

# Wetland Assessment

Gallatin County Extension

# Low Elevation Species

- ▶ Coyote Willow
- ▶ River Birch
- ▶ Dogwood
- ▶ Cattail
- ▶ Beaked Sedge
- ▶ Nebraska Sedge
- ▶ Baltic Rush
- ▶ Reed Canary Grass

Other Indicators: Sulfuric Odor

# Coyote Willow - *Salix exigua*

- ▶ Shrubs to 6 m. Twigs brown, sparsely hairy to glabrous. Leaf blades 3-12 cm long, linear to narrowly lanceolate with denticulate to nearly entire margins; both surfaces green, glabrous to hairy. Female catkins 2-5 cm long, emerging with the leaves on leafy branchlets 8-30 mm long; scales yellow, hairy, deciduous. Capsules 3-8 mm long, hairy or glabrous; stipes 0-2 mm long; style <0.2 mm long ([Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX](#)).



# River Birch - *Betula fontinalis*

- ▶ Water birch leaves are alternate, simple, and nearly oval shaped. Leaves are thin and firm, measure up to 5 inches (13 cm) long and are slightly less wide. Leaves are most broad just below the middle. Usually, leaf margins are sharply double serrate with 2 distinct tooth sizes; leaf tips are blunt to pointed. Water birch flowers occur in catkins with closely overlapping scales. Female catkins are mostly erect, solitary, and 0.6 inch (1.5 cm) long. Male catkins are pendent, occur in clusters of 2 or more, and are about 0.4 to 1.2 inches (1-3 cm) longer than female catkins. Water birch produces single-seeded nutlets in samaras



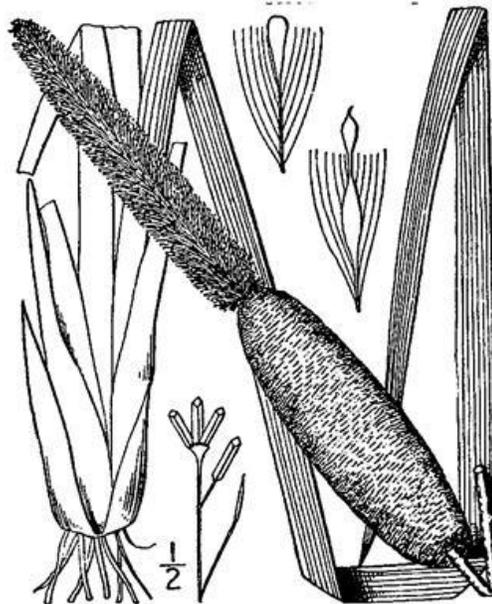
# Dogwood - *Cornus stolonifera*

- ▶ General: Dogwood Family (Cornaceae). Redosier dogwood is a woody deciduous shrub generally 1.4-6 m (4.6-20 ft.) tall. The bark and twigs are reddish to purple and fairly smooth from autumn to late spring; after the leaves have fallen, the deep burgundy branches add color to the winter landscape. The bark, twigs, and leaves are bright green in spring through summer. The simple, opposite leaves are 5- 10 cm (2-4 in) long, dark green above and hairy and lighter-colored below, with smooth margins, rounded bases, pointed tips, and falsely parallel veins. Flowering occurs from June to August. The inflorescence is a cyme, with 2-3 mm (0.08-0.12 in) white to cream-colored flowers. The white berries are smooth on the faces, furrowed on the sides



# Cattail - *Typha latifolia*

- ▶ Stems 1-2 m. Leaves glaucous, 6-18 mm wide. Inflorescence: male spike 7-15 × 1-2 cm; contiguous or separated from the female spike 7-15 × 1-3 cm. Flowers: stigma lanceolate black at the tip; pollen grains shed in tetrads



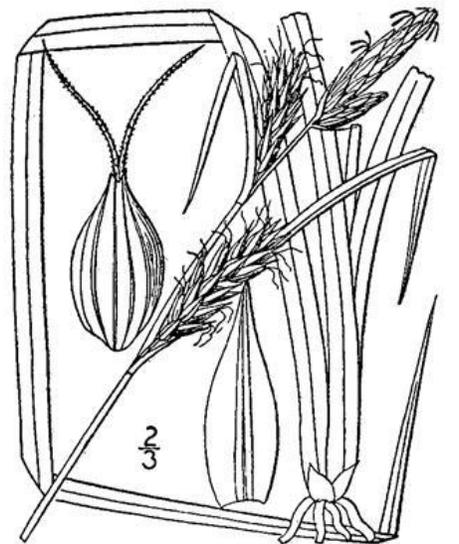
# Beaked Sedge - *Carex utriculata*

► Rhizomatous. Stems erect, 50-100 cm. Leaves basal and cauline; blades 4-10 mm wide, yellowish-green, not inrolled. Inflorescence of 4 to 8 well-separated spikes; the lowest bract greater than the inflorescence. Spikes unisexual; the uppermost 1 to 3 male, linear; the lower female, ascending, 2-10 cm long, sessile to pedunculate, cylindrical. Perigynia perpendicular spreading, green to tan, elliptic, inflated, glabrous, 4-6 mm long; the distinct narrow bidentate beak ca. 1.5 mm long; stigmas 3. Female scales acuminate to awned, brown with hyaline margins and pale midvein, smaller than the perigynia. Achene 3-sided, much smaller than the perigynium.



# Nebraska Sedge - *Carex nebrascensis*

► Rhizomatous. Stems erect, 8-80 cm. Leaves basal and cauline; blades 3-10 mm wide. Inflorescence of 3 to 6 well-separated spikes; the lowest bract equal to or shorter than the inflorescence. Spikes ascending; the uppermost 1 or 2 male; the lower female, 1-5 cm long, pedunculate, cylindric. Perigynia ascending, green to tan, obovate, 5- to 9-veined, glabrous, 2.5-3.5 mm long with a short divided beak. Female scales acuminate, awn-tipped, dark brown with a pale midstripe, longer and narrower than the perigynia. Achene 2-sided, filling the perigynia.



# Baltic Rush - *Juncus balticus*

- ▶ Strongly rhizomatous. Stems erect, terete, 15-90 cm, sometimes tufted. Leaves mainly basal; blades and auricles absent; sheaths light to dark brown. Inflorescence congested to open with sessile to pedicellate flowers; main bract terete, erect, appearing like a continuation of the stem. Flowers with prophylls; tepals brown to purple, 4-5 mm long, acuminate; stamens 6. Capsules 3-4 mm long, rounded to the beak; seeds apiculate.



# Reed Canarygrass - *Phalaris arundinacea*

- ▶ Rhizomatous perennial. Stems mostly 90-200 cm tall, forming dense stands. Leaves: blades 6-18 mm wide, ligules 4-10 mm long. Inflorescences a contracted panicle 8-35 cm long. Spikelets 4-7 mm long. Lemmas with one hairless seed-bearing floret and two lower sterile florets that are each a minute scale covered with long hairs.



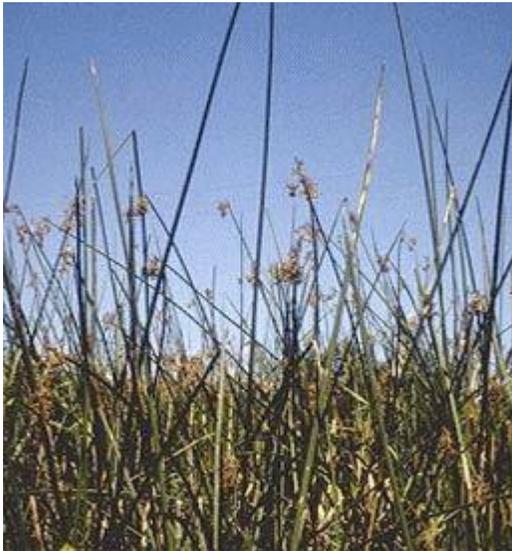
# Western Blue Iris - *Iris missouriensis*

- ▶ Stems 10-50 cm. Leaves basal, 10-40 cm × 3-8 mm wide. Inflorescence of 1 to 3 flowers; spathes inflated, united at the base, sometimes membranous-margined, 4-8 cm long; pedicels 2-5 cm long. Flowers: sepals 4-6 cm long, whitish with a yellow midstripe and blue veins and margins; petals blue, 3-4 cm long; lobes of style branch white, 3-6 mm long. Capsule ellipsoid, 2-4 cm long.



# Bulrush

- ▶ Bulrushes are perennial grass-like plants and can grow to 10 feet tall in shallow water or in moist soils. Soft-stem bulrush can grow to 10 feet and grows in dense colonies from rhizomes. Soft-stem bulrush has a round (in cross section), light gray-green, relatively soft stem that comes to a point with no obvious leaves (only sheaths at the base of the stems). Flowers usually occur just below the tip of the stem.



# Creeping Spikerush - *Eleocharis palustris*

- ▶ Rhizomatous perennial. Stems erect with purple bases, 7-90 cm solitary or few together. Spikelet 5-25 mm long with numerous flowers. Scales brown to purple with a green or tan midrib, 2.5-4 mm long, the lowest 1 or 2 empty, bract-like. Flowers: bristles 4 to 6, exceeding the achene; stigmas 2. Achenes yellow to brown, smooth, obovate, lenticular, 2-3 mm long including the short-stemmed triangular tubercle 0.5-1 mm long.



# Field mint - *Mentha arvensis*

- ▶ Stems ascending or erect, 10-50 cm, mostly simple. Herbage densely to sparsely pubescent. Leaves short-petiolate; blade 2-7 cm long. Inflorescence of verticillasters in leaf axils. Flowers: calyx pubescent, 2-4 mm long, lobes acuminate; corolla purplish, 3-7 mm long, rarely 5-lobed



# Higher Elevation Species

- ▶ Geyer's Willow
- ▶ Drummond's Willow
- ▶ Beaked Sedge
- ▶ Water Sedge
- ▶ Thinleaf Alder
- ▶ Shrubby Cinquefoil
- ▶ Tall Bluebells
- ▶ Brook Saxifrage
- ▶ Arrowleaf Groundsel

Other Indicators: Sulfuric Odors

# Geyer's Willow - *Salix geyeriana*

- ▶ Shrubs to 6 m. Twigs pubescent becoming somewhat glaucous. Leaf blades 2-7 cm long, narrowly lanceolate to elliptic with mostly entire margins, pubescent on both surfaces, glaucous beneath. Female catkins 1-2 cm long, emerging with the leaves on leafy branchlets up to 1 cm long; scales yellow to tan, short-hairy. Capsules hairy, 3-6 mm long; stipes 1-2 mm long; style <0.5 mm long.



# Drummond's Willow - *Salix drummondiana*

- ▶ Shrubs 1-4 m. Twigs usually glaucous, especially around buds. Leaf blades 2-9 cm long, lanceolate to narrowly elliptic with entire, inrolled margins, green above, moderately to densely silver-hairy below. Female catkins emerge before the leaves, 2-7 cm long, sessile; scales black, long-hairy. Capsules hairy, 3-6 mm long; stipes ca. 0.5 mm long; styles 1-2 mm long.



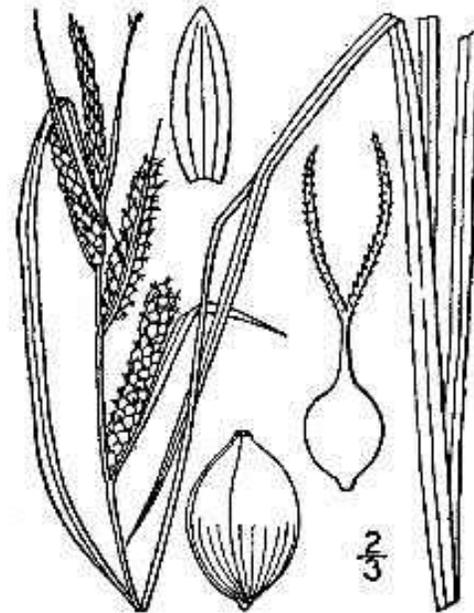
# Beaked Sedge - *Carex utriculata*

► Rhizomatous. Stems erect, 50-100 cm. Leaves basal and cauline; blades 4-10 mm wide, yellowish-green, not inrolled. Inflorescence of 4 to 8 well-separated spikes; the lowest bract greater than the inflorescence. Spikes unisexual; the uppermost 1 to 3 male, linear; the lower female, ascending, 2-10 cm long, subsessile to pedunculate, cylindrical. Perigynia perpendicular spreading, green to tan, elliptic, inflated, glabrous, 4-6 mm long; the distinct narrow bidentate beak ca. 1.5 mm long; stigmas 3. Female scales acuminate to awned, brown with hyaline margins and pale midvein, smaller than the perigynia. Achene 3-sided, much smaller than the perigynium.



# Water Sedge - *Carex aquatilis*

- ▶ Rhizomatous. Stems erect, 30-100 cm, often tufted. Leaves basal and cauline; blades 2-6 mm wide. Inflorescence of 3 to 10 well-separated spikes; the lowest bract greater than the inflorescence. Spikes erect; the uppermost 1 to 3 male, the lower female or androgynous, subsessile to pedunculate below, 12-60 mm long, cylindric. Perigynia ascending, green to tan, obovate, veinless, glabrous, 2-3 mm long with a minute beak. Female scales lanceolate, acute, brown with a pale midstripe, equal to or smaller and narrower than the perigynia. Achene 2-sided, smaller than the perigynium.



# Thinleaf Alder- *Alnus incana*

- ▶ Shrubs to 4 m high with grayish-brown bark. Twigs finely pubescent with blunt or rounded winter buds. Leaf blades 3-8 cm long with doubly serrate margins, paler, pubescent on veins below. Inflorescence borne on twigs of previous season. Female catkins 1-2 cm at maturity. Fruit a nutlet without wing margins.



# Shrubby Cinquefoil - *Potentilla fruticosa*

► Highly branched shrub 10-100 cm high. Stems reddish-brown, villous, becoming glabrous. Leaves petiolate; the blade sparsely hairy, glaucous beneath, with 5 narrowly lanceolate pinnate leaflets 7-20 mm long with entire, inrolled margins; stipules membranous, narrowly ovate. Inflorescence 1- to 5-flowered, terminal cymes or more commonly solitary in leaf axils. Flowers perfect, perigynous; hypanthium cup-shaped, villous; sepals 5, ovate, 4-7 mm long with narrow bracteoles as long as the sepals; petals yellow, 7-12 mm long; stamens 20 to 25; styles numerous. Fruit a long-hairy achene, 1-2 mm long



# Tall Fringed Bluebells - *Mertensia ciliata*

- ▶ Plants with a branched caudex. Stems ascending to erect, 20-90 cm. Herbage mostly glabrous. Leaves basal and cauline; blades lanceolate to ovate, 3-12 cm long; lateral veins obvious. Flowers: calyx 1-3 mm long, divided to the base, lobes rounded at the tip, ciliate; corolla 10-15 mm long; tube with or without hairs inside, 1-1.2 times as long as the limb; filaments inserted at the fornicies, ca. as long as the anthers; style higher than the anthers. Nutlets 2-3 mm long.



# Brook Saxifrage - *Saxifraga odontoloma*

- ▶ Perennial from a horizontal rootstock. Stems solitary, scapose, erect, 10-60 cm, glabrous below, glandular-hairy above. Leaves all basal, long-petiolate; the blade glabrous, usually ciliate, suborbicular, 2-8 cm wide, dentate. Inflorescence glandular, open-paniculate. Flowers: calyx saucer-shaped with lobes 1-2 mm long, often purplish; hypanthium <0.5 mm long; petals white with 2 green or yellow, basal spots, broadly elliptic, 2-3 mm long; ovary superior. Capsule 4-8 mm long.



# Arrow-leaf Groundsel - *Senecio triangularis*

- ▶ Plants from a branched caudex. Stems erect, 10-100 cm. Herbage glabrate. Leaves cauline, short-petiolate, only gradually reduced upward; blades lanceolate to deltoid, truncatae or cordate, 2-15 cm long, serrate. Inflorescence corymbiform with 1 to 30 heads. Heads radiate; involucre 7-10 mm high; phyllaries ca. 13, glabrous. Rays ca. 8; ligules 5-12 mm long. Disk corollas 5-9 mm long. Achenes 3-4 mm long, glabrous.

