

FABACEAE


legume family

	Leaves	Flowers	Fruit	Other
	~ Pinnately compound Leaflet margins entire ~ Alternate Stipules Petioles may be thickened at base (pulvinus) (place where turgor pressure used for ‘sleep’ movements)	Infl Racemes, cymes, spikes, solitary, etc. Bilateral symmetry (pea-like) with “wing” and “keel” petals (see other) (some radial symmetry) ~ Perfect 5 parted Stamens many to 10 Carpel – 1 Ovary superior	Legume or loment	Trees, shrubs, herbs Roots ~ w/nitrogen fixing bacterial nodules Flower type = papilionaceous (banner, two wing and two fused keel petals)

Wisteria (FABACEAE)

wisteria


Asia, N. America

	Leaves	Flowers	Fruit	Other
	Alternate Pinnately compound 3-19 leaflets	Pea flower, large Scented Pendulous racemes white, blue, pink Prune to ~4 inches from main stem after it flowers. Edible – used in wine Some species are toxic Flower on previous years growth	Legume, large ~ velvety Poisonous	Climber on trees and cliffs Deciduous Needs pruning for good blooming, avoid nitrogen W. sinensis invasive in SE US Strong trunks – ruin latticework, crush thin wooden posts, and strangle trees Nitrogen fixer Seed propagation can take decades before it flowers One in Sierra Madre, CA is more than 1 acre in size and weighs 250 tons

Cercis canadensis (FABACEAE)

eastern redbud


Eastern N. America

	Leaves	Flowers	Fruit	Other
	<p>Alternate and simple. Shape is cordate to round. Thin and papery</p>	<p>Umbel-like clusters or elongated bunches before leaves emerge. “Pea-like” flower, purple-pink Perfect. Sepals 5, fused forming cup-like calyx. Petals 5. 2-lipped, with upper three curved back and lower two larger, covering stamens and ovary. Stamens 10. One carpel.</p>	<p>Legume with many seeds. Reddish brown when ripe. Thin and flattened Persists on tree after leaves have fallen.</p>	<p>Trees to 30 ft. Deciduous. Used to season venison and opossum in Eastern US Understory tree State Tree of Oklahoma</p>

Lonicera nitida (CAPRIFOLIACEAE)

boxleaf honeysuckle


S. W. China

	Leaves	Flowers	Fruit	Other
	<p>Opposite, Simple Small (1/4-5/8” long) Ovate-to round Margin entire Blunt apex Glossy dark green (some variegated cultivars)</p>	<p>Paired flowers, axillary Petals form tube. 5-parted White, fragrant ¼ - ½” long</p>	<p>Berry, round Bluish-purple In late summer</p>	<p>Evergreen shrub Great alternative to boxwoods (<i>Buxus</i>) Can reach 10 ft. with dense, arching stems. <i>Nitida</i> means shining <i>Lonicera</i> named after a German botanist/naturalist in the 1500’s Drought tolerant</p>


Laburnum anagyroides (FABACEAE)

golden-chain tree


E. France to Italy, S. central Europe, Slovenia, Croatia

	Leaves	Flowers	Fruit	Other
	<p>Alternate, Trifoliate Lflts elliptic-obovate, 1-3 in. long Mucronulate tip Under – white pubescent</p>	<p>Infl – Pendulous racemes 8-12 in. long Yellow papilionaceous flowers 5 parted 10 stamens 1 style</p>	<p>Legume, somewhat grayish Toxic</p>	<p>Small tree to 20 ft. All parts are poisonous Somewhat invasive</p>


Aesculus hippocastanum (HIPPOCASTANACEAE) common horsechestnut S.E. Europe

	Leaves	Flowers	Fruit	Other
	<p>Opposite Palmately compound No stipules Very large, long petioles Leaflets sessile Leaflets obovate, serrate</p>	<p>Infl – terminal upright panicles Flws white with yellow centers (yellow changes to pink after pollination)</p>	<p>3-valved capsules, large Has spines Seed inside is shiny Called a conker – used as a source of starch in WWII Can be slightly poisonous Jewelry</p>	<p>Deciduous tree in the Buckeye Family Large winter buds Large leaf scars - horseshoe with nails Lenticels on branches Branches sweep down, then up Squirrels spread the seed Domed crown Whitening/washing properties, seeds contain a soapy juice, ~20 dried and milled seeds/6 litres of soft H2O. Whiten hemp, flax, silk, and wool. Bavarian Tree for Beer Gardens – provides deep shade</p>


Tilia sp. (MALVACEAE) Linden tree or basswood N. America and Eurasia

	Leaves	Flowers	Fruit	Other
	<p>Alternate and simple. Usually oblique (asymmetric) base, usually cordate. Usually toothed or serrate. Tertiary veins ladder-like between secondary veins. Deciduous stipules. Medicinally-can promote sweating to reduce fever</p>	<p>Umbel-like clusters attached to a thin, narrow bract. Sepals 5. Petals 5, green to yellow. Stamens many, grouped in 5 bundles. Stamenoids, petal-like, on some spp. Style one, w/5 lobed stigma. Contains flavonoids – antioxidant used to fight colds, fevers, high blood pressure, and migraines</p>	<p>Globose, nut-like. Stays attached to bract, which is used to launch seed off branch away from mother tree. 1-3 seeds.</p>	<p>Trees to 120 ft. Deciduous Fibrous bark-used as a source of clothing in some cultures Large winter buds Flowers usually fragrant (perfume) Good honey plant Buds and young leaves are edible Acoustic properties for drums and guitars</p>

Nothofagus (NOTHOFAGACEAE) southern beech New Guinea, New Caledonia to Australia, New Zealand, S. America

	Leaves	Flowers	Fruit	Other
	Alternate and simple. Usually small (1/2 - 1 in. long) with a short petiole. Usually has parallel veins and is either shallowly lobed or toothed. Usually two-ranked	Monoecious. Male flowers solitary or in cymes of 3-5. Sepals fused. Petals none. Stamens 8-40 with yellow or red anthers. Female flws short stalked in clusters of 3, in a 2-4 lobed involucre (cluster of bracts). Styles 3. Wind pollinated.	3-4 lobed husk w/ 2-3 seeds Husks are scaly, spiny or soft Seeds are 3 sided	Trees to 120 ft. or shrubs Deciduous or evergreen Deciduous has leaves with undulating margins, Evergreen leaves are small, not undulating. Usually horizontal branching

Viburnum plicatum var. *tomentosum* (ADOXACEAE) double-file viburnum China, Japan

	Leaves	Flowers	Fruit	Other
	Opposite, simple Broad-ovate to oblong ovate (1.5 - 4 in. long) Coarsely serrate Veins 8-12 nearly straight to margins, obvious Densely pubescent	Infl – Cymes Opposite pairs along branches Fls white, inner flowers small, fertile, marginal flowers large and sterile 5-parted	Drupe w/1 compressed stone Red turning to dark bluish	Shrub Branches horizontally spreading Plicata means pleated, tomentosum means hairy


BETULACEAE

	Leaves	Flowers	Fruit	Other
	Alternate Simple ~ doubly serrate margins	Monoecious Male slender long catkins Female upright or pendulous terminal spike ~ no perianth Fl subtended by bracts, 2 or more	Nut, (<i>Corylus</i> sp.) or samara (<i>Alnus, Betula</i>)	Deciduous trees or shrubs Wind pollinated

Alnus rubra (BETULACEAE)

red alder

West Coast of N. America, Idaho

	Leaves	Flowers	Fruit	Other
	Alternate, Simple Broadly elliptic (1½” to 3” wide) Acute base Serrate margins (deep and doubly serrate) Margin rolled under (revolute) at base of leaf Dull green above, rusty colored below	Monoecious Male long pendulous catkin Female short upright catkin	Wooden, cone-like Small (½” to 1” long) Persist on tree over the winter	Deciduous tree to 75 ft. Thin gray smooth bark Often with white patches (lichens) Early successional specie Nitrogen fixer Prolific seed producer “Trash Tree” according to timber companies Bark – produce a russet dye the Native Americans used to color fishing nets to disguise them better; also used to treat poison oak, insect bites, and skin irritations

Betula (BETULACEAE)


birch

	Leaves	Flowers	Fruit	Other
	Alternate and simple. Usually ovate w/ parallel veins. Margin usually serrate. Deciduous stipules.	Monoecious. Male flws in pendulous catkins, 3 per scale Stamens 2-3. Female flws in pendulous catkins, 3 per bract.	Upright or pendulous catkin-like heads. Scale-like bracts are often trident shaped and small, shattering on the tree. Wind dispersed.	Trees to 90 ft. or shrubs. Deciduous. Bark thin, white, pink, or reddish and often peeling.

Betula papyrifera (BETULACEAE)

paper birch


North America

	Leaves	Flowers	Fruit	Other
	<p>Alternate, Simple Serrate Ovate (<i>much larger than B. pendula</i>) Rounded base Deciduous stipules</p>	<p>Males – pendulous catkins w/3 flowers in each scale axil, has perianth Females short, 3 flwd in axils, no perianth</p>	<p>Winged nut Female scale-like bracts 1/8” & t-shaped.</p>	<p>Deciduous tree or shrub Bark grayish white Horizontal lines in bark, will peel in horizontal strips Bark is waterproof (for boats) and flammable (fire starter) Root sprouts, found in groves Native to Washington only north of Everett <i>B. jacquemontii</i> is another paperbark birch that is popular State Tree of New Hampshire</p>

Betula pendula (BETULACEAE)

European birch


Europe, Russia

	Leaves	Flowers	Fruit	Other
	<p>Very ovate-rhombic and narrows greatly to acuminate top Much smaller than B. papyrifera Base ~ cuneate Doubly serrate</p>	<p>Males – pendulous catkins w/3 flowers in each scale axil, has perianth Females short, 3 flwd in axils, no perianth</p>	<p>Winged nut Female scale-like bracts 1/8” & t-shaped.</p>	<p>Bark grayish white with large dark triangles esp. towards the base. National Tree of Finland</p>

Prunus cerasifera (ROSACEAE)

cherry plum


S.E. Europe, S.W. Asia

	Leaves	Flowers	Fruit	Other
	<p>Alternate, Simple Serrate Elliptic (1-2” long) Stipules, but no extra floral nectaries Pubescent under on midrib</p>	<p>Solitary White/pale pink Stamens 25-30 5 parted Flowers very early</p>	<p>Drupe, red to dark purplish-red Good for jams</p>	<p>Tree to 25 ft. Slender branches Leaves purple in var. atropurpurea - most common form Common street tree</p>

Sambucus racemosa (ADOXACEAE)

Red Elderberry


Northern hemisphere

	Leaves	Flowers	Fruit	Other
	<p>Opposite Pinnately compound with a terminal leaflet Leaflets usually large, less than 9-11 (usually 5-7) Leaflets with toothed margins</p>	<p>Small, usually white or cream in either pyramidal or flat-topped inflorescences Sepals, Petals, Stamens 5 Petals widespread and radially symmetric, forming tube at base</p>	<p>Drupe, varying in color from red, purple/black to blue Made into wine or brandy (the drink Sambuca is not made for elderberries) Mildly poisonous when raw</p>	<p>Deciduous shrubs to small trees Branches often covered with lenticels - somewhat warty Often lanky and thicket forming - usually best to cut back every few years to encourage a better form ‘Black Lace’ a recent very popular cultivar with dark finely divided leaves Deep in Wicca and Pagan folklore</p>

Salix (SALICACEAE)

willow

Northern Hemisphere

	Leaves	Flowers	Fruit	Other
	<p>Alternate (rarely opposite) and simple. Lanceolate to ovate and up to 8 in. long. Entire margins. Short petioles (Compare leaf shape – long & narrow in <i>Salix</i>, cordate in <i>Populus</i>)</p>	<p>Dioecious. Upright, catkin-like heads. Male flowers have one scale, usually silky and 2 (rarely up to 12) stamens. Female flowers have a silky scale, one style with 2-4 stigmas. Insect pollinated (rarely wind). (<i>Populus</i> has pendulous catkins that are wind pollinated).</p>	<p>Capsules. Flask-shaped. Seeds have silky hairs to aid in dispersal. Wind dispersed.</p>	<p>Trees to 90 ft. or shrubs. Deciduous. Winter buds with one scale. (<i>Populus</i> has many scales on winter bud) Usually found in wet soils Hybridizes easily - makes identification to species difficult (up to 5 species in Western Washington) Bark contains salicylic acid-precursor to aspirin Roots readily from cuttings, used heavily in erosion control</p>

Cotoneaster (ROSACEAE)


cotoneaster

	Leaves	Flowers	Fruit	Other
	Alternate and usually simple. Sessile or short-petioled. Usually entire margin. Often w/ prominent veins and lower surface of leaf pale.	Solitary or in cymes or corymbs, located terminal on short lateral branchlets. Flowers perfect, radial and white, pink or red. Sepals 2-5, fused at base. Petals 5, equal. Stamens approx. 20 with purple/reddish pollen. Carpels 2-5 fused, styles 2-5. Ovary inferior. Insect pollinated (bees).	Pomes. Red or black. Calyx persistent.	Shrubs to 15 ft, often creeping or ground hugging. Evergreen or deciduous. Many species are invasive

Cotoneaster lacteus (ROSACEAE)

Red Clusterberry/Milkflower


Western China

	Leaves	Flowers	Fruit	Other
	Alternate, Simple Broad-elliptic 1 ¼ - 2 ¼ “ long ¾ - 1 ¼” wide ~Mucronate at apex Upper – dull green Lower-whitish, fuzzy 6-9 prominent vein pairs	Infl – corymbs 2-3” wide Hairy White	Red pome ~ persist through winter	Semi-evergreen shrub Slender arching branches Largest leaves within genus <i>Lacteus</i> –Latin for “milky white” Can be hedged Drought tolerant


Acer saccharum (ACERACEAE)

sugar maple


Central & Eastern N. America

	Leaves	Flowers	Fruit	Other
	Leaves opposite, palmately lobed with 5 deep lobes with acuminate tips and few narrow-pointed teeth on margin. Leaves 3 ½ - 5 ½ in. long and wide. 5 main veins extend from base of leaf. Dark green upper surface of leaf, paler on lower surface with some pubescence on veins.	Dioecious. Flowers in drooping clusters on hairy stalks. Flowers small, yellow-green color, bell-shaped with 5 lobes. 2 carpels w/2 styles.	Fruit a double samara. Hairless and angle is less than 120 degrees (looks like “U” or a horseshoe).	Deciduous tree to 90 ft. (Shade tolerant big tree) Good fall color (red, orange, yellow). Bark develops furrows with age. This is the maple leaf on the Canadian flag and the source of delicious maple syrup. Not pollution tolerant and poor street tree Climate change may affect sap production

Euonymus alatus (CELASTRACEAE) winged spindle-tree/Burning Bush Asia

	Leaves	Flowers	Fruit	Other
	<p>Opposite or sub-opposite Simple Obovate Finely serrate</p>	<p>Infl – Cyme w/ ~3 fls in leaf axil Small (6 mm across), yellowish-green 4 parted 3 carpels w/1 style Stamens alternate w/petals</p>	<p>Seeds covered by reddish aril (fleshy covering).</p>	<p>Shrub 15-20 ft. but there are compact cultivars Branches & branchlets with 2-4 broad corky wings Scarlet fall color Some compact cultivars Invasive in Eastern US Four corky ridges or “wings) on stem Burning Bush – for blazing red fall color</p>

Photinia sp. (ROSACEAE) photinia SE Asia

	Leaves	Flowers	Fruit	Other
	<p>Alternate and typically simple. Lanceolate with a short petiole. Margin usually serrate. Usually bright red new foliage.</p>	<p>Wide corymbs or short panicles with white flowers. Sepals 5, fused at base. Petals 5. Stamens many. Carpels 2-5, styles 2 (rarely 3-5)</p>	<p>Pome. Red. 1-2 soft-shelled seeds in each carpel.</p>	<p>Trees to 45 ft. and shrubs. Deciduous or evergreen. Fast-growing, tolerant of poor conditions, but subject to leaf blights. Common hedge plant</p>