



Rangeland Plants:

WYOMING TOUGH



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EXTENSION

Collaborators:

Mae Smith, Ashley Garrelts, Brian Sebade, Windy Kelley,
Scott Schell, Michael Smith, J. Derek Scasta, Rachel Mealor,
Barton Stam

Reviewers:

J. Daniel Rodgers, Jeffrey Beck, Mitchell Stephenson (UNL)

Editors:

Steven Miller, Mae Smith

Photos by:

Diane Fielder, Mae Smith, Scott Schell, J. Derek Scasta,
Kristina Hufford

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Introduction

It takes tough plants to do well in Wyoming's harsh climate and diverse landscape. This guidebook is meant to help the more-than-casual observer of nature identify the most important and common plant species on Wyoming's rangelands. We have included many of the grasses, grass-like, forbs, and woody plants vital to both wildlife and domestic livestock. Unfortunately, some areas of Wyoming's rangeland are dominated by the non-native, invasive cheatgrass, and we have included it and a few other undesirable plant species.

Beside the photos of each of the 75 plants covered, we also included information on preferred habitat, forage value, and the physical, diagnostic characteristics that help distinguish each plant species. Flower and leaf shape, color, and leaf arrangement are the best clue to a plant's identity in many cases. A glossary explains some of the specialized botany terms used to keep the descriptions concise.

There are many excellent resources available if the contents of this book capture your interest and you want to learn more. There were an estimated 5,000 species of vascular plants in the Rocky Mountain region fifty-one years ago. Currently, the University of Wyoming's Rocky Mountain Herbarium has over 700,000 vascular plant specimen distribution records from the Rocky Mountains and western North America. The Wyoming checklist of plants can be downloaded from its website and is 165 pages long! Like the authors of the guidebook, you will probably find that, once you start to learn about the flora and fauna of Wyoming, it becomes a lifelong habit.

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GRASSES



Common Name	Alkali sacaton
Scientific Name	<i>Sporobolus airoides</i>
Origin	Native
Growth Habit	perennial, warm-season bunch grass, 1-3 feet tall
Leaves	flat, tapered, up to 1/4 inches wide, no auricles
ligule	fringes of short hairs
Stems	erect, firm, smooth, shiny
Flower	Open panicle, 8-20 inches long, pyramidal, spikelets are yellow with purplish bases
Seeds	rest singly on branches
Habitat	saline subirrigated sites
Forage Value	good; high productivity and palatable
Interesting Fact	tolerates high levels of salinity





Common Name	Basin wildrye
Scientific Name	<i>Leymus cinereus</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 3-7 feet tall
Leaves	long, flat, 15-25 inches long, with long, pointed auricles
ligule	membranous, collar-shaped, up to 1/4-inch long
Stems	erect, can be smooth or have very short hairs, especially at nodes
Flower	spike, numerous, 6-10 inches long
Seeds	two to four spikelets at each node, containing 3-6 florets
Habitat	deep soils usually with elevated soil water
Forage Value	good; high productivity and palatable in winter and spring
Interesting Fact	although a bunch grass, some plants contain short rhizomes





Common Name	Blue grama
Scientific Name	<i>Bouteloua gracilis</i>
Origin	Native
Growth Habit	perennial, warm-season, bunch grass, mat forming, 6-24 inches tall
Leaves	narrow, 3-6 inches long, auricle absent
Ligule	fringe of very short hairs
Stems	slender, often with many joints, smooth
Flower	one-sided spike on short stalk, up to 2 inches long, curved and comb-shaped at maturity
Seeds	numerous spikelets, arranged in two rows on one side of the rachis, awns
Habitat	sandy and loamy soils of eastern Wyoming plains
Forage Value	good; generally less productive than other warm-season grasses, but palatable and tolerant of grazing, drought, and trampling; increases under heavy grazing
Interesting Fact	Colorado State Grass





Common Name	Bluebunch wheatgrass
Scientific Name	<i>Pseudoroegneria spicata</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, up to 3 feet tall
Leaves	flat to rolled, 1/4-1/2 inches wide, and green to blue in color; auricles are pointed and semi clasping
Ligule	short, collar-shaped, membranous
Stems	erect, slender, sometimes wiry with a wavy rachis
Flower	spike, slender, up to 6 inches long, has awns
Seeds	awns at right angle to rachis, four to six florets per spikelet
Habitat	loamy soil, hills and slopes
Forage Value	good; high productivity and palatable in spring; decreases under heavy grazing
Interesting Fact	often used for reclamation in areas receiving 10 to 20 inches of precipitation





Common Name	Bottlebrush squirreltail
Scientific Name	<i>Elymus elymoides</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 6-12 inches tall
Leaves	flat to rolled, up to 1/4 inches wide, auricles variable and often absent
Ligule	short, membranous, collar-shaped
Stems	erect to spreading, stiff, can be smooth or have very short hairs
Flower	dense, bristly spike with many spreading awns; 1-3 inches
Seeds	two spikelets per rachis node containing up to three florets
Habitat	wide variety of soils, mostly with sagebrush and saltbushes
Forage Value	good; palatable but rarely abundant enough to provide large amounts
Interesting Fact	dried seedheads have a tendency to crawl up the inside of pant legs when walking through a patch of the grass





Common Name	Cheatgrass (Downy brome)
Scientific Name	<i>Bromus tectorum</i>
Origin	Introduced
Growth Habit	annual, cool-season, small bunch grass, up to 12 inches tall
Leaves	long, flat, up to 8 inches long, less than 1/8 inch wide, auricles absent
Ligule	membranous, rounded to collar-shaped, with long, pointed teeth
Stems	erect or leaning on the ground at the base, weak, covered in soft hairs
Flower	open, drooping, much branched panicle
Seeds	spikelets contain 5-8 florets, hairy, 5/8 inch or longer awns
Habitat	wide geographic and habitat distribution over a variety of non-saline soils; frequently disturbed
Forage Value	good only in early spring when green, prior to seedhead development, or late fall after seeds have fallen
Interesting Fact	purplish color when mature; mature seeds stick to clothing and animal fur





Common Name	Crested wheatgrass
Scientific Name	<i>Agropyron cristatum</i>
Origin	Introduced
Growth Habit	perennial, cool-season, bunch grass, up to 24 inches tall
Leaves	flat, smooth below, slightly coarse above, up to 1/4-inch wide; auricles short, pointed, and clasping
Ligule	short and membranous
Stems	erect to ascending, smooth
Flower	dense spikelet with a flattened head, 1-3 inches long, tapering toward the tip
Seeds	numerous spikelets, overlapping; four to eight florets per spikelet; short awns
Habitat	wide geographic and habitat distribution
Forage Value	good only in early spring and fall, high productivity
Interesting Fact	easily established and long-lived; common in highway rights-of-way





Common Name	Common timothy
Scientific Name	<i>Phleum pratense</i>
Origin	Introduced
Growth Habit	perennial, cool-season, bunch grass, 1-1/2 to 5 feet tall
Leaves	tapered, 1/4- to 1-inch long, auricles absent
Ligule	up to 1/8-inch long, membranous, rounded or bluntly pointed, with a finely toothed margin
Stems	erect, with a bulbous base, smooth
Flower	dense, cylindrical, symmetrical spike-like panicle; 2-5 inches long
Seeds	spikelet appearing to have two points, each containing a single floret
Habitat	montane to low elevations where soil moisture is plentiful
Forage Value	good, high productivity and palatable
Interesting Fact	aggressive plant that can replace native species





Common Name	Foxtail barley
Scientific Name	<i>Hordeum jubatum</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 12-24 inches tall
Leaves	flat, raised veins on upper surface, slender, 2-5 inches long, auricles absent
Ligule	short, membranous, collar-shaped
Stems	erect, slender, dark nodes, smooth or covered in soft hairs
Flower	nodding, bristly spike, up to 4 inches long
Seeds	three spikelets per rachis node, awns, up to 2 inches long, very rough
Habitat	riparian zone or irrigated meadows
Forage Value	good before flowering and poor to fair after flowering; generally undesirable in large amounts
Interesting Fact	awns can cause damage to cattle mouth and work into skin of sheep when caught in wool





Common Name	Green needlegrass
Scientific Name	<i>Nassella viridula</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, up to 4 feet tall
Leaves	rolled, threadlike, 4-12 inches long, smooth with prominent veins
Ligule	ring of hairs
Stems	erect, nodes covered in short, fine hairs
Flower	erect narrow panicle, 4-10 inches long
Seeds	twice bent awns about 1-inch long
Habitat	basins and plains, loamy-clayey soils
Forage Value	good, high productivity and palatable; intolerant of heavy grazing
Interesting Fact	fibrous roots may reach 10 feet deep in favorable conditions





Common Name	Idaho fescue
Scientific Name	<i>Festuca idahoensis</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 1-3 feet tall
Leaves	narrow, rolled, 2-10 inches long, blueish-green in color
Ligule	less than 1/16-inch long, collar-shaped, fringed
Stems	erect, smooth, waxy
Flower	panicle, erect and narrow, 4-7 inches long
Seeds	spikelets small, flattened, 1/4-inch long, contain four to seven florets, awns
Habitat	foothills and montane meadows with above 12 inches precipitation
Forage Value	good; important forage, especially in montane areas
Interesting Fact	characteristic grass of the Palouse prairie; Idaho State Grass





Common Name	Indian ricegrass
Scientific Name	<i>Achnatherum hymenoides</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 12-24 inches tall
Leaves	tightly rolled, up to 10 inches in length, auricles absent
Ligule	membranous, pointed, sometimes split
Stems	stiffly erect, slender, smooth
Flower	loose panicle with hair-like branches spread at distinctly wide angles
Seeds	floret with single plump fruit, awn two to three times as long as fruit
Habitat	wide spread on a variety of soils below 14 inches of precipitation
Forage Value	good; generally palatable and productive
Interesting Fact	seeds were a food staple for Native Americans, hence the name 'Indian ricegrass'; Nevada State Grass





Common Name	Inland saltgrass
Scientific Name	<i>Distichlis spicata</i>
Origin	Native
Growth Habit	perennial, warm-season, rhizomatous, 6-18 inches tall
Leaves	flat at the base, rolled toward the middle, less than 4 inches long, may be covered in salt crystals, auricles absent
Ligule	fringe of short hairs
Stems	short, numerous internodes, smooth, laying on the ground at the base to erect
Flower	dense panicle, yellowish at maturity, males larger than females and found on different plants
Seeds	spikelets flattened, no awns, eight to 15 florets per spikelet
Habitat	saline subirrigated soils commonly with <i>Alkali sacaton</i> ; more common on drier saline locations
Forage Value	good; moderate productivity; palatable
Interesting Fact	primary source of hay for early colonists along Atlantic Coast





Common Name	Kentucky bluegrass
Scientific Name	<i>Poa pratensis</i>
Origin	Introduced
Growth Habit	perennial, cool-season, rhizomatous, 1-3 feet tall
Leaves	boat-shaped tip, smooth, less than 1/4 inches in width
Ligule	short, membranous, collar-shaped
Stems	erect, slender, wiry, somewhat flattened
Flower	pyramidal-shaped, open panicle; lower branches in whorls of three to five; 2-8 inches long
Seeds	spikelets compressed with webs at base of lemma; three to five florets per spikelet
Habitat	riparian or montane moist meadows and aspen groves
Forage Value	good; palatable, high nutritional value, modest productivity; tolerates heavy grazing
Interesting Fact	although generally categorized as introduced, there is some discussion and evidence of native sub-species





Common Name	King spikefescue
Scientific Name	<i>Leucopoa kingii</i>
Origin	Native
Growth Habit	perennial, cool-season, rhizomatous, 1-1/2 to 2-1/2 feet tall
Leaves	coarsely veined, less than 1/4 inches in width
Ligule	short, squared-off, with an uneven and hairy margin
Stems	erect, smooth
Flower	panicle, 3-9 inches long, erect or spreading branches that produce spikelets, male and female spikelets found on different plants
Seeds	spikelets flattened, male spikelets larger than female, three to four florets per spikelet, glumes uneven
Habitat	foothills and montane open areas
Forage Value	good; highly palatable, productive
Interesting Fact	regenerates after fire due to dense plant structure and rhizomes





Common Name	Mountain brome
Scientific Name	<i>Bromus carinatus</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 1-3 feet tall
Leaves	flat and broad; up to 1/2 inches wide; mostly soft hairy, especially around the sheath, but can be hairless
Ligule	membranous, 1/8-inch long, rounded
Stems	erect, can be smooth or have soft hairs
Flower	erect panicle, 4-8 inches long, branches spreading
Seeds	spikelets highly flattened, contains five to nine florets, lemmas hairy, 1/4-inch awn arises between the divided lemma
Habitat	foothills to subalpine mountains in meadows and forest margins; precipitation greater than 16 inches; moderately to deep soils and where snow tends to accumulate
Forage Value	highly palatable in the spring providing good forage for wildlife and livestock; seeds are readily eaten by small mammals and birds; fairly sensitive to grazing
Interesting Fact	winter hardy, good shade tolerance, and fair tolerance to fire





Common Name	Mutton bluegrass
Scientific Name	<i>Poa fendleriana</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 6-24 inches tall
Leaves	boat tipped, stiff, narrow, less than 1/4 inches in width
Ligule	present but very short
Stems	erect to leaning on the ground at the base, hairless, rough to the touch under the seed head
Flower	male and female spikelets found on different plants; narrow, dense panicle, 1-4 inches long, two to three branches at a node
Seeds	spikelets compressed, glumes short, no awns, contain 5-7 florets
Habitat	foothills, plains with more than 10 inches of precipitation
Forage Value	good; palatable, modest productivity; can withstand heavy grazing
Interesting Fact	as the name indicates, good-quality sheep feed





Common Name	Needle-and-thread
Scientific Name	<i>Hesperostipa comata</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 1-4 feet tall
Leaves	narrow, rolled, 3-12 inches long
Ligule	conspicuous, 1/8-inch long and notched
Stems	erect, smooth, with very short hairs at the nodes
Flower	narrow to open panicle, 5-10 inches long that is loosely spreading
Seeds	panicle, one floret per spikelet, awn on lemma is tightly twisted and covered with fine soft hair; the awn tip is rough and usually straight; awns are 4-5 inches long
Habitat	basins and foothills on well drained and especially sandy soils
Forage Value	good; high productivity and especially palatable in early spring and late fall; cures well on the stem and provides good forage in fall and winter
Interesting Fact	seeds can damage wool and skin of sheep





Common Name	Orchardgrass
Scientific Name	<i>Dactylis glomerata</i>
Origin	Introduced
Growth Habit	perennial, cool-season, bunch grass, 1-4 feet tall
Leaves	v-shaped near the base, tapering, prominent midrib on the lower surface, less than 12 inches long
Ligule	1/8- to 1/4-inch long, membranous, collar-shaped, with split margins
Stems	erect, smooth
Flower	panicle, 2-8 inches long, spikelets crowded in one-sided clusters at the end of naked panicle branches
Seeds	spikelets small, flattened, two to five florets, short awns
Habitat	irrigated pasture and moist montane areas
Forage Value	very palatable, high productivity and good hay
Interesting Fact	avored by elk





Common Name	Prairie junegrass
Scientific Name	<i>Koeleria macrantha</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 6-24 inches tall
Leaves	narrow, flat or rolled, with slightly rough edges, coarsely veined, up to 7 inches long
Ligule	very short, membranous, collar-shaped, finely toothed margin
Stems	erect, fine hairs on branches and main stem at the base of the seed head and near the nodes
Flower	dense, narrow, spike like panicle that spreads during anthesis, 1-5 inches long
Seeds	spikelets two to four flowered separating above the glumes
Habitat	foothills and plains across Wyoming
Forage Value	good; palatable but low productivity; grazing resistant; early greenup
Interesting Fact	widespread across much of North America and Eurasia





Common Name	Prairie sandreed
Scientific Name	<i>Calamovilfa longifolia</i>
Origin	Native
Growth Habit	perennial, warm-season, rhizomatous, 3-6 feet tall
Leaves	rigid, flat to rolled, tapered, hairless, 12 inches long or more
Ligule	fringe of hairs
Stems	erect, solitary, smooth
Flower	panicle open, relatively narrow, 7-15 inches long
Seeds	spikelets one-flowered, no awns; first glume shorter than second glume
Habitat	sandy plains and dunes, eastern Wyoming, and northern plains
Forage Value	high productivity; coarse and relatively unpalatable in summer; seeds used for songbirds and small rodents
Interesting Fact	has a coarse, scaly rhizome





Common Name	Red threeawn
Scientific Name	<i>Aristida purpurea</i>
Origin	Native
Growth Habit	short-lived perennial, warm-season, bunch grass, 6-24 inches tall
Leaves	very narrow, rolled, 1-10 inches long
Ligule	membranous, ring of hairs at the base
Stems	smooth, hairless, arising densely from the base
Flower	narrow panicle, 2-8 inches long
Seeds	spikelets reddish to purple-colored; floret has a twisted awn column, which divides into three awns, $\frac{3}{4}$ - 4 inches long
Habitat	old fields and prairie dog towns; warm, dry sites
Forage Value	unpalatable, the only thing prairie dogs will not eat
Interesting Fact	has a tendency to form monocultures due to low palatability and highly competitive nature





Common Name	Redtop
Scientific Name	<i>Agrostis stolonifera</i>
Origin	Introduced
Growth Habit	perennial, cool-season, rhizomatous, 3-5 feet tall
Leaves	tapered, blue-gray color, up to 16 inches long
Ligule	pointed, up to 1/5 inches long
Stems	erect, stiff
Flower	panicle pyramidal, oblong 2-10 inches, whorled at base
Seeds	glumes as long or longer than all florets, one floret per spikelet
Habitat	moist riparian and irrigated areas
Forage Value	palatable; moderate productivity; grazing resistant, replaced by taller grasses under better management
Interesting Fact	common in old unimproved hay fields





Common Name	Sandberg bluegrass
Scientific Name	<i>Poa secunda</i>
Origin	Native
Growth Habit	perennial, cool-season, short bunch grass, up to 18 inches tall
Leaves	smooth, boat tipped
Ligule	prominent, membranous
Stems	erect, wiry, smooth, nodes occasionally reddish
Flower	narrow panicle, up to 8 inches long
Seeds	hairless spikelet, two to five florets per spikelet, glumes widest at or above middle
Habitat	widespread in moist to dry sites
Forage Value	several varieties of varying productivity, palatable, early greenup and maturing, increases with heavy grazing
Interesting Fact	many species of <i>Poa</i> were recently combined under <i>Poa secunda</i>





Common Name	Sand dropseed
Scientific Name	<i>Sporobolus cryptandrus</i>
Origin	Native
Growth Habit	perennial, warm-season, bunch grass, 2-3 feet tall
Leaves	smooth, flat, 1/8 inches wide, tapered, rolling inward as plant matures
Ligule	hairy with ring of hair at collar
Stems	erect, flattened to furrowed on one side, smooth
Flower	open, densely flowered, panicle usually partly within the sheath, whorled branches, seeds small and shatter easily
Seeds	spikelet less than 1/8 inch, lead-colored, glumes unequal
Habitat	dry sandy soils in lower elevation areas
Forage Value	palatable but usually low abundance
Interesting Fact	generally only common in warmer areas of Wyoming





Common Name	Slender wheatgrass
Scientific Name	<i>Elymus trachycaulus</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 1-5 feet tall
Leaves	flat, narrow, stiff, auricles short or lacking
Ligule	short, collar-shaped
Stems	smooth, reddish to purplish tinge at the base
Flower	spike inflorescence, 4-12 inches long
Seeds	spikelets solitary at each node, three to seven florets per spikelet, spikelets overlap along the inflorescence, glumes awned
Habitat	moist areas of basin to montane areas
Forage Value	palatable and productive
Interesting Fact	short-lived perennial with high seed production; awns longer in montane habitats





Common Name	Smooth brome
Scientific Name	<i>Bromus inermis</i>
Origin	Introduced
Growth Habit	perennial, cool-season, rhizomatous, 1-4 feet tall
Leaves	flat, smooth, up to 1/2-inch wide, marked with a wrinkle resembling a "W"
Ligule	long, rounded, membranous
Stems	erect, smooth, nodes have soft hairs
Flower	semi compact panicle, up to 5 inches long, develops a rich purplish-brown color when mature
Seeds	spikelets are rounded, no awns, 1/3-inch long, smooth
Habitat	riparian zones, irrigated meadows, and borrow ditches
Forage Value	excellent forage for large animals; high productivity
Interesting Fact	may become weedy or invasive in some areas if not properly managed and is difficult to remove





Common Name	Thickspike wheatgrass
Scientific Name	<i>Elymus lanceolatus</i>
Origin	Native
Growth Habit	perennial, cool-season, rhizomatous, 1-3 feet tall
Leaves	flat or rolled, coarsely veined, green to blue-green in color, well developed auricles
Ligule	short, collar-shaped, membranous
Stems	erect, smooth
Flower	erect spike inflorescence, 2-8 inches long,
Seeds	spikelets are solitary at each node, three to twelve florets per spikelet, and closely overlap, awns
Habitat	commonly found on foothills and basins, is adapted to a wide range of sites
Forage Value	good forage for livestock and wildlife with a high protein value in the spring; moderate productivity
Interesting Fact	often confused with western wheatgrass; commercial cultivars are weakly rhizomatous





Common Name	Tufted hairgrass
Scientific Name	<i>Deschampsia cespitosa</i>
Origin	Native
Growth Habit	perennial, cool-season, bunch grass, 2-5 feet tall
Leaves	firm, flat, or rolled, mostly basal in a dense tuft, 4-20 inches long, upper surface is rough, lower surface is smooth
Ligule	long, narrow, tapering to a point
Stems	erect, smooth
Flower	upright to nodding panicle, loosely branched, open, 4-8 inches long, appears shiny
Seeds	two florets per spikelet
Habitat	common in riparian zones from basins to alpine; an aggressive riparian zone grass that eventually replaces tall sedges as sediment builds banks or ponds fill in
Forage Value	high productivity; good forage for cattle and sheep particularly at higher elevations; is sometimes cut for hay
Interesting Fact	one of the most widely distributed grasses on earth - found in many arctic and temperate regions; occurs from sea level to 14,000 feet





Common Name	Western wheatgrass
Scientific Name	<i>Pascopyrum smithii</i>
Origin	Native
Growth Habit	perennial, cool-season, strongly rhizomatous, up to 3 feet tall
Leaves	flat, coarsely veined, blue-green in color, auricles are purplish and clasp the stem
Ligule	very short, membranous, collar-shaped
Stems	smooth, arising singly or in clusters
Flower	erect, stiff, spike inflorescence, 2-6 inches long
Seeds	at least two florets per spikelet, awns, glumes widest at base
Habitat	found in basins with deep, silt, and clay-textured soils;
Forage Value	good forage for livestock and wildlife; moderate productivity
Interesting Fact	Wyoming's State Grass





GRASS-LIKES





Common Name	Arrowgrass
Scientific Name	<i>Triglochin maritima</i>
Origin	Native
Growth Habit	rhizomatous perennial, 8-30 inches tall
Leaves	simple linear, 2-8 inches long, narrow and flattened.
Ligule	slightly bilobed ligules present at sheathing base
Stems	upright and closely tufted
Flower	inconspicuous on spike, blooms June-August
Seeds	cylindrical, up to 1/4-inch long
Habitat	wet areas
Forage Value	poisonous, contains hydrocyanic acid
Interesting Fact	remains poisonous in hay





Common Name	Baltic rush
Scientific Name	<i>Juncus arcticus</i> , ssp. <i>littoralis</i>
Origin	Native
Growth Habit	perennial, cool-season, rhizomatous, wire-like, up to 3 feet tall
Leaves	bladeless
Stems	clustered at the base, $\frac{3}{4}$ -6 inches long, multi-colored from red to light-dark to brown, bladeless
Flower	small, dark brown, clustered panicle, found on the side of the stem, 10 to 50 flowers per panicle
Seeds	capsule, brownish red, and the size of a ground pepper
Habitat	found at low-to-mid elevations along streams, in moist meadows, around springs, and other riparian areas
Forage Value	poor to fair forage for grazing animals
Interesting Fact	Blackfoot Indians used the roots for making a brown dye, and other tribes used its stems to make baskets and mats





Common Name	Nebraska sedge
Scientific Name	<i>Carex nebrascensis</i>
Origin	Native
Growth Habit	perennial, cool-season, rhizomatous, up to 3 feet tall
Leaves	flat, linear, can be longer than the stem, alternate, 1/2 inches wide, green to blue-green color
Stems	erect, triangular
Flower	borne in spikes, male and female spikes are usually separate but found on the same plant; one or two male spikes above the female spikes; narrowly cylindrical and up to 2 inches long
Seeds	fruits are brown, lens-shaped, less than 1/4-inch long. Seed ripens in August to September, surrounded by a leathery capsule
Habitat	wetlands from low valleys to mid-elevations; adapted to a broad range of soil textures
Forage Value	poor to fair for sheep, fair to good for cattle and wildlife - valuable late season forage and makes good hay
Interesting Fact	some Native Americans ate raw stem bases as a famine food





Common Name	Threadleaf sedge
Scientific Name	<i>Carex filifolia</i>
Origin	Native
Growth Habit	perennial, cool-season, rhizomatous
Leaves	stiff, narrow, rolled very tightly, 1-8 inches long
Stems	slender, stiff, triangular, wiry, often curved, 2-15 inches tall
Flower	inflorescence is up to 1.5 inches long and has flowers coated with reddish scales
Seeds	surrounded by a hairy leathery capsule
Habitat	found on dry, well-drained sites; usually sandy
Forage Value	good to excellent; especially valuable as an early spring forage; maintains high palatability throughout the growing season
Interesting Fact	typically reproduces vegetatively via tillers but does produce some viable seeds; also known as Blackroot





FORBS





Common Name	Arrowleaf balsamroot
Scientific Name	<i>Balsamorhiza sagittata</i>
Origin	Native
Growth Habit	tap rooted perennial, 1-2 feet tall
Leaves	arrowhead shaped; basal; with stalk; 2-17 inches long; silvery white to green
Stems	arise from a large basal cluster of leaves, wooly
Flower	one per stem; yellow; long petals surround a disk that is 1 inch in diameter; blooms May-August
Seeds	oblong, less than 1/4 inch
Family	Sunflower
Habitat	open hillsides and prairies at mid- to upper elevations; commonly associated with sagebrush
Forage Value	good for sheep and big game; fair for cattle
Interesting Fact	most plant parts were eaten by Native Americans; the root has been used as a coffee substitute





Common Name	Cinquefoil
Scientific Name	<i>Potentilla gracilis</i>
Origin	Native
Growth Habit	perennial from a branched, woody crown, up to 24 inches tall
Leaves	mostly basal with distinctive five to seven toothed leaflets with a dense wooly underside
Stems	clustered and branched
Flower	dime-sized, bright yellow, five heart-shaped petals, rose-like; blooms June-July
Seeds	light-brown, naked seed
Family	Rose
Habitat	moist soil in meadows, open woodland and valleys
Forage Value	low forage value, used as an indicator of poor range condition
Interesting Fact	used in herbal medicine as an astringent





Common Name	Deathcamas
Scientific Name	<i>Zigadenus venenosus</i>
Origin	Native
Growth Habit	upright perennial, oval bulbs below soil covered in blackish scales, up to 28 inches tall
Leaves	long, basal, V-creased, grass-like appearance
Stems	single, erect, unbranched, sparingly leafed, up to 28 inches tall
Flower	white to yellowish in color, single cluster with a panicle-like appearance, has orange stamens, blooms April-June
Seeds	Rough brown seeds are formed in a three-celled capsule; very poisonous
Family	Lily
Habitat	meadows, dry sagebrush hillsides
Forage Value	toxic, sheep most commonly poisoned; often eaten by livestock during spring green up
Interesting Fact	pastures containing deathcamas can be sprayed in early spring and grazed after late spring when more forages are available





Common Name	Hairy goldenaster
Scientific Name	<i>Heterotheca villosa</i>
Origin	Native
Growth Habit	spreading taprooted perennial, 6-18 inches tall
Leaves	leaves alternate, hairy
Stems	leaning or resting on the ground, woody at the base
Flower	one flower per stem, disk-shaped, yellow, 1 to 1-1/2 inches across, with 10-35 petals per flower, blooms July-August
Seeds	small brown seeds with pointed tip, hairy, flattened
Family	Sunflower
Habitat	dry plains
Forage Value	low
Interesting Fact	"Heterotheca" is from the Greek work "hetero" meaning different and "theke" meaning ovary, which refers to the unlike seeds of the ray and disk florets





Common Name	Halogeton
Scientific Name	<i>Halogeton glomeratus</i>
Origin	Introduced
Growth Habit	upright annual; up to 12 inches tall
Leaves	fleshy with an awn like tip
Stems	usually red, turning yellow to white with maturity
Flower	inconspicuous; five segments, blooms July-September
Seeds	small black or brown
Family	Goosefoot
Habitat	mostly disturbed areas, typically with some salinity
Forage Value	poisonous with oxalates
Interesting Fact	has two types of seed; the black seed germinates quickly, and the brown seed has delayed germination





Common Name	Hawksbeard
Scientific Name	<i>Crepis acuminata</i>
Origin	Native
Growth Habit	upright tap-rooted, perennial; 8-28 inches tall
Leaves	mostly basal, pinnately lobed, edges have teeth, 4-16 inches long
Stems	single, upright, wooly, milky sap
Flower	flattish or round-topped cluster of 20-100 or more narrow flower heads, yellow to white rays, 1/2 to 1-inch wide, blooms May-August
Seeds	yellow or brown with hairs at the tip
Family	Sunflower
Habitat	upland foothill and mountain
Forage Value	good
Interesting Fact	can be an important food source for young sage grouse





Common Name	Indian paintbrush
Scientific Name	<i>Castilleja</i> (~25 species in region)
Origin	Native
Growth Habit	annual or perennial from a woody crown; 1-3 feet tall
Leaves	narrow and grasslike, alternating along stem
Stems	single, non-branching
Flower	tubular, yellow-green actual flower surrounded by bracts and upper leaves that are often bright-red but can be orange, pink, yellow, or white; blooms June-September depending on elevation
Seeds	very small, inconspicuous
Family	Figwort
Habitat	various species can be found from lowlands to over 10,000 feet
Forage Value	low
Interesting Fact	paintbrush plants are hemiparasitic, using their roots to take nutrients from other plants; they form a special association with sagebrush





Common Name	Larkspur
Scientific Name	<i>Delphinium</i> (bicolor, geyeri, occidentale)
Origin	Native
Growth Habit	taprooted perennial; 4 inches to 6 feet tall depending on species
Leaves	alternate, simple leaves, palmately to linear divisions, petioles longer near base
Stems	erect, hollow
Flower	blue or purple (rarely white or pink), upper sepal has a spur, flowers on a stalk (raceme), blooms July-August
Seeds	short, oblong, dry fruit that opens on one side to release its many seeds, which are highly poisonous
Family	Buttercup
Habitat	sagebrush lowlands to meadows in forested mountains
Forage Value	low larkspurs poisonous to cattle especially in spring, contains alkaloids; tall, montane larkspurs more commonly poison cattle in mid summer- bud through flower stage
Interesting Fact	often used in ornamental landscapes; some American Indian tribes used crushed foliage of certain larkspurs as a miticide and insecticide





Common Name	Locoweed/ Milkvetch
Scientific Name	<i>Oxytropis</i> spp. / <i>Astragalus</i> spp.
Origin	Native
Growth Habit	perennial, with a thick, woody, root-stock, 3-18 inches tall
Leaves	leaves pinnately compound, can be covered with white hairs
Stems	some species have leafless stems, and others are leafy
Flower	multiple flowers per stem ranging from white to pink to purple. <i>Astragalus</i> : keel of petal rounded; <i>Oxytropis</i> : keel of petal beaked; blooms May-July
Seeds	legume, multiple seeds per pod
Family	Pea
Habitat	dry uplands, hillsides, and prairies
Forage Value	many poisonous species
Interesting Fact	some animals (especially horses) may become addicted and refuse to eat better forage; alkaloids cause brain lesions in horses (loco), while selenium can be an acute poison or damage hooves if chronic exposure





Common Name	Lupine
Scientific Name	<i>Lupinus</i> (~50 species in region)
Origin	Native
Growth Habit	perennial with a deep taproot; 1-2 feet tall
Leaves	hairy, alternate, palmate, divided into 10-15 narrowly oblong leaflets
Stems	one to several stems
Flower	bonnet-shaped, blue, purple, and white racemes; blooms June-August
Seeds	distinctive pubescent pea pod containing cream-colored semicircular seeds
Family	Pea
Habitat	dry, open fields to montane sagebrush meadows
Forage Value	low, some species poisonous, especially toxic to sheep; also causes birth defects in cattle if eaten during early gestation
Interesting Fact	lupine roots harbor nitrogen-fixing bacteria and enrich the soil





Common Name	Pale agoseris (False dandelion)
Scientific Name	<i>Agoseris glauca</i>
Origin	Native
Growth Habit	taprooted perennial; 2-24 inches tall
Leaves	basal rosette, simple leaves with smooth, toothed or shallowly lobed edges
Stems	slender, leafless, entire plant contains milky juice
Flower	heads solitary, yellow ray flowers, bracts upright (distinguish from dandelion), blooms May-June
Seeds	beaked seeds have white bristles about 1/2-inch long
Family	Sunflower
Habitat	disturbed sites to meadows, wide range of soils
Forage Value	good, especially for sheep and wildlife
Interesting Fact	sap of the plant was chewed by Indians to clean teeth





Common Name	Phlox
Scientific Name	<i>Phlox</i> (about 25 species in region)
Origin	Native
Growth Habit	spreading, taprooted perennial; varies in height depending on species
Leaves	thin, straight-sided leaves
Stems	most have woody main stems with short leafy branches
Flower	small white- to lilac-colored with five symmetrical petals off a tube, blooms early May-August depending on altitude
Seeds	1/12-inch, rough surface, flattened oval shape.
Family	Phlox
Habitat	dry upland sites to alpine areas
Forage Value	low
Interesting Fact	plant breeders have developed many varieties of phlox for gardeners





Common Name	Pussytoes
Scientific Name	<i>Antennaria rosea</i>
Origin	Native
Growth Habit	taprooted perennial; 2-11 inches tall
Leaves	spreading mat of basal rosettes of hairy, gray green leaves
Stems	stems are clustered on the woody branched root crown
Flower	single stems capped with clusters of flowers that resemble faded kitchen match heads, blooms May-August
Seeds	female flowers set very hairy seeds that help in wind dispersal
Family	Daisy
Habitat	moist areas from lower elevation prairies to upland meadows in mountains
Forage Value	low; used as an indicator of poor range condition and increases under heavy grazing
Interesting Fact	the longer-stemmed species are used for dry flower arrangements





Common Name	Sticky purple geranium
Scientific Name	<i>Geranium viscosissimum</i>
Origin	Native
Growth Habit	perennial; 15-35 inches tall
Leaves	palmately divided, alternate leaves, leaves densely covered with hairs that have glands
Stems	densely covered in glandular hair, which makes the plant feel sticky
Flower	light-pink, magenta, or reddish purple flowers up to $\frac{3}{4}$ -inch across; five separate, rounded petals that often have pink/purple vein stripes; blooms June-August
Seeds	seed capsules are elongated, glandular and hairy with a long beak shaped like a stork's or crane's bill
Family	Rose
Habitat	dry to moist soils in all vegetation zones; characteristic in montane tall forb plant communities
Forage Value	good to excellent for cattle and sheep during early growth stages and poor to good in later growth stages
Interesting Fact	sticky purple geranium is protocarnivorous; it is able to dissolve protein, such as insects, that become trapped on its leaf surface and absorb the nitrogen derived from the protein; early settlers and Native Americans used a poultice made from its leaves as a remedy for insect bites





Common Name	Scarlet globemallow
Scientific Name	<i>Sphaeralcea coccinea</i>
Origin	Native
Growth Habit	low, spreading perennial; often forming patches from spreading rhizomes; taproot may remain unbranched for up to 3 inches below the soil surface
Leaves	alternate, 1/2-2 inches long, deeply cut into three to five palmate, wedge-shaped segments, small tufts on hair on leaves; yellowish-green above, grey-hairy beneath
Stems	stems reach a height of 4-16 inches; plants are covered with hairs
Flower	salmon to dark orange, saucer-shaped, about 1/2-inch across, with five broad petals shallowly notched at tips, short-stalked; blooms May-July
Seeds	splits into separate one-seeded segments at maturity,
Family	Mallow
Habitat	dry, open sites; plains, foothills; southern Canada to New Mexico
Forage Value	fair for cattle and elk; poor for horses; important forage for pronghorn, domestic sheep, deer, and bighorn sheep
Interesting Fact	the Navajo made a tea from the plant and used it as a remedy for diseases caused they thought by witchcraft; roots were used to stop bleeding and they were chewed to reduce hunger when food was scarce, among a number of other historic uses





Common Name	Scurfpea
Scientific Name	<i>Psoraleidium spp.</i> (6 species)
Origin	Native
Growth Habit	rhizomatous, upright perennial; rhizomes can be thick and tuberous; 11-24 inches tall
Leaves	three to seven leaflets, green to silvery
Stems	upright
Flower	“pea” flower with banner petal, wing petals and keel petals; white or blue or purplish; blooms May-July
Seeds	single seed
Family	Pea
Habitat	upland, loamy to sandy soils
Forage Value	fair to good, can be poisonous
Interesting Fact	forms association with nitrogen-fixing bacteria that enrich the soil





Common Name	Sulfur-flower buckwheat
Scientific Name	<i>Eriogonum umbellatum</i>
Origin	Native
Growth Habit	woody, taprooted perennial; mat-forming
Leaves	basal leaves lance to spoon shaped, densely hairy beneath with green upper surface
Stems	4-12 inches tall with a terminal flower cluster; leafless
Flower	umbrella-shaped clusters, greenish-white to orange-yellow, whorl of leaves at base of flower, blooms June-August
Seeds	small, rounded with a point, hard seed coat
Family	Buckwheat
Habitat	sagebrush and exposed sites
Forage Value	seeds important for birds and small mammals; leaves are eaten by browsers but rarely by grazers
Interesting Fact	some use the leaves to make tea





Common Name	Tumblemustard
Scientific Name	<i>Sisymbrium altissimum</i>
Origin	Introduced
Growth Habit	taprooted annual, 2-5 feet tall
Leaves	leaves alternate, lobed, lower leaves are coarse and divided into broad lobes of leaflets; upper leaves are finer with narrow lobes or segments
Stems	upright, much-branched
Flower	small, pale yellow in racemes; blooms July-September
Seeds	small, numerous, yellow-brown, found in a slender two-valved capsule 2-4 inches long
Family	Mustard
Habitat	disturbed areas
Forage Value	poor
Interesting Fact	Native Americans used this for anything from tea to burn treatment to inducing vomit





Common Name	Western wallflower
Scientific Name	<i>Erysimum asperum</i>
Origin	Native
Growth Habit	taprooted biennial, 1-3 feet tall
Leaves	slender, slightly toothed alternating leaves
Stems	usually unbranched, rough, hairy
Flower	bright yellow with four petals; blooms May-August
Seeds	small, round seed in long, slender seed pods
Family	Mustard
Habitat	uplands on plains, foothillss and mountains
Forage Value	poor to fair, increases with heavy grazing
Interesting Fact	in Greek, <i>Erysimum</i> translates as “to help or save” in reference to medicinal qualities of several species such as relieving bronchial congestion and stomach cramps





Common Name	Western yarrow
Scientific Name	<i>Achillea millefolium</i>
Origin	Native
Growth Habit	perennial with a shallow, spreading root system, 6-24 inches tall, rhizomatous
Leaves	alternate, looks fringed and soft feeling on main stem with basal rosette
Stems	one to several stems arise off horizontal roots, having dense wooly hairs
Flower	stems capped with clusters of usually white flowers, blooms from May-June
Seeds	very small, flattened, pale tan
Family	Daisy
Habitat	widely distributed from arid plains to subalpine zone
Forage Value	fair, increases with grazing
Interesting Fact	very aromatic leaves, used medicinally; many garden varieties





Common Name	Yellow salsify
Scientific Name	<i>Tragopogon dubius</i>
Origin	Introduced
Growth Habit	annual or biennial or monocarpic, taprooted, 1 to 3 feet tall, branched
Leaves	narrow up to 12 inches long
Stems	hollow and filled with a waxy sap
Flower	pale yellow flower, surrounded by green bracts, which are notably longer than the petals, blooms June-September
Seeds	1 to 1-1/2 inches long seed attached to a long, feathery tuft of hairs
Family	Sunflower
Habitat	roadsides, meadows, hillsides
Forage Value	some value to deer, antelope, sheep
Interesting Fact	this plant is sometimes considered monocarpic - meaning it dies after seed production; this can happen in its first to 14th (rarely) year; typically this happens between two to four years





Common Name	Yellow sweetclover
Scientific Name	<i>Melilotus officinalis</i>
Origin	Introduced
Growth Habit	biennial legume, tap rooted, 2-6 feet tall
Leaves	three leaflets that resemble alfalfa with teeth along the edge
Stems	single with many branches, increase in number its second year of growth
Flower	small yellow to cream-colored, arranged in racemes; blooms April-September depending on location
Seeds	small pods typically produce one seed each, but may produce two and terminate in a beak
Family	Pea
Habitat	disturbed sites, road sides
Forage Value	can cause bloat in cattle; there are improved forage varieties that are less likely to cause bloat; some wildlife forage value
Interesting Fact	Coumarin, the chemical compound responsible for the sweet smell, can cause internal bleeding if consumed in sufficient quantity





WOODY PLANTS





Common Name	Antelope bitterbrush
Scientific Name	<i>Purshia tridentata</i>
Origin	Native
Growth Habit	perennial shrub, with many branches, 2-6 feet tall; moderate to deep rooted; may be evergreen or deciduous
Leaves	simple, alternate, three-lobed, underside is wooly, dark green top
Stems	gray to brown with many short, spur like branches
Flower	yellow, five spatula shaped petals and five sepals, many stamens; blooms April-June
Fruits/ Seeds	spindle-shaped seed pod with tapering hairy beak
Family	Rose
Habitat	plains, foothills, mountain slopes; most abundant in well-drained sandy, gravelly, or rocky soils
Forage Value	good for cattle, sheep, and goats, especially in late fall and winter, excellent for wildlife
Interesting Fact	characterizes many foothill big game fall/winter ranges





Common Name	Big sagebrush
Scientific Name	<i>Artemisia tridentata</i> var. <i>tridentata</i> , <i>wyomingensis</i> , or <i>vaseyana</i>
Origin	Native
Growth Habit	perennial evergreen shrub, with many branches, 1-16 feet tall
Leaves	simple, alternate, three-lobed at the tip, gray-green in color, two crops of leaves produced each year
Stems	twigs round and rigid, brown below and green above
Flower	three to 12 small yellowish disk flowers, blooms August-September
Fruits/ Seeds	brownish, flattened, hairy
Family	Sunflower
Habitat	valley, plains, mountain slopes, and basins
Forage Value	important for many species of wildlife and domestic sheep; characterizes sage grouse habitat
Interesting Fact	pollen causes hay fever; Native Americans used for many medicinal purposes, including preventing infection and headache treatment





Common Name	Chokecherry
Scientific Name	<i>Prunus virginiana</i>
Origin	Native
Growth Habit	perennial shrub or small tree, 6-25 feet tall, with horizontal branches, deciduous
Leaves	simple, alternate, oval to oblong, margins serrated, 1 to 3-1/2 inches long, turn bright yellow to orange in the fall
Stems	twigs slender, greenish then becoming reddish-brown to orangish brown
Flower	Flowers are white with five petals arranged in long dense clusters; blooms April-July
Fruits/ Seeds	fruit is dark red to black, fleshy, thick skinned, and juicy, 1/4-1/2 inches in diameter
Family	Rose
Habitat	prairies, mountain, slopes, and canyons where moist soils are present
Forage Value	important for many species of wildlife and domestic sheep
Interesting Fact	fruits can be used for jelly; leaves and stems contain toxins poisonous to livestock if eaten in significant quantities; poisonings are rare unless other forage is scarce and the plant has been stressed





Common Name	Fringed sagewort
Scientific Name	<i>Artemisia frigida</i>
Origin	Native
Growth Habit	perennial, woody, low-growing shrub, 4-16 inches tall, strongly aromatic
Leaves	finely divided into either three or five segments, abundant, clustered toward the base and scattered along the stem
Stems	spreading from base, covered in silvery hairs
Flower	grayish/yellowish flower clusters that extend above the base, 1/4 inch in diameter, blooms July-August
Fruits/ Seeds	oblong seeds flattened with rounded edges, gray to brown
Family	Sunflower
Habitat	desert, rocky hillsides, meadows, sagebrush communities
Forage Value	valued for wildlife and sheep but often competes with perennial grasses; increases in disturbed areas
Interesting Fact	used by Native Americans to treat numerous ailments; poisonous to humans if consumed in large quantities





Common Name	Gardner saltbush
Scientific Name	<i>Atriplex gardneri</i>
Origin	Native
Growth Habit	perennial, woody, evergreen shrub, low growing, 8-20 inches tall
Leaves	simple, alternate, blades narrowly linear and thick, tip rounded and base is narrowed, gray green in color, salt crystals often visible
Stems	twigs slender, erect or ascending, often herbaceous
Flower	unisexual, found in dense cluster toward the branch tips; males are brown, females borne on leafy spikes, rise above the shrub outline; blooms June-August
Fruits/ Seeds	fruits are utricles enclosed in bracts
Family	Goosefoot
Habitat	valleys, plains, and badlands; usually associated with saline or alkaline soils
Forage Value	good forage for livestock and wildlife
Interesting Fact	some Native Americans ground parched fruits to make pinole flour





Common Name	Greasewood
Scientific Name	<i>Sarcobatus vermiculatus</i>
Origin	Native
Growth Habit	perennial, monoecious, warm-season, woody shrub, deciduous, 2-8 feet tall
Leaves	simple, alternate above, opposite below, round and fleshy, bright green, often with a crust of salt
Stems	twigs spreading, much-branched, rigid, white to tan in color, spiny
Flower	green unisexual flowers; male flowers on fleshy cone-like spikes, female flowers form singly or in pairs on leaf-like bracts and are wing-like, may be tinged with red, blooms June-August
Fruits/ Seeds	seeds are veined, green to tan in color, winged at the middle, with a leathery texture
Family	Goosefoot
Habitat	dry plains, flats, and eroded hills, mostly found in alkaline or saline soils
Forage Value	poor to fair forage for livestock; high protein content in spring and summer; woody by fall
Interesting Fact	can be poisonous to domestic sheep or cattle if consumed without sufficient other forages (grass) high in calcium





Common Name	Green rabbitbrush
Scientific Name	<i>Chrysothamnus viscidiflorus</i>
Origin	Native
Growth Habit	perennial, woody shrub, deciduous, 8-30 inches tall
Leaves	simple, alternate, blades linear to oblong and often appear twisted
Stems	twigs erect, stiff, brittle, greenish or white, marked with parallel lines
Flower	yellowish disk flower appearing in clusters; blooms July-September
Fruits/ Seeds	fruits are long, hairy, wedge-shaped, and flattened, light brown with five ribs; produces an abundance of plumed seeds
Family	Sunflower
Habitat	dry plains, valleys, and hillsides in sagebrush, ponderosa, or aspen
Forage Value	fair; browsed by large game and livestock, especially in the fall; used by birds, rabbits, and rodents
Interesting Fact	many ethnobotany purposes including medicinal, dye, and chewing gum





Common Name	Mountain mahogany
Scientific Name	<i>Cercocarpus montanus</i>
Origin	Native
Growth Habit	perennial shrub, deciduous, 2-20 feet tall
Leaves	simple, alternate, leaves usually oval and margins coarsely toothed at the tip, wedge-shaped at the base, resembling a birch leaf, typically has three to ten prominent veins
Stems	twigs stout, rigid, roughed by leaf scars, reddish in color
Flower	greenish-yellow becoming reddish-brown, five sepals, no petals; blooms May-June
Fruits/ Seeds	seeds are hard, narrow, and sharp-pointed, tipped with a persistent feathery style; seed production is sporadic
Family	Rose
Habitat	canyons, rimrock, and rock outcroppings, mountain sides; primarily occurs on calcareous substrate
Forage Value	very good for domestic livestock and wildlife (deer, elk, and bighorn sheep)
Interesting Fact	hard heart wood is valued for carving





Common Name	Mountain snowberry
Scientific Name	<i>Symphoricarpos oreophilus</i>
Origin	Native
Growth Habit	perennial deciduous shrub, up to 3 feet tall
Leaves	simple, opposite, elliptic to oval, thin, pale green, edges smooth to slightly wavy-lobed
Stems	erect with numerous, slender twigs
Flower	pink to white tubular flowers, found solitary or in pairs; blooms June-July
Fruits/ Seeds	fruits are white, waxy, berry-like drupes found in small clusters, persist through winter, ripen in late August; berries are toxic if eaten in quantity; one of few woody species with white berries
Family	Honeysuckle
Habitat	dry, open sites in the foothills to montane zones
Forage Value	important wildlife food; berries are valuable as food for grouse and songbirds; fruits, branches, leaves, and roots are poisonous to humans causing vomiting and diarrhea
Interesting Fact	some native people called snowberries 'corpse berries' or 'snakes berries'; because of their white color, they were believed to be the ghosts of saskatoon berries and part of the spirit world, not to be eaten by the living





Common Name	Rocky mountain Juniper
Scientific Name	<i>Juniperus scopulorum</i>
Origin	Native
Growth Habit	perennial, small, evergreen tree, up to 35 feet tall, often with an irregular crown
Leaves	opposite or in whorls of three; scale-like, pale to dark green in color
Stems	slender and scaly, flattened at first and becoming round; bark is reddish brown and shreds
Flower	flowers small and cone-like, separate male and female plants
Fruits/ Seeds	blueish, fleshy berry-like, 1/4-inch diameter, covered with a whitish bloom that will wipe off; two seeds are contained within the “husk” of the cones, 1/8-inch long, pointed on one end with a small, dark mark on the other
Family	Juniper
Habitat	ridges, bluffs, canyons, hillsides, and wash areas; often undeveloped, erodible soils; most abundant on calcareous and somewhat alkaline soils
Forage Value	provides cover and food for numerous birds and mammals
Interesting Fact	seeds are mostly spread by birds; fruits used to make gin flavoring





Common Name	Rose
Scientific Name	<i>Rosa woodsii</i>
Origin	Native
Growth Habit	perennial shrub, 2-5 feet tall, usually forming thickets
Leaves	odd-pinnately compound, alternate, five to nine leaflets with serrated margins
Stems	twigs reddish-brown to gray with straight or recurved prickles
Flower	pink colored flowers with five petals, five sepals, and many stamens; blooms May-July
Fruits/ Seeds	contained within the hip
Family	Rose
Habitat	prairies, open slopes, thickets, in a wide range of soils
Forage Value	good for elk, deer, small mammals, and birds
Interesting Fact	rose hips (fruit of rose) important for birds and edible and high in vitamin C for humans





Common Name	Rubber rabbitbrush
Scientific Name	<i>Ericameria nauseosa</i>
Origin	Native
Growth Habit	perennial bushy shrub, 1-6 feet tall
Leaves	simple, long, narrow, and alternating on stem, one to three nerved
Stems	erect, flexible, yellowish-green, covered with matted white hairs; trunk is gray-brown with small cracks
Flower	bright-yellow disk flowers, arranged in an umbrella-shaped head, blooms June-September
Fruits/ Seeds	small, pointed with hairs that aid in dispersion
Family	Sunflower
Habitat	dry soils from desert to foothills
Forage Value	poor, though domestic sheep and wildlife will utilize when other forage is limited; increase with heavy grazing and erosion
Interesting Fact	contains latex and has been evaluated as a potential source of natural rubber





Common Name	Serviceberry
Scientific Name	<i>Amelanchier alnifolia</i>
Origin	Native
Growth Habit	perennial shrub or small tree, up to 22 feet high, variable in growth form; may form thickets, mats, or clumps; deciduous
Leaves	simple, alternate, blades oval to oblong, with lateral, parallel veins
Stems	young twigs silky-pubescent, becoming reddish-brown to grayish, smooth, and rigid
Flower	White, five-petaled flowers arranged in groups, blooms April-June
Fruits/ Seeds	Reddish to purplish-black, sweet fruit with three to six seeds
Family	Rose
Habitat	open woods, brushy hillsides, canyons and creek banks; usually in well-drained soils
Forage Value	stems are important for deer and moose, and fruit is consumed by bears, small mammals, and birds
Interesting Fact	the fruit can be used to makes jams or jellies; strong, distinctive petroleum like smell when leaves are crushed





Common Name	Shadscale saltbush
Scientific Name	<i>Atriplex confertifolia</i>
Origin	Native
Growth Habit	perennial shrub, 1-3 feet tall, with a rounded crown
Leaves	simple, alternate, round, gray-green, crowded in clusters, leaf shaped like a fish scale
Stems	twigs rigid, erect, stout, with spines extending above the foliage, yellow-brown
Flower	unisexual, green-colored flowers attached directly to stem, no petals; female flowers are solitary or clustered and found near the end of smaller branches at the base of leaves; male flowers are dense with leafy bracts found at the tip; blooms March-June
Fruits/ Seeds	small utricle that bears one seed, similar in appearance to the leaves, and yellowish-brown in color
Family	Goosefoot
Habitat	desert valleys, hills and bluffs, usually saline soils
Forage Value	fair to good for livestock, good for pronghorn, mule deer, and birds
Interesting Fact	leaves are salty to the taste





Common Name	Shrubby cinquefoil
Scientific Name	<i>Dasiphora fruticosa</i>
Origin	Native
Growth Habit	perennial shrub, deciduous, 1 to 6-1/2 feet tall, can either be low and mat-forming or erect
Leaves	compound, alternate, three to seven leaflets, narrowly elliptic, long white hairs on both surfaces
Stems	twigs slender, bark first silky and reddish-brown to grey
Flower	five petal, yellow flowers that are saucer-shaped, blooms May-late September
Fruits/ Seeds	hairy seeds
Family	Rose
Habitat	alpine meadows, bogs, rocky ground at higher elevations; adapted to a wide range of soils
Forage Value	browsed extensively by mule deer, poor for cattle and good for sheep and goats
Interesting Fact	a popular landscape plant





Common Name	Silver sagebrush
Scientific Name	<i>Artemisia cana</i>
Origin	Native
Growth Habit	perennial shrub, up to 5 feet tall
Leaves	simple, alternate and lance-shaped occasionally with one or two irregular teeth
Stems	older stems are dark brown with a fibrous bark; younger stems covered with a dense white to yellowish-green small wooly hairs
Flower	greyish disk flowers; blooms August-September
Fruits/ Seeds	seeds sticky with four or five ribs
Family	Sunflower
Habitat	loamy to sandy soils
Forage Value	browsed by wildlife and sheep
Interesting Fact	this shrub can resprout from its roots after fire





Common Name	Skunkbush sumac
Scientific Name	<i>Rhus aromatica</i>
Origin	Native
Growth Habit	Perennial shrub, 2-8 feet tall, thicket forming, can be rounded, mound-like, or upright
Leaves	compound, alternate, three-lobed, skunky smelling when crushed; leaflets grow in groups of three and are waxy; turn bright red to orange in fall
Stems	twigs grayish to reddish-brown, slender, leaf scars, fragrant when bruised
Flower	numerous unisexual flowers with five yellow petals, yellowish-green to cream-colored, crowded in clusters near the tips of branches; blooms early spring before or during leaf emergence, April-May
Fruits/ Seeds	clustered fruits that are reddish-orange to red, containing a single seed; fruit highly acidic
Family	Sumac
Habitat	hillsides, ravines, thickets, and woodlands; adapted to a wide range of soils
Forage Value	poor for most domestic livestock, good for wildlife and domestic goats
Interesting Fact	blooms before it leafs out; Native Americans made a lemonade-type drink with the berries





Common Name	Wax Currant
Scientific Name	<i>Ribes cereum</i>
Origin	Native
Growth Habit	perennial, deciduous shrub with multiple stems, 1/2 to 6-1/2 feet tall
Leaves	simple, alternate, round lobes/kidney-shaped to broadly fan shaped; 1/4 to 1-1/2 inches wide
Stems	erect to spreading, hairy when young, greyish to red-brown when mature
Flower	clusters of two to eight white/pink tubular flowers; five tiny, erect petals and five small, spreading sepals; blooms April-June
Fruits/ Seeds	fruits are red berries with protruding, sticky hair and are rather tasteless; contain numerous seeds
Family	Rose
Habitat	dry slopes plains to montane
Forage Value	important browse for wildlife in areas where other shrub species are not present; wildlife eat seeds and leaves
Interesting Fact	some say this plant has a "spicy" scent





Common Name	Winterfat
Scientific Name	<i>Krascheninnikovia lanata</i>
Origin	Native
Growth Habit	perennial, low-growing, shrub, with a woody base and numerous annual branchlets, up to 3 feet tall
Leaves	simple, alternate, densely hairy; margins are rolled and midrib is prominent on underside
Stems	erect to spreading, dwarf forms are herbaceous and taller forms are herbaceous to woody; new growth has wooly hair
Flower	wooly and clustered at joint of leaf and stem, male flowers found at the end of branches; female flowers found in a pair of silky bracts, blooms April-September
Fruits/ Seeds	less than 1/4-inch long fruit is covered in fine, long, white hairs up to 1/2-inch long; beaked, four-angled
Family	Goosefoot
Habitat	usually associated with sagebrush or salt desert shrub; tolerates saline conditions
Forage Value	excellent forage, especially in winter because of its high protein content
Interesting Fact	has been used as a hair wash and to treat fevers by Native Americans





GLOSSARY

Term	Definition
alkaloids	group of naturally occurring chemical compounds that result in physiological action
annual	lives only one year and completing entire life cycle in that time
anthesis	the time period when the grass plant flowers
auricle	appendage that protrudes at the junction of the leaf blade edge and sheath
awn	hair-like bristle protruding from lemma or glumes of grass
biennial	lives two years; the first year the plant is vegetative, and the second year it flowers, and completes life cycle
bract	modified leaf or scale at the flower base
bulbous	has a bulb just below the soil surface
bunch grass	grows in clumps
capsule	dry fruit that splits apart into several seed-bearing sections
cool-season	matures earlier in the growing season and grows best in cooler temperatures
deciduous	sheds its leaves annually
dioecious	male and female reproductive parts on separate plants
drupe	fleshy fruit with thin skin and central seed
evergreen	retains green leaves throughout the year
floret	the seed of a grass (lemma, palea, and fruit)
glabrous	smooth, no hair
glume	membranous bract on the lowest part of the grass head or seed (comes in pairs)
inconspicuous	difficult to see or doesn't attract attention
inflorescence	flowering structure of a plant
keel	bottom part of the flower that is shaped like a boat hull
leaflet	smaller leaves that make up a compound leaf
legume	dry fruit that splits apart with one seed-bearing section
lemma	membranous skin that covers one side of a grass seed
ligule	appendage (membranous, hairy, or absent) found where the leaf meets the stem

monoecious	both male and female reproductive parts on same plant
nodes	raised bump along grass stems
palmate	veins radiating from a point or compound leaf where the leaflets start at a common point (like fingers on a hand)
panicle	grass flowering structure that is in an open, branching arrangement
perennial	lives more than one year; comes back from the roots or woody material
petal	a modified leaf that surrounds the reproductive organs, usually colored
petiole	the short stem of a leaf
pinnate	compound leaf where the leaflets are arranged on both sides of the stalk (odd has single leaflet on end)
pubescent	covered with short, soft hair
raceme	flower cluster with flowers attached by short, equal length stalks to stem
rachis	the stem within the fruiting structure of grass
rhizomatous	reproduces through an underground stem; plants grow individually
rosette	circular arrangement of leaves that sit near the soil
saline	area containing salt
sepal	a modified leaf that surrounds the reproductive organs, below or in place of the petal, usually green
sheath	part of the leaf that wraps around the stem
spike	flowering structure where seeds are attached directly to the stem
spikelet	basic unit of a grass flower with two glumes and the seed(s)
stamen	male reproductive organ of a flower consisting of a stalk (filament) and anther that bears the pollen
subirrigated	shallow water table where plants are watered from below, not flooded
utricule	small, dry seed enclosed in a bladder-type ovary
warm-season	matures later in the growing season and grows best in warmer temperatures

Other Good Resources

USDA Plants Database (plants.usda.gov)

A Field Guide to Wyoming Grasses. 2010. Quentin D. Skinner. ISBN 978-0615387628

Vascular Plants of Wyoming. 2001. Robert R. Dorn. University of Wyoming Publishing

Wildflowers of Wyoming. 2004. Diantha States and Jack States. ISBN 978-0878424962

North American Wildland Plants. 2011. James Stubbendieck, Stephan L. Hatch and Neal M. Bryan. ISBN 978-0803234857

A Field Guide to Rocky Mountain Wildflowers: Northern Arizona and New Mexico to British Columbia. 1998. ISBN 978-0395936139

Weeds of the West. 2006. Tom D. Whitson. ISBN 978-0756711825

Plants of the Black Hills and Bear Lodge Mountains. 1999. Gary E. Larson, James R. Johnson and Mary Brashier. ISBN 978-0913062050

Plants of the Rocky Mountains. 1998. Linda J. Kershaw, Jim Pojar and Paul Alaback. ISBN 978-1551050881

Grassland Plants of South Dakota and the Northern Great Plains. 1999. James Johnson. ISBN 978-0913062067

Plants of Yellowstone and Grand Teton National Parks. 2001. Richard J. Shaw. ISBN 978-0970206701

