenbergii* – chinkapin – alt, simple, shallow, sharp, lobes, acum – acorn, 1.5cm, dark, 1/2 cup
- f. Fagaceae – *Q. palustris* – pin oak – alt, simple, narrow, sharp, deep sinuses – acorn, 1.3cm, 1/4 cup, sessile
- f. Fagaceae – *Q. prinoides* – dwarf chinkapin oak – alt, simple, small lobes – acorn, 1.5cm, 1/4-1/3 cup, blunt, sessile
- f. Fagaceae – *Q. prinus* – chestnut oak – alt, simple, spat, acum, shallow, round – twig ridged – acorn 2cm, 1/3 cup
- f. Fagaceae – *Q. rubra* – n. red oak – alt, simple, sharp lobes – bark with silver streaks – acorn, 1.5-3cm, beret cup
- f. Fagaceae – *Q. velutina* – black oak – alt, simple, shiny – bud dusty – acorn, 1.5cm, 1/2 cup, loose scales, squared

- f. Ginkgoaceae – *Ginkgo biloba* – ginkgo – alt, simple, fan-shaped – excurrent – spur shoots

- f. Hamamelidaceae – *Hamamelis virginiana* – witch-hazel – alt, simple – buds naked, stalked, yellowy – 2 bund sc
- f. Hamamelidaceae – *Liquidambar styraciflua* – sweetgum – alt, simple, star – pith angled, glittery – beaks fruit

- f. Juglandaceae – *Carya cordiformis* – bitternut hickory – alt, pinnate (7–9) – sulfur-yellow buds – ironed bark
- f. Juglandaceae – *C. glabra* – pignut hickory – alt, pinnate (5-7) – thin/medium husk – bud downy, dome-shaped
- f. Juglandaceae – *C. ovata* – shagbark hickory – alt, pinnate (5) – thick husk – bud large – loose strips of bark
- f. Juglandaceae – *Juglans nigra* – black walnut – alt, pinnate (13-23) – chambered pith – monkey face leaf scar

- f. Lauraceae – *Lindera benzoin* – spicebush – alt, simple, acum – twigs slender, spicy, dark – buds green
- f. Lauraceae – *Sassafras albidum* – sassafras – alt, simple, poly-lobed – orange inner bark – twig green, spicy smell

- f. Lythraceae – *Decodon verticillatus* – water-willow – opp/whorled – wet habitats – single stemmed shrub

- f. Magnoliaceae – *Liriodendron tulipifera* – tuliptree – alt, simple, 4-lobed – duck-bill bud – tire track bark
- f. Magnoliaceae – *Magnolia acuminata* – cucumber tree – alt, simple, large, leathery – bud white, pub – black fruit

- f. Malvaceae – *Tilia americana* – Am. basswood – alt, simple – buds plump, lopsided – bark smooth > furrowed

- f. Moraceae – *Maclura pomifera* – osage-orange – alt, simple, ovate, acum – thorn in each node – green brain fruit
- f. Moraceae – *Morus alba* – white mulberry – alt, simple, poly-lobed – buds offset, orbicular – twig tan

- f. Nyssaceae – *Nyssa sylvatica* – blackgum – alt, simple, lustrous, ovate, entire – alligator bark – excurrent

- f. Oleaceae – *Fraxinus americana* – white ash – opp, pinnate – twigs knobby – crescent-shaped leaf scar – bud light
- f. Oleaceae – *F. nigra* – black ash – opp, pinnate – lateral buds spaced from terminal – bud cone shaped – bud dark
- f. Oleaceae – *F. penn...a* – red ash – opp, pinnate (6) – twig pub. – semicircle/shield leaf scar – bud dark, at apex
- f. Oleaceae – *F. quadrangulata* – blue ash – opp, pinnate – twigs square and winged
- f. Oleaceae – *Ligustrum vulgare* – common privet – opp, simple, ovate, lanc, variable in size – petioles short
- f. Oleaceae – *Syringa vulgaris* – common lilac – opp, simple, cordate, entire – shrub – beaked dehiscent capsules

- f. Pinaceae – *Abies balsamea* – balsam fir – needles, 1-1.5cm two-ranked, soft – erect shatter cones, 8cm
- f. Pinaceae – *A. concolor* – white fir – needles, 5cm, flat, upswept, glaucous – citrus smell – shatter cones, 7cm
- f. Pinaceae – *Larix laricina* – eastern larch – needles, on short shoots – decid. – bog species – rosette cone, 1-1.5cm
- f. Pinaceae – *Picea abies* – Nor spruce – needles, 1.5cm – cone, 12-13cm, papery, stiff, notched – drooping branches
- f. Pinaceae – *P. glauca* – white spruce – needles, 1.5-2cm, glaucous, diamond – cone, 4cm, entire – widespread
- f. Pinaceae – *P. mariana* – black spruce – needles, stiff, 1cm – bog species – cone, 3-5cm, erose margin
- f. Pinaceae – *P. pungens* – CO blue spruce – needles, 2cm, sharp, glaucous – droopy branches – cone 9cm, papery
- f. Pinaceae – *Pinus banksiana* – jack pine – needles, 2.5cm, twisted diverg. – cone, 3-4cm, closed, persists, points in
- f. Pinaceae – *P. nigra* – black pine – needles, 12cm – cone, 5-6cm, bas. intact, decid. term. arm. – 90° lat. branches
- f. Pinaceae – *P. ponderosa* – ponderosa pine – needles, 12cm, 2-3 – cone, 5-10cm, armed, w/out bas. – 45° branches
- f. Pinaceae – *P. resinosa* – red pine – needles, 12cm, brittle – cone, 5cm, w/ dors. umbo, w/out bas. scales
- f. Pinaceae – *P. strobus* – e. white pine – needles, 10cm, slender, 5-per, tufts – cone, 10-12cm, term. umbo
- f. Pinaceae – *P. sylvestris* – Scotch pine – needles, 6cm, 2 per, glauc – bark orange – 3-4cm, bas. intact, dors. umbo
- f. Pinaceae – *Pseudotsuga menziesii* – Douglas-fir – needles, 3cm, upswept, rounded tips – cone, 6cm, with rat-tails
- f. Pinaceae – *Tsuga canadensis* – e. hemlock – needles, 1-1.5cm, two-ranked – cone, 2cm, wobbly – drooping leader

- f. Platanaceae – *Platanus occidentalis* – sycamore – alt, simple – camo bark – twig internodes straight, buds covered

- f. Rhamnaceae – *Rhamnus cathartica* – common buckthorn – alt, simple, arcuate – ashy, mottled – terminal thorn
- f. Rhamnaceae – *Rhamnus frangula* – glossy buckthorn – alt, simple, arc, ovate – no terminal thorn

- f. Rosaceae – *Amelanchier arborea* – downy serviceberry – alt, simple, lanc – buds, long, narr, sharp – stretch bark
- f. Rosaceae – *Aronia melanocarpa* – black chokeberry – alt, simple, arc, incurved, spatulate – glands on leaf midrib
- f. Rosaceae – *Crataegus spp.* – hawthorn – alt, simple, acum base – unbranched thorns – red/ylw pome – eg: malus
- f. Rosaceae – *Malus pumila* – common apple – alt, simple – leaves, twigs, and buds tomentose – short shoots
- f. Rosaceae – *Physocarpus opulifolius* – ninebark – alt, simple, cren – bark exf – twigs 5-lined – papery seed caps
- f. Rosaceae – *Prunus avium* – sweet cherry – alt, simple – petiole glands – horizontal lenticels – naturally rare
- f. Rosaceae – *P. serotina* – black cherry – alt, simple, incurved teeth – burnt chip bark – buds tiny
- f. Rosaceae – *P. virginiana* – choke cherry – alt, simple, outcurved teeth – poop-on-a-stick – twig dark like Amelan.

- f. Rosaceae – *Rosa spp.* – roses – alt, pinnate (odd) – stipules – recurved spines – rosehips – zig-zag twig
- f. Rosaceae – *Rubus allegheniensis* – highb black – alt, palmate (3-5) – prickles – pub pet – buds green – ridge twig
- f. Rosaceae – *R. hispidus* – dwarf blackberry – alt, compound (3) – bristles – ground cover – bristled petioles
- f. Rosaceae – *R. occidentalis* – black raspberry – alt, pinnate (3), pale beneath – few large spines – twig red glaucous
- f. Rosaceae – *R. strigosus* – red raspberry – alt, pinnate (3-5) – twig with dense erect hairs, glaucous, pink looking
- f. Rosaceae – *Spiraea alba* – meadowsweet – alt, simple – twigs yellowish, wandlike – similar to goldenrod

- f. Rubiaceae – *Cephalanthus occidentalis* – buttonbush – whorled/opp, simple – buds covered by thin bark

- f. Rutaceae – *Zanthoxylum americanum* – prickly-ash – alt, pinnate (5-11) – thorny – let-my-people-go-thorns

- f. Salicaceae – *Populus alba* – Euro. white poplar – alt, simple, white under, green above – diamond bark
- f. Salicaceae – *P. deltoides* – eastern cottonwood – alt, simple – 3 bundle scars – buds large – bark tan, furrowed
- f. Salicaceae – *P. grandidentata* – bigtooth aspen – alt, simple, toothed (~10) – bark smooth, gray – bud dusty
- f. Salicaceae – *P. tremuloides* – quaking aspen – alt, simple – petioles flat, long – new bark smooth, white
- f. Salicaceae – *P. x rouleiiana* – white poplar hybrid – alt, simple, toothed (~7-8) – alba x grandidentata hybrid
- f. Salicaceae – *Salix amygdaloides* – peachleaf willow – alt, simple, long – cat-claw buds – small leaf scars
- f. Salicaceae – *S. exigua* – sandbar willow – alt, simple – bark w/ lenticels – buds small, term w/ 1 scale – shrub

- f. Sapindaceae – *Acer negundo* – boxelder – opp, pinn (6) – twig green, nodes lined, eg: Fraxinus – buds hidden?
- f. Sapindaceae – *A. nigrum* – black maple – opp, simple, 3-lobed – wilting leaves – lobe pointing inward
- f. Sapindaceae – *A. platanoides* – Norway maple – opp, simple, 5-lobed – samara large, widely diverging
- f. Sapindaceae – *A. rubrum* – red maple – opp, simple, 3-lobed, serrate – twigs red lustrous, buds red clustered
- f. Sapindaceae – *A. saccharinum* – silver maple – opp, simple, serrate, deep smooth sinuses – long pet. – twig red
- f. Sapindaceae – *A. saccharum* – sugar maple – opp, simple, 5-lobed – terminal bud sharp conical – lobe outward
- f. Sapindaceae – *Aesculus glabra* – Ohio buckeye – palmate (5), opp – buds resinous – twig tan, stout – bud reddish

- f. Saxifragaceae – *Ribes americanum* – wild black currant – alt, simple, 3-lobed, cordate – no spines – twig light
- f. Saxifragaceae – *R. cynosbati* – prickly gooseberry – alt, simple, dentate-crenate, 3-lobed – spiny nodes

- f. Simaroubaceae – *Ailanthus altissima* – tree-of-heaven – pinnate (11-41), alt – twig stout – large bundle scar

- f. Smilacaceae – *Smilax tamnoides* – bristly greenbriar – alt, simple – vine – paired tendrils on petioles – armed

- f. Staphyleaceae – *Staphylea trifolia* – A. bladdernut – opp, pin (3), stalked term, long pet. – lantern – twig green

- f. Taxaceae – *Taxus Canadensis* – Canada yew – needles, arranged flat on twig – bog shrub – red berries (cones)

- f. Thymelaeaceae – *Dirca palustris* – leatherwood – alt, simple – bark leathery – swollen twig nodes – hidden buds

- f. Ulmaceae – *Ulmus americana* – Am. elm – alt, simple, rough up, veins rarely fork, acuminate – beef n cheese
- f. Ulmaceae – *U. pumila* – Siberian elm – alt, simple, small, glabrous – tan twig small dark buds
- f. Ulmaceae – *U. rubra* – slippery elm – alt, simple, very rough up, veins fork – beef n beef – twig redder

- f. Vitaceae – *Parthenocissus quinquefolia* – Virginia creeper – alt, palmate (5) – twig nodes swollen – spaghetti
- f. Vitaceae – *Vitis riparia* – river-bank grape – alt, simple, lobed, serrate – single tendrils – woody, shreddy bark