

Common Low Shrubs (40-200cm tall)

Betulaceae

Betula glandulosa

B. nana

Salicaceae

Salix lanata

S. pulchra

S. glauca

Adoxaceae (formerly part of Caprifoliaceae)

Viburnum edule

Eleagnaceae

Shepherdia canadensis

Grossulariaceae

Ribes triste (formerly part of Saxifragaceae)

Myricaceae

Myrica gale

Rosaceae

Dasiphora fruticosa (= *Potentilla fruticosa*, *Pentaphyloides floribunda*)

Rubus idaeus

Rosa acicularis

Spiraea beauverdiana

13 species

Plant identification terminology

Notes for Plant Identification:

1. Be familiar with how to write names for a plant family (no italics, capitalized), genus (italics or underline, capitalized), species (italicized or underlined, no caps.), and subspecies (ssp. followed by subspecies name, no caps, italicized or underlined). For example: Betulaceae, *Alnus viridis* ssp. *fruticosa* or *Alnus viridis* ssp. *fruticosa*.

TERMS (refer to Harris and Harris *Plant Identification Terminology* for definitions:

Lab 1. Trees and tall shrubs (>200 cm tall)

Alternate vs. Opposite venation or branching

Ament or Catkin (as in *Betula* or *Salix*)

Bracts of cones

Capsule or Ovary (as in fruit of *Salix*)

Felty (as in undersides of leaves of *Salix alaxensis*)

Dehiscence (as in capsules of *Salix*)

Dentate leaf margin

Dioecious vs. Monoecious. Know which families and/or species are dioecious or monoecious

Elliptical (as in petiole of *Populus tremuloides*)

Fascicle as in needle arrangement in of Pinaceae

Pendulate (as in some catkins of *Salix* and *Betula*)

Petiole stalk of leaf attachment to stem

Precocious timing of flowering

Reticulate venation (as in *Salix hebbiana* or *S. reticulata*)

Samara winged fruits (as in *Betula* or *Acer*)

Serrate leaf margin

Stipule leaf-like organs at base of true leaves (as in *Salix*)

Villous hairiness (as in hairs on branches of *Salix alaxensis*)

Lab 2. Low shrubs (40-200 cm)

Aggregate fruit as in *Rubus idaeus*

Connate as in the flowers of Caprifoliaceae and *Viburnum*

Corymb inflorescence as in *Spirea beauverdiana* (check out common inflorescence types in Harris and Harris).

Cuneate leaf base (as in *Betula glandulosa* and *Myrica gale*)

Glabrous as in stems of *Salix pulchra*

Inflorescence the complete cluster of flowers including the axis and any bracts at base of the inflorescence

Hip as in fruit of *Rosa acicularis*

Hypanthium cup-shaped base of flowers of Rosaceae consisting of fused corolla, calyx, and stamens)

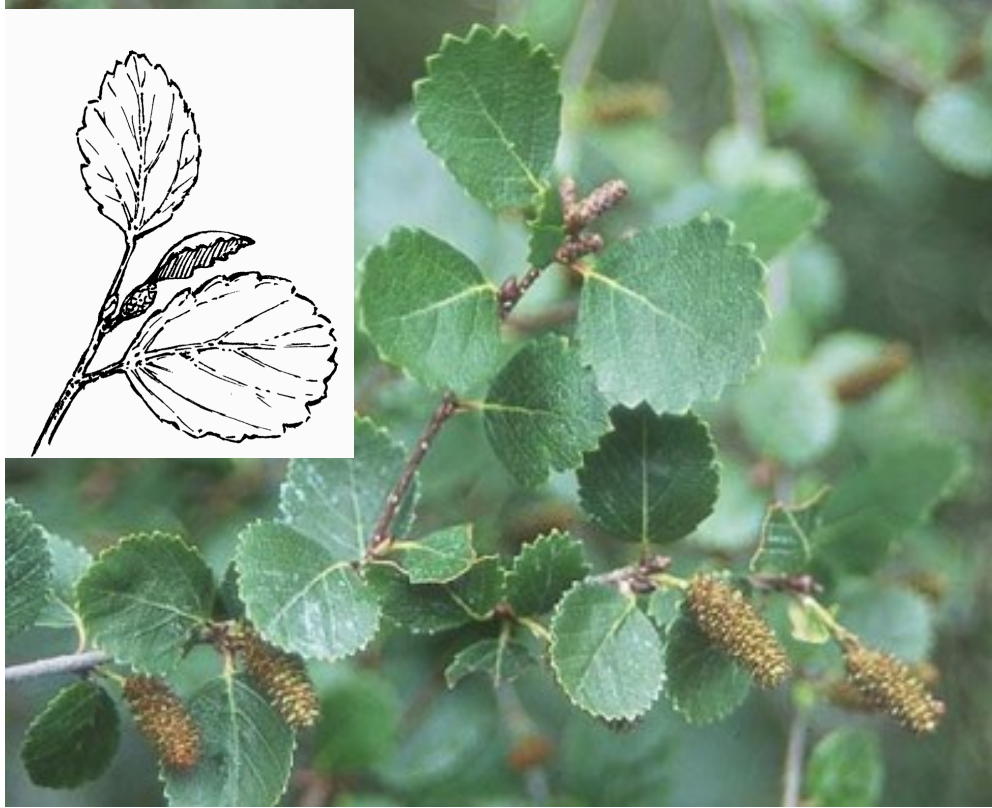
Lanate hairiness as in leaves of *S. glauca*

Oblanceolate leaf shape as in *Myrica gale*

Palmate as in venation of Grossulariaceae and *Ribes*

Pedice stalk-like attachment to the stem of flower, inflorescence, or fruit

- Key terms for each lab posted in Blackboard.



Family: Betulaceae

Common name: Dwarf Birch

Betula glandulosa

- Low shrub
- Cuneate (wedge-shaped) leaf base.
- Taller more robust shrub than *B. nana*



Family: Betulaceae

Common name: Dwarf Birch

Betula nana

- Erect dwarf shrub
- Truncated (flat) leaf base.
- *Betula nana* has generally much smaller leaves than *B. glandulosa*, and is often a dwarf shrub (<40 m tall).



Foto: Anna Lena Anderberg



Foto: Arne Anderberg



<http://www.visualsunlimited.com/browse/vu108/vu108767.html>

Family: Salicaceae

Common name: Richardson willow

Salix lanata

- Leaves are often lanate (covered in wooly hairs), that give the plant a grayish appearance, with persistent, prominent, slender stipules, that give stems rough appearance.
- Flowers early before leaves form, (precocious).
- Young branchlets villous, or pilose (densely hairy).
- Pedicels, ovaries and seed capsules not hairy. (*in S. glauca* they are hairy.)
- Grows on calcareous substrates.
- This is a very important species in the Arctic that is missing in the teaching collection. Check it out in collections of the UA Herbarium using the Arctos resource.



http://www.ofps.ucar.edu/atlas/ivotuk_CD/Images/Copass_photos/pages/willow_tif.htm



<http://www.mun.ca/biology/delta/arcticf/sal/>
www.wlsapu.htm

Family: Salicaceae

Common name: Diamondleaf Willow

Salix pulchra

- Branches brown, or red, glabrous (without hairs), shiny,
- Leaves, diamond-shaped, longer than wide, shiny green.
- Leaf bases cuneate.
- Dead leaves persist for 2 or more years and are apparent in winter plants



Family: Salicaceae

Common name: Glaucous (or Gray-Leaf)
Willow

Salix glauca

- Leaves similar to *S. lanata*, with grayish lanate hairs.
- Branches do not have persistent stipules, so appear smoother than *S. lanata*.
- Flowering is not precoecious (flowers after leaves form).
- Seed capsule hairy.
- Capsules dehisce in late summer.

http://www.em.ca/garden/native/nat_viburnum_edule.html

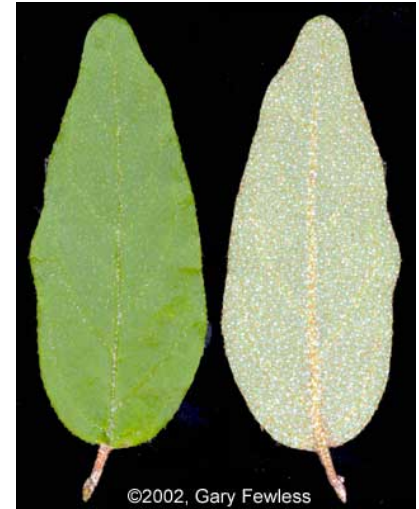


Family: Adoxaceae (previously in Caprifoliaceae)

Common name: Highbush Cranberry

Viburnum edule

- Leaves, opposite, simple, serrate, with 3 lobes, with acuminate tips pointing forward toward apex.
- Inflorescence a compound corymbose cyme in axils of leaves.
- Flowers: Petals, 5, connate (joined in tube) ; Carpels 2-5, connate.
- Fruit, red drupe.
- Heavily browsed by moose in the interior.



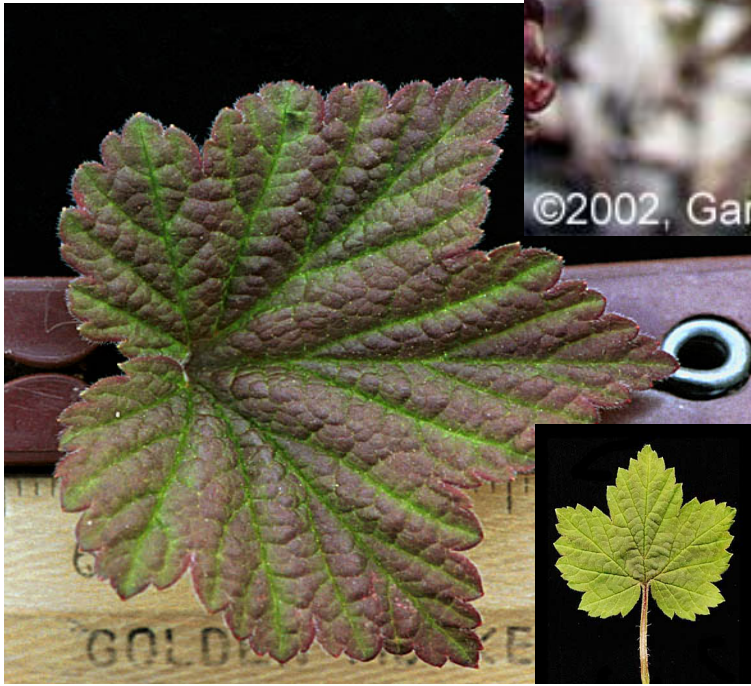
Family: Elaeagnaceae

Common name: Soapberry,

Buffaloberry

Shepherdia canadensis

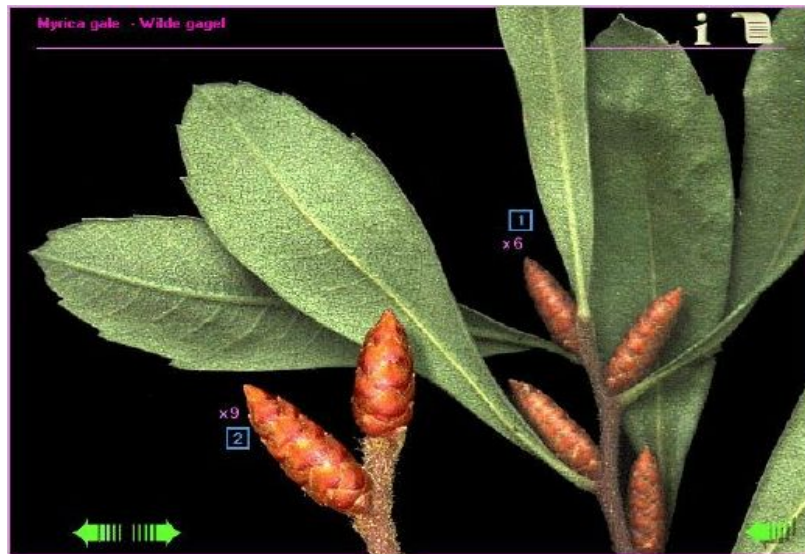
- Low shrub. Plants covered with scurfy or scaly pubescence.
- Leaves simple, firm, alternate or opposite.
- Flowers, small, Sepals fused to form disc-shaped or tubular calyx. N-fixing bacteria in root nodules.
- **Leaves:** opposite, rounded at both ends. Underside of leaves and twigs densely covered with reddish-brown scales and silvery star-shaped hairs.
- **Flowers:** Small, yellow, dioecious, lack petals. In axillary racemes. No petals. Flowers before leaves develop. One of earliest flowering plants in the interior.
- **Fruits:** berrylike, elliptic, red.



Family: Grossulariaceae (Saxifragaceae)
Common name: Northern Red Current

Ribes triste

- **Leaves:** Simple, 3-5 lobed, *palmately* veined, lobes broadly triangular, and coarsely toothed.
- **Twigs:** Smooth when young but becoming shredded and reddish brown (characteristic feature in winter).
- **Inflorescence and Fruits:** In *racemes*, Bright red berries.
- Common in white spruce and paper birch forests on well drained soils.
- This and several other species of *Ribes* are common in Alaska. *R. triste* has the widest distribution and is main current in the interior and north to warm areas of the North Slope. Other common species near Fairbanks include. *R. glandulosum*, *R. bracteosum*, *R. lacustre*. Hulten and Welsh placed *Ribes* in Saxifragaceae.



Family: Myricaceae

Common name: Sweet Gale

Myrica gale

- **Leaves:** Oblanceolate, cuneate, coarse teeth, thinly hairy on both surfaces, with waxy glands.
- **Flowers:** Dioecious, small, inconspicuous, yellowish in spikes. Flowers in early spring.
- **Fruits:** Green or yellow, two-winged nutlet, long, resinous, waxy.
- Common in wet areas in interior Alaska.



Family: Rosaceae

Common name: Shrubby
Cinquefoil

Dasiphora fruticosa (= *Potentilla fruticosa*, *Pentaphylloides floribunda*)

- Much branched deciduous shrub.
- **Leaves:** Alternate, pinnate, with pair of membranous, persistent stipules.
- **Flowers:** 5-merous, 5 sepals, many spirally arranged stamens. Yellow, showy, 2-3 cm. diam., in terminal clusters.
- **Habitat:** Common throughout most of Alaska, except West, and SE. Drier areas in the Arctic. Moist soils in the Interior, borders of streams and lakes, and dry rocky hillsides.



Family: Rosaceae

Common name: Prickly Rose

Rosa acicularis

Growth form: Spiny much branched low shrub (0.3-2.2m) high.

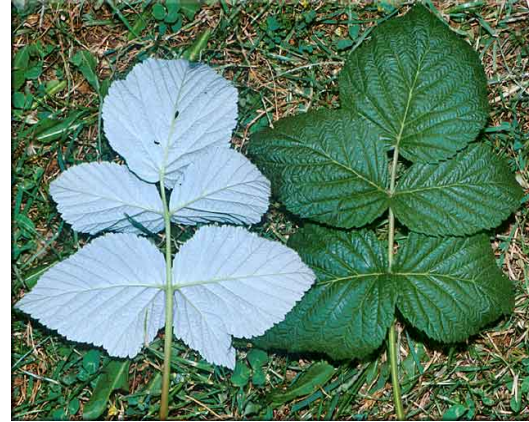
Leaves: Alternate, compound pinnate (5-9 cm long). Mostly 5 (3-9) leaflets, paired except at end, rounded at both ends, edges toothed.

Flowers: Large (4-6 cm diam.), Usually 1, sometimes 2-3 at end of twigs, pink to rose petals.

Fruit: Elliptic or rounded "*hip*", rich in Vitamin C. Food for grouse and other birds.

Habitat: Shaded undergrowth of deciduous and white spruce forest, with aspen on old burns.

Common in interior and most of Alaska. Some warm areas of the Arctic, near Umiat and Sadlerochit Springs.



Family: Rosaceae

Common name: American Red Raspberry

Rubus idaeus

- Deciduous thorny shrub, 0.6-1.2 m tall.
- Common raspberry in the interior.
- **Leaves:** pinnate, 6-18 cm long, with very narrow paired stipules, 3-5 leaflets, ovate, toothed margins, green mostly hairless above, gray-green and hairy beneath.
- **Flowers:** 5 narrow hairy sepals, 5 white petals.
- **Fruit:** aggregate, red raspberry with many hairy drupelets.
- **Habitat:** Common in openings and borders of forests in much of Alaska, and roadside weed. Occurs in most of Alaska except tundra north of Brooks Range. Several other species of *Rubus* are common in southern and SE Alaska.



Family: Rosaceae

Common name: Beauverd Spirea

Spiraea beauverdiana

- Small (30-60 cm) much-branched deciduous shrub.
- **Leaves:** Simple, with short petioles, blades elliptical to ovate 1.5-5 cm long, 1-3 cm wide, rounded at both ends with teeth most conspicuous near the leaf tip.
- **Twigs:** Purplish brown, slender, hairy when young, afterwards shedding outer bark in long thin strips.
- **Flowers:** In flattened clusters (corymbs) 2-4 cm across, Flowers small (about 6 mm) with 5 triangular sepals bent down, 5 white or rose-tinged petals. Many long conspicuous stamens.
- **Fruit:** Usually 5 podlike follicles less than 3 mm long, shiny brown, hairy, with 2 to several seeds. Persistent in winter.
- **Habitat:** Common tundra and black spruce from lowlands to alpine except in SE Alaska and north of Subzone E in the tundra.