

This volume covers the C-E plant families in the series Flora of the Pikes Peak Region, supported by the Carter Herbarium of Colorado College. Preceding volumes include the overview of regional vegetation and ecology of El Paso, Fremont, Pueblo, and Teller Counties in volume 1 entitled Botany of the Pikes Peak Region, Ferns and Fern Allies (volume 2), Asteraceae (Vol. 3), and Plant Families A-B (excluding Asteraceae) in Vol. 4. This volume covers the following families:

Cactaceae (cactus family)  
Callitrichaceae (water starwort family)  
Campanulaceae (harebell or bellflower family)  
Cannabaceae (hops family)  
Capparaceae (caper family)  
Caprifoliaceae (honeysuckle family)  
Caryophyllaceae (pink family)  
Ceratophyllaceae (hornwort family)  
Chenopodiaceae (goosefoot family)  
Cistaceae (rock rose family)  
Commelinaceae (dayflower family)  
Convolvulaceae (morning glory family)  
Cornaceae (bunchberry or dogwood family)  
Crassulaceae (stonecrop family)  
Cucurbitaceae (squash or gourd family)  
Dipsacaceae (teasel family)  
Elaeagnaceae (oleaster family)  
Elatinaceae (waterwort family)  
Ericaceae (heath family)  
Euphorbiaceae (spurge family)

The Cyperaceae (sedge family) will be covered in separate volume

Although this treatment is as complete as possible based on our current knowledge and regional herbarium records, new species, especially adventive ones, may easily move into the area on a regular basis. Larger scale treatments such as the Flora of the Great Plains are recommended for descriptions of species that don't appear in these keys and that may be recent introductions or overlooked rarities for our region.

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## Cactaceae: Cactus Family

The unmistakable cactus family - succulent, spiny, photosynthetic stems and fragile, showy flowers - is more diverse throughout our region than many realize. Our greatest species diversity is on the plains and to the south of Colorado Springs, but even the montane zone contains a few representatives. The term “areole” refers to the clump of spines; “tubercles” are the swollen projections that occur on stems of some genera.

### Key to the Genera

1. Areoles with glochids (minute barbed bristles that are very hard to get out of your fingers!), stems with separate pads.....2
1. Areoles and stems not as above, appearing small balls or cylinders.....3
2. Joints of stem cylindrical, plants erect shrubs to 2 m tall.....*Cylindropuntia*
2. Joints of stem flat pads, plants low, sprawling.....*Opuntia*
3. Stems ribbed, flowers born below the apex, spines in rows.....*Echinocereus*
3. Stems not ribbed but tuberculate, flowers born at the apex.....4
4. Plants with tubercles lacking grooves on the top surface (look closely, with a lens).....*Pediocactus*
4. Plants with tubercles having deep grooves on the top surface.....*Coryphantha*

### *Coryphantha* “nipple cactus”

*Coryphantha missouriensis* (Sweet) Britton & Rose

Syn. *Escobaria missouriensis*

**Plants** with greenish yellow flowers, central spines on the areoles usually absent. Fruit red.

**Habitat:** Plains grasslands.

**Notes:** Uncommon, look for the red fruit if the flowers are not present.

*Coryphantha vivipara* (Nuttall) Britton & Rose

Syn. *Escobaria vivipara*

**Plants** with pink flowers, central spines usually present on the areoles. Fruit green or yellow.

**Habitat:** Plains, grasslands, occasionally in the lower foothills.

**Notes:** Our common species in the genus. Watch out for confusion with *Pediocactus*, which also has pink flowers. Look for the *Coryphanthus* deep grooves in the tubercles that distinguish this genus.

### *Cylindropuntia* “cholla, candelabra cactus”

Many put this species into *Opuntia*, but it differs in very obvious ways from the other prickly pears that have flat pads. This tall candelabra shape creates a beautiful silhouette on our plains landscape from Fort Carson through the southern portion of our region.

*Cylindropuntia imbricata* (Hayworth) Knuth

Syn. *Opuntia imbricata*

**Stems** tall, woody, to 2 m. Flowers bright red pink.

**Habitat:** Plains, juniper woodlands, southern El Paso County to the south.

**Notes:** An unmistakable plant; look for the flowers in June to early July.

### *Echinocereus* “hedgehog cactus”

This genus can always be easily identified here by the longitudinal ribs with nodes of spines.

*Echinocereus reichenbachii* (Terschek) Haage var *perbellus* (Britton & Rose) L. Benson

**Plants** with pink flowers, barrel narrowly cylindrical.

**Habitat:** Limestone breaks and outcrops.

**Notes:** Rare or uncommon here, known thus far only from the Pueblo Reservoir area, although relatively common in Las Animas County. Look for the narrow barrel shape if the flowers are not present.

*Echinocereus triglochidiatus* Engelm

**Plants** with scarlet or deep red flowers, plants often forming huge tussocks.

**Habitat:** Rocky cliff sides and slopes.

**Notes:** A beautiful and intimidating species, too often collected by wishful gardeners. The size is unmatched by any other cactus in our region.

*Echinocereus viridiflorus* Engelm

**Plants** with greenish yellow flowers, frequent side shoots.

**Habitat:** Extremely common in the grasslands and on the mesas, as well as rocky outcrops in the Black Forest and lower foothills.

**Notes:** Our most common cactus. Look for the side shoots that give this the name of “hen and chickens.”

### ***Opuntia* “prickly pear”**

The genus is unmistakable with its broad flat pads. The species are somewhat harder, but look closely at the pad covering and the habitat details. Many species have multiple pastel flower colors present - this is not a diagnostic character to species, but an interesting and beautiful array of blossoms that occur in several of our representatives, especially *O. polyacantha* and *O. macrorhiza*.

*Opuntia fragilis* (Nuttall) Haworth

**Plants** with pads very fragile, easily coming apart and somewhat rounded in shape.

**Habitat:** Pine forests.

**Notes:** Look for the breakable stems. This is a typical species for the Black Forest and lower foothills.

*Opuntia macrorhiza* Engelm

**Plants** having pads with relatively few spines and with transverse wrinkles. Flowers typically yellow but sometimes somewhat orange as well.

**Habitat:** Mesas, grasslands, and occasionally lower foothills.

**Notes:** Look for the wrinkled pads and few spines. Fruits edible, but watch out for the tiny glochids. This species can occur with *O. phaeacantha* on the mesas.

*Opuntia phaeacantha* Engelm

**Plants** with large broad pads and long spines with brown tips.

**Habitat:** Piñon-juniper grasslands and rocky areas, especially in Fremont and Pueblo Counties.

**Notes:** The common prickly pear cactus for the southern part of our region.

*Opuntia polyacantha* Haworth

**Plants** with pads relatively small, very spiny. Flowers appearing in an array of color, from yellow to copper orange. A variable species, with at least 1 distinct type from our region and see Colorado: var. *trichophora* has long, filiform and flexible shaggy spines. This form is usually found on cliff faces.

**Habitat:** Mesas, plains grasslands. Can occur with *O. macrorhiza* on the mesas.

**Notes:** Common species, blooming in late June or July. Look for the color array and spiny pads.

### ***Pediocactus* “ball cactus”**

*Pediocactus simpsonii* (Engelm) Britton & Rose

**Plants** small balls, somewhat elongated with water and when in bloom. Flowers bright pink.

**Habitat:** Plains, grasslands, foothills to montane.

**Notes:** Look at the tubercles to distinguish this from *Coryphantha*: they lack grooves in *Pediocactus*. The bright pink flowers are quite noticeable in early June but do not last long and often close at night.

### Callitrichaceae: Water Starwort Family

This family is composed entirely of small, delicate, aquatic herbs with slender stems and opposite leaves where the tiny flowers occur in the leaf axils. Our species are not well surveyed, so the descriptions here are tentative with respect to distribution and abundance.

*Callitriche hermaphroditica* L.

**Plants** with leaves all linear, submerged, with clasping bases that lack wings.

**Habitat:** Ponds and pond shores, plains to montane.

**Notes:** Generally recognized by the linear leaves. This species is relatively common in our area.

*Callitriche heterophylla* Pursh emend. Darby

**Plants** with leaves linear and oblong, petioles connected across the stem by a membranous wing. Fruit thickest just below the middle.

**Habitat:** Ponds of the foothills and montane.

**Notes:** Relatively uncommon or little collected. The fruit is necessary for positive identification.

*Callitriche verna* L.

**Plants** with leaves linear and oblong, petioles connected across the stem by a membranous wing. Fruit thickest just above the base.

**Habitat:** Ponds of the plains, foothills, and montane.

**Notes:** Our most common species. Look at the fruits and the leaf shapes.

### Campanulaceae: Bellflower Family

This family is easily recognized by its flagship genus, *Campanula*, our most abundant representative with bell-shaped, blue flowers called harebells. *Triodanis* and *Lobelia* are much less common in our region, requiring wetlands or abundant water.

#### Key to the Genera

1. Flowers tubular, bilaterally symmetrical, plants of moist sites.....*Lobelia*
1. Flowers not as above, plants of dry or moist sites.....2
2. Flowers campanulate.....*Campanula*
2. Flowers flat open (rotate), in the leaf axils.....*Triodanis*

#### *Campanula* “harebell”

*Campanula parryi* A. Gray

**Plants** with deep purple corolla lobed halfway to base, lobes spreading; base of lower leaves ciliate.

**Habitat:** Moist montane meadows, Black Forest, Teller and Fremont Counties.

**Notes:** A species of the middle elevations and moist sites; look for the broader, shallower corolla.

*Campanula rapunculoides* L.

**Plants** with deep purple flowers in a tall raceme; leaves coarsely serrate.

**Habitat:** Adventive rhizomatous species from gardens, often naturalized.

**Notes:** A difficult garden weed. The tall racemes and leaf shape are diagnostic.

*Campanula rotundifolia* L.

**Plants** with pale purple flowers, corolla lobed only to about 1/3 its length, base of lower leaves not ciliate.

**Habitat:** Dry meadows, trailsides, from the foothills to the tundra.

**Notes:** Our most common species, occurring in many habitats and throughout our foothills and mountains. The name “rotundifolia” comes from the basal leaves that wither early and are easy to miss.

*Campanula uniflora* L.

**Plants** usually less than 10 cm tall, flowers narrowly campanulate, with deep lobes.

**Habitat:** Alpine tundra, Pikes Peak.

**Notes:** Not uncommon, but inconspicuous and much smaller and more delicate than other species of *Campanula*.

***Lobelia***

This genus is somewhat similar in appearance to *Penstemon* with a bilaterally symmetrical corolla. However, both our species occur in wetlands, while penstemons are typically found in dry areas. *Lobelia* also has an inferior ovary, whereas all of the Scrophulariaceae have superior ovaries.

*Lobelia cardinalis* L.

**Plants** with flowers bright red in a spikelike raceme; stems erect, to 100 cm. Corollas bilaterally symmetrical, with short lips.

**Habitat:** Rare in our region, thus far only known from wetlands of Pueblo Co. in the Chico Basin area.

**Notes:** A striking plant with the scarlet corollas.

*Lobelia siphilitica* L.

**Plants** with flowers purple to blue-ish, often striped with white, in a spikelike raceme. Stems to 100 cm. Corollas bilaterally symmetrical, resembling *Penstemon*.

**Habitat:** Moist prairie swales and streambanks; uncommon.

**Notes:** Known from Chico Basin area of s. El Paso County and n. Pueblo County, as well as the Black Squirrel Cr. drainage near Falcon and Peyton.

***Triodanis* “Venus’ looking glass”**

*Triodanis perfoliata* (L.) Nieuwland

**Plants** annual, with broadly ovate, clasping (perfoliate) leaves. Flowers bluish, deeply lobed to rotate, sometimes cleistogamous; stems angled, from decurrent leaf bases, to 50 cm.

**Habitat:** Wet areas, uncommon or undercollected.

**Notes:** The clasping leaves that surround the stem are diagnostic for this species. Thus known only from Cheyenne Mountain and the lower foothills, but probably occurring elsewhere along the mountain front in our region.

**Cannabaceae: Hops Family**

This family is sometimes included in the Moraceae, the mulberry family, but differs in having 4 parted flowers and a herbaceous habit. Its members are known as social stimulants in different ways and with different legal standing.

*Key to the Genera*

- 1. Plants erect, not vines. Leaves compound.....*Cannabis*
- 1. Plants vines, leaves palmately lobed but not compound.....*Humulus*

***Cannabis* “marijuana”**

*Cannabis sativa* L.

**Plants** with palmately compound leaves, and unisexual flowers. Leaflets narrowly serrate on the margins. Stems to 2 m tall.

**Habitat:** Dry areas, roadsides, clandestine gardens.

**Notes:** Adventive, often cultivated illegally. No one living in the latter half of the twentieth century would fail to recognize the leaf shape of this plant.

***Humulus* “hops”**

*Humulus lupulus* L.

**Plants** twining vines, leaves palmately lobed, stems harshly scabrous. Flowers unisexual.

**Habitat:** Canyons, rocky slopes of our foothills throughout the region.

**Notes:** Used for the flavoring of beer; this native species has distinctive bracts surrounding the female flowers.

**Capparaceae: Caper Family**

The caper family can often be mistaken for the Brassicaceae because of its long silique-like fruits, but can be distinguished by its long-exserted stamens and the long stipes (pedicels) on the fruit.

*Key to the Genera*

- 1. Plants not sticky to the touch.....*Cleome*
- 1. Plants sticky to touch.....*Polanisia*

***Cleome* “beeplant”**

*Cleome serrulata* Pursh

**Plants** tall, to 1 m or more; leaves trifoliate, leaflets 5-10 mm wide, petals purple to whitish, 8-12 mm.

**Habitat:** Roadside, sandy areas.

**Notes:** Relatively common. Look for the open flowers, and long stipate fruits that lack stickiness. The common name is accurate for the garden relative of our native species that is an excellent bee attractant.

***Polanisia* “clammyweed”**

*Polanisia dodecandra* (L.) de Candolle

**Plants** sticky viscid, to about 1 m, often less; leaves trifoliate, leaflets 2-5 cm long; petals white to purple, 8-10 mm.

**Habitat:** Plains, roadsides, sandy or gravelly areas.

**Notes:** Look for a sticky feel and a strong, somewhat disagreeable odor. Relatively common on the plains.

*Polanisia jamesii* (Torrey & Gray) Iltis

Syn. *Cristatella jamesii*

**Plants** annual, small and somewhat delicate, to about 10 cm. Leaflets linear, 1-5 mm side, entire plant very sticky glandular. Flowers tiny, white to creamy.

**Habitat:** Sandhills on the plains.

**Notes:** Uncommon but probably undercollected. It is very inconspicuous and looks like a small tuft of succulent, sticky, yellowy-green leaves.

**Caprifoliaceae: Honeysuckle Family**

This family is characterized by having paired flowers and opposite leaves. The true honeysuckles are introduced shrubs here but are commonly naturalized on the mesas and in the lower foothills. Most of our species are distinctly woody, only the diminutive *Linnaea* appears somewhat herbaceous but has semiwoody lower stems.

*Key to the Genera*

- 1. Leaves pinnately compound.....*Sambucus*
- 1. Leaves simple.....2

- 2. Plants small, with creeping stems, appearing mostly herbaceous, flowers pink in nodding pairs.....*Linnaea*
- 2. Plants larger, clearly shrubby, not as above.....3
- 3. Leaves 3-lobed, somewhat maple-like.....*Viburnum edule*
- 3. Leaves not maple-like.....4
- 4. Flowers yellow, surrounded by a cup of broad bracts, berry black.....*Lonicera involucrata*
- 4. Flowers white or pink, bracts narrow, berries white, pink or red.....5
- 5. Flowers bilaterally symmetrical, berry red, juicy.....*Lonicera*
- 5. Flowers with short triangular lobes, berry bright white, not juicy.....*Symphoricarpos*

***Linnaea* “twinflower”**

*Linnaea borealis* L. ssp *americana* (Forbes) Hultén ex Clausen

**Plants** mat forming, stems less than 15 cm tall, somewhat inconspicuous. Flowers paired, nodding, campanulate; leaves ovate, evergreen.

**Habitat:** Cool, moist, conifer forests, middle elevations.

**Notes:** Relatively uncommon on Pikes Peak, except in the foothills west of the Palmer Divide where there is more moisture, very common elsewhere in Colorado. A very endearing species when in bloom, for which the adjective “cute” is easy to apply.

***Lonicera* “honeysuckle”**

A mixed group of species, and probably best considered two genera, *Distegia*, or the native bush honeysuckle, and true honeysuckles in the genus *Lonicera* proper. *Lonicera morrowii* and *L. tatarica* are introduced species here, but commonly escaping since the juicy red berries are popular with birds and spread easily.

*Lonicera involucrata* (Banks) Cockerell

Syn. *Distegia involucrata*

**Plants** tall shrubs, to 3 m. Flowers in pairs, creamy yellow, surrounded by red bracts. Berries black, shiny. Leaves opposite, ovate to ovate-lanceolate, with pointed tips, somewhat leathery in texture.

**Habitat:** Moist locations, foothills to montane.

**Notes:** Look for the bright red bracts and shiny black (nonedible) berries.

*Lonicera morrowii* A. Gray in Perry

**Plants** tall shrubs, to 3 m. Flowers in pairs, white, turning yellowish in age. Leaves ovate, to 3 cm, pubescent beneath. Berries red, juicy.

**Habitat:** Adventive cultivated species, occurring around cities, old homesteads, and throughout the mesas and foothills.

**Notes:** Sometimes hybridizing with *L. tatarica*.

*Lonicera tatarica* L.

**Plants** tall shrubs, to 3 m. Flowers in pairs, pink. Leaves ovate, to 3 cm, glabrous beneath. Berries red, juicy.

**Habitat:** Adventive cultivated species, occurring around cities, old homesteads, and throughout the mesas and foothills.

**Notes:** Sometimes hybridizing with *L. morrowii*.

### *Sambucus* “elderberry”

*Sambucus racemosa* L.

Syn. *Sambucus microbotrys*

**Plants** tall shrubs, to 3 m or more. Flowers white, in dense pyramid clusters, becoming orange-red berries. Leaves opposite, pinnately compound, with 5-7 teeth; margins sharply dentate.

**Habitat:** Moist canyons of the foothills to the montane.

**Notes:** Relatively common along streams and seeps.

### *Symphoricarpos* “snowberry”

*Symphoricarpos albus* (L.) S. F. Blake

**Plants** low slender shrubs typically not forming dense patches, to about 1 m high; leaves ovate, to about 1 cm long, flowers broadly bell-shaped, pink, anthers and style enclosed within the tube, berries white.

**Habitat:** Foothill canyons

**Notes:** Our only snowberry that does not form big patches.

*Symphoricarpos occidentalis* Hooker

**Plants** low shrubs, typically forming broad patches, to about 1 m high; flowers broadly bell-shaped, pink, with anthers and style exerted, berries white.

**Habitat:** Plains and mesas.

**Notes:** Our lowest elevation species, usually not found in the foothills.

*Symphoricarpos rotundifolius* A. Gray

**Plants** low shrubs, typically forming broad patches, to about 1 m high; flowers narrowly tubular, pink, berries white. Leaves extremely variable in size and shape, with margins entire to quite lobed.

**Habitat:** Canyons, lower foothills.

**Notes:** A mid-elevation, patch-forming species with quite variable leaves. The variation has led to an abundance of early names for multiple species, but it seems best to include them under the broad concept of *S. rotundifolius*. The species seems particularly variable in the steep canyons of southern Fremont County.

### *Viburnum* “bush cranberry”

The common name of bush cranberry refers only to our single native species, the boreal species *Viburnum edule*. The genus also includes a number of cultivated species of *Viburnum*, which occasionally become established. *Viburnum lantana* has densely stellate pubescent leaves, and *V. lentago* has reddish hairs on the leaves, which resemble those of the genus *Prunus* in the Rosaceae. Neither is common in our region.

*Viburnum edule* (Michaux) Rafinesque

**Plants** low shrubs, to 2 m. Leaves broad, to 10 cm long, three lobed. Fruits bright red.

**Habitat:** Moist conifer forests of the foothills, often along streams or near seeps.

**Notes:** Relatively uncommon here, except in the Palmer Divide area west of Palmer Lake.

### **Caryophyllaceae: Pink Family**

Although this family is sometimes divided into the Caryophyllaceae, with united sepals and clawed petals, and the Alsiniaceae, with separate sepals and nonclawed petals, they are combined here under the more traditional inclusive family concept. The family is easily recognized by the opposite leaves and swollen nodes (look closely in small plants and in cushion forming ones) and the 5-parted flowers with pink or white petals. A lookalike family is the Molluginaceae, with a single uncommon species (*Mollugo verticillata*). This genus has blunt whorled leaves, with a large basal whorl and smaller ones above.

*Key to the Genera*

1. Sepals united into a tube, petals with a long stalk (claw).....2  
 1. Petals separate, petals lacking or when present, without a long stalk .....6

2. Styles 5 (use a lens).....*Melandrium*  
 2. Styles 2 or 3.....3

3. Styles 3, calyx with 10 “nerves” (vertical veins, showing as lines).....*Silene*  
 3. Styles 2, calyx with 5 “nerves” or angled, or rounded and only faintly nerved.....4

4. Flowers very tiny, numerous in much branched broad inflorescences.....*Gypsophila*  
 4. Flowers not tiny, over 1 cm long, relatively few.....5

5. Calyx rounded, flowers white to light pink, plant perennial.....*Saponaria*  
 5. Calyx angled, flowers deep pink, plants annual.....*Vaccaria*

6. Leaves with minute, colorless stipules at the base.....7  
 6. Leaves lacking stipules.....8

7. Plants annual, glandular pubescent.....*Spergularia*  
 7. Plants perennial, not glandular pubescent.....*Paronychia*

8. Plants less than 2 cm high, leaves mostly basal, linear, stems few flowered, high elevations.....9  
 8. Plants not as above.....10

9. Styles 3 (use a lens).....*Minuartia stricta* (see comments at end of *Minuartia*)  
 9. Styles 4-5.....*Sagina*

10. Styles 5, capsule cylindrical, splitting into 10 teeth.....*Cerastium*  
 10. Styles 3, capsule short and ovoid or oblong, splitting into 3 or 6 teeth.....11

11. Petals deeply 2-lobed, sometimes to the base.....*Stellaria*  
 11. Petals entire or shallowly notched.....12

12. Leaves elliptical, tips rounded, plants with some leaf pairs on stem.....13  
 12. Leaves linear, basal, stems lacking leaves.....14

13. Stems elongate, sprawling, branched, stem and leaves densely short pubescent.....*Spergulastrum*  
 13. Stems simple or branched, erect, stem and leaves inconspicuously pubescent.....*Moehringia*

14. Leaves linear or filiform, grasslike and over 3 cm long.....*Arenaria*  
 14. Leaves linear but short and thick, less than 1 cm.....*Minuaria*

**Note:** The genus *Dianthus* (carnation, pink) is often found in seed revegetation mixes and can occur in patches occasionally in our region. *Dianthus* has red pink flowers, relatively short stems, and narrow leaves. Two small bracts occur below the calyx. It does not appear to spread here and may be only a short-term inhabitant of reseeded areas.

### *Arenaria* “sandwort”

See also *Spergulastrum*.

*Arenaria fendleri* A. Gray

Syn. *Eremogone fendleri*

**Plants** 15-20 cm tall, leaves mostly basal, over 3 cm long. Flowers white, in an open cyme.

**Habitat:** Dry meadows, mesas through alpine.

**Notes:** An extremely common species, covering a wide elevational span and blooming throughout the growing season. Tundra plants tend to be shorter than those found at lower elevations.

*Arenaria hookeri* Nuttall ex Torrey & Gray

Syn. *Eremogone hookeri*

**Plants** mat forming, stems usually less than 10 cm, leaves sharp pointed in age, flowers white, in dense clusters.

**Habitat:** Barrens, sandy and gravelly areas on the plains, mesas and lower foothills.

**Notes:** Common in Pueblo and Fremont Counties, as well as eastern El Paso County.

### *Cerastium* “chickweed, mouse ear”

*Cerastium arvense* L.

Syn. *Cerastium strictum*

**Plants** perennial, with stems to 20 cm tall, usually single, containing tufts of sterile shoots in the leaf axils. Flowers with conspicuous white petals, bracts below inflorescence scarious.

**Habitat:** Mesas and lower foothills to subalpine meadows.

**Notes:** A common species with a broad elevational range; look for the single stems and sterile shoots.

*Cerastium beeringianum* Chamisso & Schlechtendal

**Plants** perennial, somewhat sprawling and loosely matted; flowers with conspicuous white petals, bracts below inflorescence not scarious, calyx glandular with long multicellular hairs.

**Habitat:** Tundra, usually in damp areas along rivulets or below snowbeds, or rocky slopes.

**Notes:** An arctic species, always found at high elevation.

*Cerastium fontanum* Baumgartner

Syn. *Cerastium vulgatum*

**Plants** perennial, stems single, sprawling and rooting at the nodes; flowers with petals about as long as the sepals.

**Habitat:** Adventive species of gardens, naturalized around towns.

**Notes:** Look for the sprawling habit and nodal stems.

*Cerastium nutans* Rafinesque

**Plants** annual, stem single, erect, not sprawling or rooting at the nodes; flowers with petals more or less equal to the sepals.

**Habitat:** Native species, moist areas on mesas and lower foothills.

**Notes:** Often blooms early in seepage areas and runoff channels.

### *Gypsophila* “baby’s breath”

*Gypsophila elegans* Bieberstein

**Plants** annual, low, inflorescence few flowered; flowers with very short petals, about 6 mm.

**Habitat:** Adventive species, naturalized from seed mixes, roadsides, disturbed areas.

**Notes:** Uncommon, but perhaps spreading.

*Gypsophila paniculata* L.

**Plants** tall, ca. 1 m or more, much branched, with many tiny white flowers. Inflorescence branches glabrous.

**Habitat:** Adventive garden species, naturalized around towns and along roadsides.

**Notes:** Uncommon adventive species.

*Gypsophila scorzonerifolia* Seringe

**Plants** ca 1 m or more, much branched, with many tiny white flowers. Inflorescence branches glandular pubescent.

**Habitat:** Garden species, naturalized around towns, and occurring in the Monument Creek floodplain around Colorado Springs.

**Notes:** Uncommon adventive species, possibly spreading.

### ***Melandrium* “campion”**

Some species are placed in the genus *Gastrolychnis* by European authors; the two are separated on the basis of unisexual (*Melandrium*) flowers vs. perfect ones (*Gastrolychnis*).

*Melandrium apetalum* L.

Syn. *Gastrolychnis apetala*

**Plants** less than 10 cm tall, flowers perfect, nodding, with very short petals that are included in or barely longer than the calyx; calyx strongly inflated.

**Habitat:** Alpine tundra, uncommon or overlooked.

**Notes:** A diminutive alpine species, usually occurring singly.

*Melandrium drummondii* Hooker

Syn. *Gastrolychnis drummondii*

**Plants** with stems to 20 cm or more, flowers perfect, stem with multiple leaf pairs, not reduced in size.

**Habitat:** Dry meadows, foothills to montane.

**Notes:** Very similar to *Silene scouleri*, which fewer leaf pairs that become progressively smaller on the stem.

*Melandrium dioicum* (L.) Cosson & Germain

**Plants** with stems to 25 cm, flower unisexual, stems leafy.

**Habitat:** Dry meadows, foothills through montane.

**Notes:** Look for the unisexual flowers.

### ***Minuartia* “alpine sandwort”**

*Minuartia obtusiloba* Rydberg

Syn. *Lidia obtusiloba*

**Plants** forming dense mats, basal stems slightly woody, erect stems to 5 cm. Flowers single, white, to about 5 mm in diam., petals slightly lobed at the apex, sepals cucullate (hooded) at the tip.

**Habitat:** Alpine tundra, often in sandy or gravelly areas.

**Notes:** It is sometimes difficult to see the paired leaves in mat-forming genera in this family, but look for the 5-parted flowers; mat or cushion growth forms are common in alpine representatives of this family.

*Minuartia rubella* (Wahlenberg)

Syn. *Tryphane rubella*

**Plants** delicate, tufted, low mats. Inflorescence few flowered cyme; sepals acute, petals slightly shorter, white. Pedicels and calyx glandular.

**Habitat:** Wet gravels, alpine and subalpine.

**Notes:** Check carefully, similar to *Sagina* and to *Spergula*.

Another species of *Minuartia* (also sometimes put in the genus *Alsinanthe*), *M. macrantha*, is common in the Colorado mountains but has not yet been collected on Pikes Peak. Whether this is just an oversight, or whether it truly does not occur here has yet to be answered. *Minuartia macrantha* can be distinguished by

its long, broad and conspicuous petals that exceed the sepals, and by the loose matted growth habit. The sepals are acute, not cucullate as in *M. obtusiloba*. It occurs in sandy and gravelly areas on the tundra.

### *Moehringia*

*Moehringia lateriflora* (L.) Fenzl

Syn. *Arenaria lateriflora*

**Plants** perennial, stems delicate, to 25 cm, erect, but decumbent at the base; stems finely pubescent. Leaves 1-3 cm, oval to elliptical, apex rounded. Inflorescence with 1 to few flowers, white, petals to about 5 mm.

**Habitat:** Moist shady areas, montane to subalpine.

**Notes:** Sometimes difficult to see if not in bloom. Look for the oval leaves with rounded apices and the decumbent stem base.

### *Paronychia* “nailwort”

The flowers in this genus are very small and apetalous (meaning they lack petals) and are born in bract-like stipules.

*Paronychia jamesii* Torrey & Gray

**Plants** loosely matted, leaves linear, very sharp pointed, to about 2 cm long, flowering stems to about 3 cm. Inflorescence with numerous flowers, in branched cymes.

**Habitat:** Sandy areas, open gravelly slopes, plains through ponderosa forests of the Black Forest and foothills.

**Notes:** Look for the loose mats, sharp leaves, and erect lower-bearing stems above the mat.

*Paronychia pulvinata* Gray

**Plants** tightly matted, leaves not sharp, somewhat elliptic, flowers born within the mats.

**Habitat:** Alpine tundra, gravelly areas.

**Notes:** A common species at high elevation, often occurring in frost scars with other members of the family.

*Paronychia sessiliflora* Nutt.

**Plants** loosely matted, leaves linear, sharp pointed, to about 5 mm long, flowering stems short, just above the mat, flowers few, appearing yellowish.

**Habitat:** Sandy areas and barrens, plains. Our lowest elevation species.

**Notes:** Differs from *P. jamesii* in having very short stems and fewer flowers. Common in Pueblo and Fremont Counties.

### *Sagina* “pearlwort”

*Sagina saginoides* (L.) Karsten

**Plants** forming very small, circular mats with a short taproot. Flowers single, minute, on very short stems. Leaves mostly basal, linear.

**Habitat:** Moist gravelly areas in the subalpine and alpine, often around ponds or along roads.

**Notes:** Easily missed since these are such small plants, but relatively common. Look for the single flowers.

### *Saponaria* “bouncing bet, soapwort”

*Saponaria officinalis* L.

**Plants** perennial, from rhizomes, stems to 1 m tall; leaves ovate to elliptical, to 1 cm or more wide; flowers numerous in a loose apical cluster, pink to white, large, petals to 1 cm long.

**Habitat:** Adventive species, naturalized along roadsides and around towns.

**Notes:** A garden escapee that has become a pest since it is difficult to eradicate and spreads rapidly here. The leaves make a lather when rubbed in water.

### *Silene* “campion”

This genus comes in 2 growth forms: the familiar alpine mat form of *S. acaulis*, and the taller, leafy stemmed lower elevation species. Look closely to distinguish the flowers from some species of *Melandrium* (see key).

*Silene acaulis* L.

**Plants** perennial, low, tightly and densely matted. Leaves linear, to 2 cm long, sessile, and crowded. Flowers solitary, bright pink.

**Habitat:** Alpine tundra, open or rocky areas.

**Notes:** One of our most familiar tundra plants. Look for pink flowered dense cushions.

*Silene antirrhina* L.

**Plants** annual, with stems to 50 cm or rarely taller, erect, with a distinctive sticky band around the upper internodes (often appearing dark). Leaves linear to lanceolate, to 4 cm or more long, flowers white to slightly pink, usually exceeding the sepals, with petals to 15 mm long. Calyx glabrous.

**Habitat:** Fields, meadows, plains to middle elevations in the foothills.

**Notes:** Look for the annual growth habit, the glabrous calyx, and the sticky band, which gives the common name in Europe of “catchfly”.

*Silene noctiflora* L.

**Plants** annual, stems tall, to 1 m, relatively stout; typically sticky pubescent above (not in bands). Leaves to 10 cm (usually less) and broadly lanceolate. Flowers white to pinkish, in open cymes, calyx inflated, with green ribs.

**Habitat:** Adventive species, meadows and foothills.

**Notes:** Look for the sticky stem; the inflated calyx resembles those of *Melandrium* (which is never sticky).

*Silene scouleri* Hooker ssp *hallii* (S. Watson) Hitchcock & Maguire

**Plants** perennial, stems to 50 cm, glandular. Leaves narrowly lanceolate, long cuneate to the base. Flowers purplish, in open inflorescence, somewhat nodding, Calyx with distinctive dark, sticky “ribs”.

**Habitat:** Meadows, upper elevations.

**Notes:** A native species, somewhat resembling *Melandrium* (but look for the sticky ribs on the calyx).

*Silene vulgaris* (Moench) Garcke

**Plants** perennial, stems to 80 cm, erect. Leaves to 5 cm, sessile, ovate lanceolate, glabrous. Flowers whitish, calyx distinctively reticulate with a netlike appearance of the veins.

**Habitat:** Adventive species, fields, roadsides, throughout the middle elevations.

**Notes:** Look for the netlike appearance of the veins on the calyx.

### *Spergularia* “sand spurry”

*Spergularia marina* L.

**Plants** annual, stems erect, to 20 cm (usually shorter), branched, leaves somewhat fleshy, round in cross section, with a mucronate apex; flowers white or pinkish, shorter than the sepals, stamens 2-5.

**Habitat:** Muddy areas, often around ponds.

**Notes:** Uncommon in our area. Other species of *Spergularia* occur in Colorado, and may also be in our region though they have not been collected yet: *S. media* is a large robust plant of the plains, and has 6-10 stamens.

*Spergularia rubra* (L.) J. & K. Presley

**Plants** annual, low, delicate, and prostrate. Leaves not rounded but somewhat flattened, often glandular. Flowers pink, with 6-10 stamens.

**Habitat:** Along logging roads, montane and subalpine.

**Notes:** Uncommon in our region.

### *Spergulastrum*

*Spergulastrum lanuginosum* Michaux ssp *saxosum* (A. Gray) W. A. Weber

Syn. *Arenaria lanuginosa*

**Plants** with branched and somewhat sprawling stems, leaves elliptical, apices acute; stem and leaves densely pubescent; leaf pairs numerous.

**Habitat:** Montane forests, rocky slopes and open areas.

**Notes:** Known from Fremont County. Often put in the genus *Arenaria*, but has much broader leaves than other members of that group.

### *Stellaria* “chickweed, starflower”

The group as a whole is easily recognized by their “star” appearance of delicate, sharp white petals, often deeply divided. The species can be more difficult to distinguish: check habitat carefully! These species can be divided into 2 easily recognized groups: *Pseudostellaria*, which has fleshy tubers and glandular pubescence, and true *Stellaria*, which lacks the glands and has fibrous roots, not tubers.

PLANTS WITH FLESHY TUBERS AND GLANDULAR HAIRS

*Pseudostellaria jamesiana* (Torrey) Weber & Hartman

**Plants** arising from tubers; glandular, with thin, elliptical lanceolate leaves. Flowers white, upper ones infertile.

**Habitat:** Forests, foothills and middle elevations.

**Notes:** An unusual species, distinctly different in many aspects from true *Stellaria* and probably best as a separate genus.

PLANTS WITH FIBROUS ROOTS, LACKING GLANDULAR HAIRS

*Stellaria calycantha* (Ledebour) Bongard

**Plants** with erect stems, leaves usually over 1 cm long, lanceolate to elliptical, stems with multicellular hairs, leaves ciliate; petals almost lacking, very small to absent.

**Habitat:** Wet subalpine meadows, often in willow carrs.

**Notes:** Often hidden among willows and on tussocks; look for the ciliate leaves and hairy stems.

*Stellaria crassifolia* Ehrhart

**Plants** with weak, somewhat sprawling stems; leaves lanceolate, glabrous, lacking cilia on the margins. Flowers few, inflorescence terminal; flowers about as long as the sepals.

**Habitat:** Wet meadows, upper elevations.

**Notes:** Similar to *S. calycantha*, but lacking the cilia on the leaves and having glabrous stems.

*Stellaria longifolia* Mühlenberg ex Willdenow

**Plants** with flowers subtended by bracts; inflorescence appearing lateral with stem continuing above. Leaves lanceolate to linear lanceolate.

**Habitat:** Moist meadows, montane, very common.

**Notes:** Look for the stem continuing beyond the inflorescence, which is subtended by bracts, not leaves.

*Stellaria longipes* Goldie

**Plants** with erect glabrous stems, leaves lanceolate, somewhat thick, flowers usually single, terminal.

**Habitat:** Meadows, subalpine through alpine.

**Notes:** Look for the thick leaves and single terminal flowers.

*Stellaria media* (L.) Vil.

Syn. *Alsine media*

**Plants** annual, stems prostrate to somewhat ascending, less than 10 cm; leaves ovate, to 5 mm, abruptly narrowed to the petiole. Flowers deeply divided, appearing as if they have 10 petals, delicate, almost the same length as the sepals.

**Habitat:** Lawns, gardens, shrubbery around towns.

**Notes:** A common adventive, but nonproblematic, species. Look for the deeply divided flowers.

*Stellaria umbellata* Turczaninow

**Plants** with stems to 40 cm, slender, usually branched; inflorescences subtended by bracts, flowers with petals lacking, inflorescence umbellate. Plants highly variable.

**Habitat:** Meadows, upper elevations.

**Notes:** An extremely variable plant; look for the bracts subtending the inflorescences, and the apetalous flowers.

### *Vaccaria* “corn cockle”

*Vaccaria pyramidata* Medicus

**Plants** annual, branched, somewhat glaucous in appearance. Leaves lanceolate, to 10 cm., clasping.

Flowers bright pink, to 12 cm broad.

**Habitat:** Fields, roadsides. Adventive species, occasionally naturalized from gardens and used in xeriscape mixes.

**Notes:** A distinctive, somewhat uncommon weed in our area, although a pretty garden species.

## **Ceratophyllaceae: Hornwort Family**

This family is one of several very similar aquatic groups with tiny flowers and divided leaves. *Chara*, an alga, has very rough stems and smells bad. *Ranunculus trichophyllus* has alternate leaves, and larger flowers. In *Ceratophyllum*, look for the dichotomous branching and the tiny toothed edges of divisions (use a lens).

*Ceratophyllum demersum* L.

**Plants** aquatic, with leaves opposite to almost whorled, branching in a dichotomous fashion. Divisions linear, with segments having minute teeth on the margins, visible with a lens.

**Habitat:** Ponds, lower elevations to montane.

**Notes:** Very similar to a number of other aquatic species. Look closely!

## **Chenopodiaceae: Goosefoot Family**

This family contains the familiar garden beet and spinach, as well as some of our weedy tumbleweeds. The small flowers in clusters are difficult to decipher, but together with the typical geometric shapes of the leaves and mealy appearance (“farina”), the family is easy to recognize, although the genera can be difficult! The two most challenging can be *Atriplex* (herbaceous species) vs. *Chenopodium*, where it is necessary to see if the flowers are perfect (both sexes present in a flower), or imperfect (flowers single sex only). Ripe fruits are often necessary for positive identification to species! Members of the Chenopodiaceae are typically tolerant of (and indicators for) alkaline and salty soils, so flourish in the Arkansas River drainage.

### *Key to the Genera*

1. Plants tall woody shrubs.....2
1. Plants not tall woody shrubs; if shrubby, less than 1 m in height.....3
2. Plants with linear, cylindrical somewhat succulent leaves, spiny.....*Sarcobatus*
2. Plants not as above; if spiny, then with leaves flat, not cylindrical or succulent.....*Atriplex*
3. Plants low growing to prostrate; stems with succulent, terete, sausage-like leaves bearing a small spine at tip.....*Halogeton*
3. Plants not as above.....4

4. Leaves linear, becoming very sharp spiny, plants pyramid shaped tumbleweed.....	<i>Salsola</i>
4. Leaves not linear or spiny.....	5
5. Plants prominently pubescent or stellate woolly tomentose.....	6
5. Plants glabrous or farinose with white or yellow meal.....	7
6. Plants low shrubs, woody at the base, white woolly all over, appearing gray-green.....	<i>Krascheninnikovia</i>
6. Plants not as above.....	<i>Axyris</i>
7. Leaves pungent, pinnatifid or marginally toothed, glandular.....	<i>Teloxys</i>
7. Leaves not smelly, entire or coarsely lobed, sometimes with farina.....	8
8. Plants strongly pilose with long hairs on leaves and stem, fruiting calyx with a prominent hook.....	<i>Bassia</i>
8. Plants only slightly hairy or glabrous, calyx lacking hook.....	9
9. Plants hairy, not farinose, leaves entire, pyramid shaped tumbleweed.....	<i>Kochia</i>
9. Plants not as above.....	10
10. Plants either monoecious or dioecious, female flowers with specialized bracts.....	11
10. Plants with perfect flowers, lacking specialized bracts.....	12
11. Leaves broadly ovate, coarsely toothed, fruit triangular conical, with fused and folded bracts, plants annual, prostrate.....	<i>Suckleya</i>
11. Leaves lanceolate to triangular hastate, fruit not triangular conical.....	<i>Atriplex</i>
12. Leaves sinuate dentate, narrow, dropping early; plant becoming a deep red tumbleweed.....	<i>Cycloloma</i>
12. Plants not as above.....	13
13. Leaves linear, lacking farina.....	14
13. Plants leaves wider than linear, or if not so, then farinose.....	15
14. Flowers solitary in the axils of bracts with scarious margins, plants not succulent, tumbleweeds.....	<i>Corispermum</i>
14. Flowers in clusters in leaf axils, plants with succulent leaves, prostrate.....	<i>Suaeda</i>
15. Leaves succulent, farinose, hastate, plants prostrate.....	<i>Monolepis</i>
15. Leaves not succulent, often (not always) farinose, stems erect.....	<i>Chenopodium</i>

#### ***Atriplex* “saltbush, shadscale”**

The genus *Atriplex* is a complex one that covers shrubs and herbs. It reaches a wide extent in the Great Basin deserts of Nevada and Utah where shrub species are the dominant community type. In our area, the shrubs are relatively few and easily distinguished; the herbaceous species more abundant and something of a challenge! This genus is poorly collected in our region, and more species are likely to be present here; see Colorado floras to check for other possible species when in doubt. See also *Chenopodium*!

#### SPECIES THAT ARE CLEARLY SHRUBBY

*Atriplex canescens* (Pursh) Nutt.

**Plants** medium sized to tall shrubs, dioecious with male and female plants. Leaves narrowly lanceolate, grey green. Female flowers with fruit bracts spreading widely, forming four “wings”.

**Habitat:** Mesas, plains, lower grasslands.

**Notes:** An abundant shrub in the lower elevations in dry areas, especially around the mesas and in the Arkansas River Valley. This is the “four wing saltbush”, its name taken from the characteristic bracts on the female bushes.

*Atriplex confertifolia* (Torrey & Fremont) S. Watson

**Plants** medium sized shrubs, noticeably spiny, leaves typically ovate, sometimes more oblong. Plants often very unpleasantly smelly, like selenium.

**Habitat:** Plains and grasslands, most commonly in Pueblo and Fremont Counties.

**Notes:** Look for the spines, the rounded leaves and the bad smell.

SPECIES WITH WOODY BASES ONLY, NOT CLEARLY SHRUBBY

*Atriplex gardneri* (Moquin) Standley

**Plants** with woody bases and herbaceous upper stems; stem and branches greyish to white scurfy, leaves white or grayish. Flowers in long terminal spikes, fruit a berry-like utricle.

**Habitat:** Plains, Arkansas River drainage.

**Notes:** Relatively uncommon in our area, known from Pueblo -Cañon City.

SPECIES HERBACEOUS THROUGHOUT

*Atriplex argentea* Nuttall

**Plants** with thick, triangular leaves, veins pinnate. Plants very greyish or silvery pubescent, especially on lower leaf surfaces. Bracts irregularly toothed at apex (use lens).

**Habitat:** Alkaline flats, pond margins at low elevations.

**Notes:** Look for the thick leaves and pinnate veins. Close to *A. powelli*, which lacks leaf succulence and has 3 veins in a leaf.

*Atriplex patula* L.

**Plants** greenish, lacking prominent farina, bracts rhombic to rhombic ovate, leaves oblong to triangular hastate.

**Habitat:** Adventive species occurring in disturbed areas.

**Notes:** Look for the lack of meal and the hastate leaf lobes.

*Atriplex powellii* S. Watson

**Plants** with oval, nonsucculent leaves, veins 3, prominent. Plants farinose. Bracts smooth at the apex.

**Habitat:** Roadsides, barrens, Arkansas River region, especially between Pueblo and Cañon City but also occurring in s. El Paso Co.

**Notes:** Apparently only found in a narrow region, or perhaps little collected elsewhere. Look for the oval leaves.

*Atriplex rosea* L.

**Plants** farinose, leaves coarsely dentate, bracts becoming very hard.

**Habitat:** Adventive species, roadsides.

**Notes:** Look for the hard bracts around the flowers and coarsely dentate leaves.

*Atriplex saccaria* S. Watson

**Plants** farinose, leaves cordate at the base, bracts cuneate.

**Habitat:** Open flats, southern portion of our region.

**Notes:** Look for the cordate leaf bases.

*Atriplex hortensis* is a common garden weed that occurs here but is not typically naturalized outside of gardens. It is distinguished by the erect stem, broad, triangular leaves with hastate bases, and the stems that turn reddish purple.

***Axyris* “Russian pigweed”**

*Axyris amaranthoides* L.

**Plants** annual, with whitish green stems erect, branched, to 1 m or taller. Leaves ovate to lanceolate, flowers monoecious, with male flowers surrounded by paper sepals and female flowers green, in the leaf axils or mixed with male flowers.

**Habitat:** Roadsides, fields, disturbed areas.

**Notes:** Adventive species, relatively uncommon here. Look for a whitish green stem.

### *Bassia*

*Bassia hyssopifolia* (Pallas) Kuntze

**Plants** much branched annuals, to 1 m. Leaves very small, lanceolate, flowers in leaf axils; sepals with distinctive hooked spines.

**Habitat:** Disturbed areas, lowlands and agricultural regions.

**Notes:** Similar to the abundant *Kochia*, but with hooked spines on the sepals.

### *Chenopodium* “lamb’s quarters”

There are many species in this very common genus, some of which are quite distinctive, but some are not. Be careful about confusion with *Atriplex*: *Chenopodium* has perfect flowers (you will need a good lens or microscope)! Fruits are often necessary for positive identification.

*Chenopodium album* L.

**Plants** annual, from relatively short to 1 m or taller; extremely variable! Leaves farinose below, petiolate, with dentate-undulate margins, shape highly variable, ranging from lanceolate to rhombic; often with reddish purple blotches. Flower clusters terminal, at the end of branches.

**Habitat:** Disturbed areas.

**Notes:** Adventive species, an extremely common and variable weed. See *C. berlandieri*.

*Chenopodium atrovirens* Rydberg

**Plants** annual, stems relatively thick, to 0.5 m, erect, much branched. Leaves relatively thick, ovate to oblong, margins entire, slightly farinose when young, glabrate in age.

**Habitat:** Roadsides, disturbed areas.

**Notes:** Relatively uncommon or undercollected here, but probably present throughout our region.

*Chenopodium berlandieri* Moquin

**Plants** annual, pale, and farinose in appearance; stems to 1.5 m tall, erect, often branched. Leaves to 4 cm, ovate, elliptic, or rhombic, usually broadly cuneate at the base, pale above, farinose below.

**Habitat:** Disturbed areas, roadsides, meadows.

**Notes:** A native species, very similar to *C. album*. *C. berlandieri* has fruits that are not honeycombed in appearance, unlike *C. album* which does have distinctly reticulate fruits.

*Chenopodium capitatum* (L.) Ascherson

**Plants** annual, leaves green, farinose, triangular, coarsely dentate. Flowers in dense, round clusters, becoming bright red at maturity.

**Habitat:** Roadsides and trails, middle elevations.

**Notes:** Adventive species, distinctive with the bright red clusters that give the name “strawberry blite”.

*Chenopodium cycloides* A. Nelson

**Plants** delicate annuals, to 1 m in height, little branched. Flowers in small clusters, throughout the stem. Each flower surrounded by a wavy collar composed of fused sepals that enlarge with age.

**Habitat:** Open sandy areas, plains.

**Notes:** Apparently rare or overlooked; very similar to *C. subglabrum*, which lacks the distinctive “collar”. Look also for the bright red centers on ripe fruits.

*Chenopodium foliosum* (Moench) Ascherson

Syn. *Chenopodium overi*

**Plants** annual, leaves green, farinose, flowers in tiny clusters that remain green; clusters in terminal spike interspersed with leafy bracts. Leaves usually rounded to ovate.

**Habitat:** Middle elevations.

**Notes:** Similar to *C. capitatum*, but more slender and without the red flower clusters.

*Chenopodium fremontii* S. Watson

**Plants** relatively slender, stems weak, green to slightly farinose. Leaves broad, with rounded apex and basal lobes. Flower clusters small, in interrupted spikes.

**Habitat:** Piñon-juniper woodlands, foothills, and lower elevations.

**Notes:** Native species, one of the few *Chenopodiums* that occur in the dry oak or piñon woodlands of the southern portion of our range.

*Chenopodium glaucum* L.

**Plants** erect or prostrate, branched from the base, stems stout. Leaves obovate to oblong, margins sinuate dentate to entire, farinose below when young. Inflorescences in interrupted terminal spikes.

**Habitat:** Moist pond shores, lower elevations.

**Notes:** One of the few species in the genus that occurs in moist habitats.

*Chenopodium incanum* (Watson) Heller

**Plants** relatively low, less than 0.5 m, branched from the base and forming an inverted triangle. Leaves narrowly lanceolate-elliptical, white farinose below. Fruits with the sepals covering them almost entirely.

**Habitat:** Moist clay or sandy soils, often in playa basins on the plains.

**Notes:** Look for the low branched growth habit and the moist habitat. Usually visible late in the season as the plains dry out.

*Chenopodium leptophyllum* (Nuttall ex Moquin) S. Watson

**Plants** with erect stems, to 0.5 m., somewhat delicate in appearance. Leaves narrowly oblong, with a single main vein, not white below.

**Habitat:** Plains grasslands, piñon-juniper woodlands.

**Notes:** Common in the southern portion of our region.

*Chenopodium pratericola* Rydberg

**Plants** with thin stems, to 80 cm, much branched. Leaves narrow, bases often hastate, main veins 3, lower surfaces often bright green with dense farina.

**Habitat:** Plains.

**Notes:** Differing from *C. leptophyllum* in the number of veins and in having farina.

*Chenopodium simplex* (Torrey) Rafinesque

**Plants** to 1 m, erect, much branched. Leaves broadly triangular to ovate, farinose, often subcordate at the base, with prominent teeth on the margin.

**Habitat:** Foothills canyons.

**Notes:** Uncommon in our region. Look for the large, toothed leaves.

*Chenopodium subglabrum* (Watson) Nelson

**Plants** relatively delicate, stems erect little branched. Leaves with 1 main vein, narrowly oblong.

**Habitat:** Sandy areas on the plain.

**Notes:** Similar to the more rare *C. cycloides*, but lacking that species distinctive fused sepals.

*Chenopodium watsonii* A. Nelson

**Plants** somewhat unpleasantly aromatic, stems to 80 cm, much branched. Stems densely farinose, 1-4 cm long and equally wide, rounded deltoid, margins entire or with 1-2 large teeth on 1 side, farinose on both surfaces. Fruits white.

**Habitat:** Plains.

**Notes:** Uncommon or little collected.

Several other species of *Chenopodium* may occur here as adventive species or as natives, though they have not yet been definitively found in our region. Many of these are described in detail in other floras for Colorado and for the Great Plains.

#### ***Corispermum* “bugseed, tickseed”**

*Corispermum americanum* (Nuttall) Nuttall

**Plants** annual, stems to 50 cm tall, branched. Stems glabrous, ascending. Leaves linear. Flowers in leaf axils, subtended by a bract. Fruits prominently winged.

**Habitat:** Sandy areas on the plains.

**Notes:** Uncommon or little collected. Look for the glabrous stems and wide wings on the fruits to distinguish this species from *C. villosum*.

*Corispermum villosum* Rydberg

**Plants** annual, stems 5-20 cm tall, much branched at least in age. Stems strongly villous. Leaves linear, cuspidate, pubescent. Flowers perfect, subtended by leaf-like scarious margined bracts; fruits narrowly winged. Plants somewhat inconspicuous.

**Habitat:** Plains, especially on dunes and sandy blowouts in Chico Basin.

**Notes:** Uncommon or little collected; look for the long villous hairs.

#### ***Cycloloma* “winged pigweed”**

*Cycloloma atriciplifolium* (Sprengel) Coulter

**Plants** annual, with delicate, diffusely branching stems, to ca 0.5 m. Leaves narrowly oblong to lanceolate, irregularly sinuate on the margins, with teeth having a mucronate apex. Leaves dropping in age, and plants becoming a bright red color, acting as tumbleweeds.

**Habitat:** Sandy areas, plains.

**Notes:** A beautiful late summer plant, adding a delicate red splash on the roadsides.

#### ***Halogeton***

*Halogeton glomeratus* (Bieberstein) Meyer

**Plants** annual, stems low, to 30 cm, branched from the base and quite red in color. Leaves cylindrical, succulent, with a sharp bristle tip.

**Habitat:** Adventive species of wet, alkaline ground.

**Notes:** Recently found in Pueblo, otherwise common on the west slope. A problematic weed to eradicate and one of our noxious species. Look for the distinctive bristle-tipped, succulent leaves.

#### ***Kochia* “burning bush”**

*Kochia scoparia* (L.) Schrad.

Syn. *Kochia sieversiana*, *Bassia sieversiana*

**Plants** tall, bushy branched annuals, to 2 m. Leaves alternate, thin, lanceolate. Flowers clustered in leaf axils, gray tomentose in age. Plants turning reddish purple then brown in age, becoming our most abundant tumbleweed.

**Habitat:** Extremely abundant plant in all disturbed habitats, especially along roadsides and railroad tracks.

**Notes:** Somewhat similar to the much less abundant *Bassia hyssopifolia*, which has spines on the sepals.

#### ***Krascheninnikovia* “winterfat”**

*Krascheninnikovia lanata* (Pursh) Meeuse & Smit

Syn. *Eurotia lanata*, *Ceratoides lanata*

**Plants** suffrutescent, with woody bases and herbaceous stem tips, forming low clumps to 1.5 m. Leaves densely stellate tomentose, lanceolate oblong, margins slightly revolute.

**Habitat:** Mesas, lower foothills, plains.

**Notes:** A very common species on the mesas, often mistaken for a sagebrush, but lacking the sage aroma. One of our more difficult genera to spell but easy to identify. Look for the large grey green clumps.

#### ***Monolepis* “poverty weed”**

*Monolepis nuttalliana* (Schultes) Greene

**Plants** low, branched from the base and somewhat sprawling or prostrate. Leaves succulent, prominently hastate at the base, to 3 cm long. Flower clusters in the leaf axils, flowers with 1 sepal, petals lacking.

**Habitat:** Pond margins, muddy areas on the plains to upper elevations.

**Notes:** Look for the succulent leaves with prominent basal lobes.

#### ***Salsola* “Russian thistle”**

Next to *Kochiai*, the *Salsola* species form our most abundant tumbleweeds. When young, they resemble each other, but *Salsola* becomes very sharp and spiny to the touch. When young, *Salsola* has a stiffer feel to the stem and leaves.

*Salsola australis* R. Brown

**Plants** forming pyramidal tumbleweeds, bracts broad based with flaring spiny tips. Branches very stiffly spreading.

**Habitat:** Disturbed areas, roadsides, adventive species from Asia.

**Notes:** Our most abundant *Salsola*, very spiny in age.

*Salsola collina* Pallas

**Plants** forming pyramidal tumbleweeds, bracts with narrow bases, tips curving inward. Branches arched and curving upwards.

**Habitat:** Disturbed areas, roadsides.

**Notes:** Apparently much less common than *S. australis*.

#### ***Sarcobatus* “greasewood”**

*Sarcobatus vermiculatus* (Hooker) Torrey

**Plants** tall spiny shrubs, to 2 m. Leaves narrowly linear to oblong, up to 2 cm long, flowers subtended by peltate bracts.

**Habitat:** Dry alkaline soil on the plains, southern part of our range.

**Notes:** A ubiquitous shrub of the badlands of the Great Basin, but relatively constrained here, most common in the Chico Basin area and Arkansas River drainage. Look for the spiny twigs and grey green leaves.

#### ***Suaeda* “sea-blite”**

*Suaeda calceoliformis* (Hooker) Moquin

**Plants** annual, stems decumbent, branched from the base and somewhat stout, to 30 cm, often less. Leaves linear, cylindrical, succulent. Flowers usually in leaf axils, with a conical outgrowth on the tepals, flowers appearing contorted.

**Habitat:** Saline areas, muddy pond margins and seeps on the plains.

**Notes:** An indicator of salty conditions, one of the few plants that can tolerate salt flats. The species are difficult to distinguish, and in many difficult habitats the plants do not develop fully.

*Suaeda nigra* (Rafinesque) Macbride

**Plants** annual, stems usually erect, somewhat branched, to 80 cm, often less. Leaves linear, narrowed at the base and somewhat flattened. Flowers in leaf axils, lacking conical outgrowth on the tepals.

**Habitat:** Saline areas, muddy pond margins and seeps on the plains.

**Notes:** Usually more upright than the more common *S. calceoliformis*, leaves flatter, tepals lacking conical outgrowth.

***Suckleya***

*Suckleya suckleyana* (Torrey) Rydberg

**Plants** low, prostrate and spreading, succulent. Leaves long petiolate, blades suborbicular to ovate, margins coarsely toothed.

**Habitat:** Muddy, alkaline areas on the plains.

**Notes:** Look for the rounded leaf shape and the succulent vegetative growth.

***Teloxys* “wormseed”**

*Teloxys botrys* (L.) Weber

Syn. *Chenopodium botrys*

**Plants** annual, aromatic, densely glandular pubescent throughout, stems much branched, to 0.5 m. Leaves oblong or oval, margins irregularly sinuate to pinnatifid.

**Habitat:** Adventive species of roadsides, plains to foothills.

**Notes:** Look for the sticky glandular hairs and note the smell which many find unpleasant.

**Cistaceae: Rock Rose Family**

This Mediterranean family is represented here by only a single, rare species. The upper flowers look somewhat like a *Potentilla*, but the lower ones are cleistogamous and do not open.

***Helianthemum* “frostweed”**

*Helianthemum bicknellii* Fernald

Syn. *Crocianthemum bicknellii*

**Plants** relatively short, with a cluster of wiry stems to about 30 cm. Leaves ovate-elliptic, alternate. Flowers of two types: upper ones yellow, to about 1 cm, stamens many; lower flowers cleistogamous, small, and crowded on short axillary branches. Can be locally abundant in open sandy soils.

**Habitat:** Open ridges in ponderosa pine forests, especially in the Black Forest region.

**Notes:** Easily overlooked species, currently considered somewhat rare. Look for the stem cluster and alternate elliptical leaves.

**Commelinaceae: Dayflower Family**

This Monocot family is characterized by having 3 petals and 3 sepals, with quite showy flowers. They provide a blue or purple blast of color in arid landscapes.

*Key to the Genera*

- 1. Petals blue or blue and white, flowers enclosed in a sheathing bract.....*Commelina*
- 1. Petals purple, flowers not enclosed in a sheathing bract.....*Tradescantia*

***Commelina* “dayflower”**

*Commelina dianthiflora* Delile

**Plants** with flowers with 3 sky blue petals, on short pedicels and hooded by a folded, sheathing bract. Stems relatively low, usually less than 10 cm.

**Habitat:** Canyons off CO115, lower foothills west of Colorado Springs, oak thickets and outcrops.

**Notes:** Uncommon or easily missed in our region, but locally abundant where it does occur. The bright blue flowers are very distinctive.

*Commelina erecta* L.

**Plants** with flowers with 2 blue petals and 1 white petal, on short pedicels and hooded by a folded,

sheathing bract. Sheaths with white, marginal hairs.

**Habitat:** Gulches, foothills, southern portion of our region and Cañon City.

**Notes:** Apparently uncommon or rare here at the edge of its range.

#### *Tradescantia* “spiderwort”

*Tradescantia occidentalis* (Britton) Smyth var *scopulorum* (Rose) Anderson & Woodson

**Plants** with erect stems, to 0.5 m, usually shorter. Stem and leaves somewhat succulent, leaves glaucous. Petals purple, flowers to about 1 cm in diam., showy, on long pedicels from leaf axes.

**Habitat:** Mesas, grasslands, lower foothills.

**Notes:** A common grassland and mesa species, very drought tolerant and showy. Different soil pH may make the flower color vary from pink to purple.

### Convolvulaceae: Morning Glory Family

The classic garden morning glory, with its funnel-shaped flowers and twining growth habit typifies this family. One of our representatives, *Evolvulus*, does not grow as a vine, however, and its flowers are very inconspicuous. Be careful on 1 trick species: *Euploca*, a white-flowered member of the Borage family occurring in sand dunes on the plains, looks like a tiny morning glory at first glance!

#### Key to the Genera

- 1. Leaves linear, glabrous.....*Ipomoea*
- 1. Leaves not linear, or if so, with hairs.....2
- 2. Plants not twining vines, leaves elliptic, densely gray pubescent.....*Evolvulus*
- 2. Plants twining vines, plants not as above.....3
- 3. Plants yellow, stringy vines.....*Cuscuta*
- 3. Plants not as above.....4
- 4. Calyx subtended by 2 large bracts; flowers over 3 cm long.....*Calystegia*
- 4. Calyx not subtended by bracts; flowers less than 3 cm long.....*Convolvulus*

#### *Calystegia* “hedge bindweed”

*Calystegia sepium* (L.) R. Brown ssp *angulata* Brummitt

**Plants** large, twining vines often covering fences and hedgerows; leaves hastate at base, 2-angled; flowers very large, 3-5 cm long, pink, subtended by 2 ovate bracts.

**Habitat:** Grasslands, lower foothills, usually growing on other plants.

**Notes:** Adventive species, uncommon in our region and not problematic like *Convolvulus arvensis*.

#### *Convolvulus* “bindweed”

*Convolvulus arvensis* L.

**Plants** low, twining vines, often forming mats along roadsides or growing on other plants; leaves about as broad as long, hastate at the base. Flowers usually less than 3 cm long, pink to white, lacking bracts below; sepals glabrous or only slightly pubescent.

**Habitat:** Grasslands, roadsides, disturbed areas.

**Notes:** A problematic adventive species and major garden pest that occurs abundantly throughout the region.

*Convolvulus equitans* Bentham

**Plants** low, twining vines, often forming mats along the highways or roadsides, leaves long and narrow,

hastate at the base. Flowers less than 3 cm long, pink to white, lacking bracts below; sepals densely pubescent.

**Habitat:** Grasslands, mesas, roadsides, particularly common in Fremont and Pueblo Counties.

**Notes:** Somewhat less invasive than *C. arvensis*; the common bindweed along Highway 50. Look for the more narrow, very hastate leaves.

### *Cuscuta* “dodder”

This parasitic group of species is very obvious due to its orange color and strangling growth habit. Some botanists place dodders in their own family, the Cuscutaceae, and some treat the group under two generic names, *Cuscuta* and *Grammica*, which differ in style shape. Since the characters are hard to distinguish and flowers are very small or lacking, our species are treated here as *Cuscuta*.

*Cuscuta indecora* Choisy

Syn. *Grammica indecora*

**Plants** stringy orange vines, almost always covering other species. Flowers inconspicuous, tube longer than the calyx, lobes not reflexed.

**Habitat:** Plains grasslands.

**Notes:** Relatively uncommon; our collections known from the Falcon-Peyton area. Look for the corolla tube slightly longer than the calyx and flat, not reflexed petals.

*Cuscuta umbellata* Kunth

Syn. *Grammica umbellata*

**Plants** stringy orange vines, covering other plants. Flowers inconspicuous, tube enclosed by the calyx, lobes reflexed.

**Habitat:** Plains grasslands.

**Notes:** Uncommon, known from the Chico Basin area of Pueblo Co. Look for the reflexed corolla lobes and short tube, engulfed by the calyx.

### *Evolvulus*

*Evolvulus nuttallianus* Schultes

**Plants** with clumps of stems to about 30 cm; leaves elliptical, densely gray pubescent. Flowers small, inconspicuous, purple, occurring singly in the leaf axils.

**Habitat:** Dry grasslands, plains and barrens.

**Notes:** A common and distinctive species, but very unlike the other members of the family here.

### *Ipomoea* “morning glory”

*Ipomoea leptophylla* Torrey

**Plants** forming bushy, sprawling mounds. Leaves narrow, linear-lanceolate. Flowers very large, over 5 cm long; conspicuous red-purple.

**Habitat:** Plains, mesas, often in sandy or gravelly areas.

**Notes:** A beautiful conspicuous summer wildflower in the lower elevations; common throughout our region, esp. in southern El Paso Co., and Pueblo Co. Look for the huge flowers and clumped growth.

The common garden morning glory, *Ipomoea purpurea*, is occasionally naturalized here in small clumps.

## **Cornaceae: Dogwood Family**

The dogwoods are typified by the well known horticultural trees of the south, the flowering dogwoods. Our two native species are less showy, but have similar 4-parted flowers (not composed of petals, but actually of petal-like bracts) and opposite, prominently pinnate veined leaves.

*Cornus canadense* L.

Syn. *Chamaepericlymenum canadense*

**Plants** herbaceous, slightly woody at the base; stems to about 20 cm tall, bearing 4 leaves that appear whorled. Leaves ovate-elliptic, prominently veined, 2-8 cm long. Flowers white, composed of petaloid bracts; berry red.

**Habitat:** Moist forests, foothills.

**Notes:** A boreal forest species that is uncommon in our dry region; most abundant in the moist foothills west of Palmer Lake, often growing under conifers.

*Cornus sericea* L.

Syn. *Swida sericea*

**Plants** medium sized shrubs, to 2 m; branches many, forming dense thickets. Stems red, leaves opposite, to 11 cm. Flowers white to creamy, fruit a white berry.

**Habitat:** Streamsides in the foothills.

**Notes:** Always found near running water, look for the red stems and opposite leaves.

### **Crassulaceae: Stonecrop Family**

This family is one of our “succulents” (other common ones are the Portulacaceae and the Cactaceae).

#### *Key to the Genera*

1. Flowers yellow, leaves very succulent, rounded in cross section.....*Sedum*
1. Flowers pink, red, or white, leaves not as above.....2
2. Flower pink, perfect, midrib on leaves prominent.....*Clementsia*
2. Flowers red or maroon purple, unisexual, midrib not prominent.....*Rhodiola*

#### ***Clementsia* “queen’s crown, rose crown”**

*Clementsia rhodantha* (A. Gray) Rose

**Plants** to about 20 cm., leaves elliptical, bearing flower clusters in the upper part of the stem, and ribbed below. Flowers pink or white.

**Habitat:** Moist subalpine meadows.

**Notes:** Look for the pink color to distinguish this from *Rhodiola*. One of our beautiful moist meadow species; very showy in July.

#### ***Rhodiola* “king’s crown”**

*Rhodiola integrifolia* Rafinesque

**Plants** to about 20 cm, leaves elliptical, bearing flower clusters at the tip of the stem, not prominently ribbed below. Flowers deep maroon red.

**Habitat:** Alpine and subalpine meadows.

**Notes:** Look for the maroon flower color and the lack of a prominent midrib on the underneath surface of the leaves. A common high elevation species.

#### ***Sedum* “stonecrop”**

*Sedum lanceolatum* Torrey

Syn. *Amerosedum lanceolatum*

**Plants** low, stems less than 10 cm. Leaves very fleshy, cylindrical in cross section, closely packed on the stem. Flowers yellow, star-shaped.

**Habitat:** Rocky, stony or open areas from the plains to the tundra.

**Notes:** An extremely common species with an enormous elevational range. The bright yellow flowers of

summer are quite showy, but otherwise the plant is inconspicuous.

### **Cucurbitaceae: Squash Family**

All gardeners who have grown pumpkins, squash, cucumbers, zucchini or melons will recognize this family: sprawling vines, broad leaves, big, unisexual, funnelform flowers.

#### *Key to the Genera*

- 1. Plants huge, trailing vines on the ground, leaves rough pubescent, fruit a gourd.....*Cucurbita*
- 1. Plants climbing vines, leaves not rough pubescent, fruit papery and balloonlike.....*Echinocystis*

#### ***Cucurbita* “buffalo gourd”**

*Cucurbita foetidissima* Humboldt, Bonpland, & Kunth

**Plants** sprawling vines, leaves very large, to 20 cm or more broad, entire, harshly pubescent. Flowers orange-yellow, to 10 cm long, female flowers becoming greenish, dry gourds.

**Habitat:** Roadsides, dry disturbed areas.

**Notes:** A native species, very common roadside plant in Fremont and Pueblo Counties; less common but not rare in El Paso Co.

#### ***Echinocystis* “wild cucumber”**

*Echinocystis lobata* (Michaux) Torrey & Gray

**Plants** climbing vines; leaves palmately lobed, with 3-5 triangular lobes. Flowers greenish white, female ones solitary or in small clusters, forming an ovoid, inflated prickly fruit.

**Habitat:** Plains, southern portion of our region.

**Notes:** Showing little resemblance to a cucumber; look for the inflated prickly fruits.

### **Dipsacaceae: Teasel Family**

This family is the only other one in our flora besides the Asteraceae to have a “head” inflorescence. Our species is very distinctive, with prickly 4-angled stems, purple flowers in the head, and a sharp head with sharp bracts remaining after flowering.

*Dipsacus fullonum* L.

**Plants** biennial, stems very tall, to over 3 m, stems 4-angled, harshly scabrous-prickly; leaves opposite, sessile, bases forming a “moat” that collects water. Flowers purple, in a ovoid or cylindrical head.

**Habitat:** Wetlands, moist swales, and streamsides, especially common along Fountain Creek.

**Notes:** Although attractive to insects, “teasel” is a problematic invasive species here in wetlands and along streams.

### **Elaeagnaceae: Oleaster Family**

This family is generally composed of shrubs with leaves characterized by silvery scales and hairs. The fruit looks berry-like, but is actually composed of a swollen calyx that becomes the berry wall and the interior portion is an achene.

#### *Key to the Genera*

- 1. Leaves opposite, plants low shrubs, dioecious.....*Shepherdia*
- 1. Leaves alternate, plants tall shrubs or small trees, flowers usually perfect.....*Elaeagnus*

***Elaeagnus* “Russian olive, silverberry”**

*Elaeagnus angustifolia* L.

**Plants** tall shrubs or small trees, branches usually thorny. Leaves alternate, lanceolate, longer than wide, usually less than 2 cm wide; branches and leaves silvery in appearance.

**Habitat:** Adventive species, very common along roadsides, river and stream banks, especially common on the plains.

**Notes:** A somewhat invasive species now dominating riverbanks and displacing native shrub species that provide important bird habitat. The silvery leaves and stems are very distinctive.

*Elaeagnus commutata* Bernhardt

**Plants** tall shrubs, branches not thorny. Leaves alternate, broadly lanceolate, usually over 3 cm wide; branches with brown scales.

**Habitat:** Known in small patches from the Florissant area.

**Notes:** Probably not native populations and apparently not spreading beyond a limited area in Teller County.

***Shepherdia* “buffalo berry”**

*Shepherdia canadensis* (L.) Nuttall

**Plants** low shrubs, leaves opposite, green, broadly elliptical with prominent rusty brown scales. Fruits orange red.

**Habitat:** Pine forests, rocky slopes.

**Notes:** Uncommon in our region, generally more common in Fremont Co. than here, though abundant elsewhere in Colorado. Look for the scaly leaves.

**Elatinaceae: Waterwort Family**

This small family of tiny, pond-shore plants is often overlooked and not well represented in our region. The genera and species resemble other tiny semi-aquatic species in other families, so look closely! These have opposite or verticillate leaves that are entire and subtended by small stipules. Flowers are axillary.

*Key to the Genera*

- 1. Plants erect, glandular pubescent throughout, sepals and petals 5.....*Bergia*
- 1. Plants creeping, not glandular, sepals 2, petals 3.....*Elatine*

***Bergia***

*Bergia texana* (Hooker) Seubert

**Plants** low, somewhat erect, notably glandular, sepals 5, with prominent scarious margins and midrib.

**Habitat:** Pondshores, low elevations.

**Notes:** Apparently rare, known from only a few old collections in Colorado.

***Elatine* “waterwort”**

*Elatine rubella* Rydberg

**Plants** low, creeping, leaves spatulate, glabrous. Flowers whitish, sepals 2 and petals 3.

**Habitat:** Pond-shores, muddy banks, shallow water, plains to lower foothills regions.

**Notes:** Resembles *Callitriche*, but less delicate in appearance. Probably very under-collected.

**Ericaceae: Heath Family**

This family, which includes the familiar blueberry, azalea, rhododendron, and heather, is very abundant

in the cool climates of the Northwest and Northeast. In our area, we have few representatives, but the abundant *Arctostaphylos* is a notable component of the understory in our pine forests. Some botanists place the related Wintergreen family Pyrolaceae (*Pyrola*, *Moneses*, *Chimaphila*, etc) under a more inclusive Ericaceae, but it is are separated here. In the Ericaceae here, look for the oval, leathery leaves, and small bell shaped flowers for our genera. Two genera, *Pterospora* and *Hypopitys*, are parasitic and lack chlorophyll.

*Key to the Genera*

- 1. Leaves thick, evergreen, berries red.....*Arctostaphylos*
- 1. Leaves not thick and evergreen.....2
- 2. Leaves scale-like, stem single, tall, plants lacking chlorophyll (not green).....3
- 2. Leaves ovate to elliptical, thin, green.....*Vaccinium*
- 3. Corolla with united petals, plant reddish brown.....*Pterospora*
- 3. Corolla with separate petals, plants yellowish or pinkish.....*Hypopitys*

***Arctostaphylos* “kinnickinnick, bearberry”**

*Arctostaphylos uva-ursi* (L.) Sprengel

**Plants** forming low spreading mats, leaves ovate elliptical, margins entire, somewhat yellowish green, leathery and evergreen. Berries dry, bright red.

**Habitat:** Abundant throughout the pine forests, foothills to middle elevations.

**Notes:** An important food source for animals in winter; one of the few understory plants in ponderosa forests.

***Hypopitys* “pinesap”**

**Plants** composed of a single stem, to 30 cm, pinkish or yellowish green, lacking chlorophyll. Flowers in a nodding terminal cluster, erect in fruit.

**Habitat:** Moist conifer forests.

**Notes:** Uncommon in our region, known from Cheyenne Mountain and the Palmer Divide area. Parasitic on conifers but not harmful. The stems are shorter, and not distinctly red brown as in *Pterospora*.

***Pterospora* “pinedrops”**

*Pterospora andromedea* Nuttall

**Plants** composed of a single, somewhat tall (to 30 cm) stem, reddish brown, lacking chlorophyll. Flowers reddish, in a long raceme, somewhat nodding.

**Habitat:** Pine forests, common, but typically growing singly.

**Notes:** Parasitic on pine species, but not apparently harmful. Look for the distinctive red brown stem.

***Vaccinium* “blueberry, huckleberry”**

The genus *Vaccinium* is a common component of acidic soils in conifer forests and bogs of the northern U.S., and Canada. Several species occur in Colorado, and are abundant elsewhere in the state. Because of the aridity of our region, blueberries are uncommon here, generally found in moist ravines on north facing slopes, especially in the Palmer Divide area, but they also occur sporadically in cool shady moist sites on the Pikes Peak massif. Our species is *V. caespitosum*, but two other species occur just west of us in Park Co, and are possibly present in Fremont County. These species, *V. myrtillus* L. ssp. *oreophilum* and *V. scoparium*, are somewhat difficult to distinguish (perhaps through hybridization) typically occur above or near timberline, and can be distinguished from *V. caespitosum* by the green rather than brown branches, the leaves that are serrate along the entire edge and broad at the base. Many rarely produce berries, though they

are very tasty when they do! These berries are red or blue-black, instead of the deep blue of *V. caespitosum*.

*Vaccinium caespitosum* Michaux

**Plants** low and spreading, suffrutescent, to 30 cm tall. Stems brown, leaves ovate to ovate elliptical, broadest at the middle or above, margins entire below and serrate above the middle. Fruits blue.

**Habitat:** Shady moist sites, often in cool conifer forests and montane ravines and canyons.

**Notes:** Uncommon in our region, occurring only in unusually cool moist habitats.

## Euphorbiaceae: Spurge Family

The spurge family is large and diverse in the tropics but relatively limited here. Our representatives include some noxious weeds (*Euphorbia esula* and *E. myrsinites*), as well as some harmless native species. The family is one of a few with white milky “juice” (although not all species have milky juice) and the flowers are deeply modified and difficult to interpret. The flowers are much reduced, often to a single stamen or pistil, they typically lack sepals, and have colored glands rather than petals. Showy bracts are also common. Familiar cultivated representatives include poinsettia, crown of thorns, and manioc.

### Key to the Genera

1. Leaves silvery with minute stellate hairs (use lens).....*Croton*
1. Leaves not silvery with stellate hairs.....2
2. Upper leaves and bracts with prominent white margins.....*Agaloma*
2. Upper leaves and bracts lacking white margins.....3
3. Flowers with a true calyx, involucre lacking, leaves sharply serrate with stinging hairs.....*Tragia*
3. Flowers lacking sepals or petals, cyathium present (reduced flower cluster that mimics a single flower)...  
.....4
4. Glands in the cyathium with petal-like appendages, leaf bases asymmetrical.....*Chamaesyce*
4. Glands in the cyathium lacking petal-like appendages.....*Euphorbia*

### *Agaloma* “snow on the mountain”

*Agaloma marginata* (Pursh) Löve & Löve

Syn. *Euphorbia marginata*

**Plants** annual, to 1 m tall, stems stout with milky juice. Flowers small, inconspicuous, white, in broad white margined bracts; leaves ovate, upper ones with white margins when mature (sometimes lacking the white margins when immature).

**Habitat:** Dry slopes, sandy areas, plains to lower foothills.

**Notes:** Common but scattered and rarely locally abundant, quite showy and distinctive with the white bracts.

### *Chamaesyce*

This genus is composed of small, sprawling species of open, often sandy soils. They have petal-like appendages in the cyathium, so look like they have tiny white or pinkish flowers. The species can be difficult to distinguish without ripe seeds; these ripen early and can often be found in a plant otherwise in flower.

*Chamaesyce glyptosperma* (Engelmann) Small

**Plants** annual, low and prostrate, stem and leaves glabrous. Leaves opposite, narrowly oblong to ovate, margins entire or serrulate to the apex. Seeds minutely pitted with transverse ridges.

**Habitat:** Open disturbed areas, low elevations.

**Notes:** A native species that acts weedy in disturbed sites. Look for the transverse ridges on the seeds to distinguish this from *C. serpyllifolia*.

*Chamaesyce missurica* (Rafinesque) Shinnars

**Plants** annual, low, erect or sprawling, stem and leaves glabrous. Leaves opposite, linear, entire. Seeds smooth.

**Habitat:** Plains, often in sandy soils.

**Notes:** Look for the linear leaves and smooth seeds.

*Chamaesyce serpyllifolia* (Persoon) Small

**Plants** annual, low, sprawling, stem and leaves glabrous. Leaves opposite, oblong to ovate, margins serrulate towards the apex. Seeds smooth.

**Habitat:** Open disturbed areas, low elevations.

**Notes:** Adventive species often found in gardens or along roads and sidewalks. Look for the smooth seeds to distinguish it from *C. glyptosperma*. The two species are otherwise very similar.

*Chamaesyce stictospora* (Engelmann) Small

**Plants** annual, low, sprawling, stem and leaves with short hairs. Leaves suborbicular to oblong linear. Seeds pitted.

**Habitat:** Plains.

**Notes:** Look for the hairs on the stem and leaves.

### ***Croton***

*Croton texensis* (Klotsch) Müller-Argoviensis

**Plants** annual, stellate pubescent, low and spreading, stems to 60 cm, usually less. Stem and leaves prominently stellate pubescent. Plants dioecious, flowers lacking petals.

**Habitat:** Plains, Arkansas valley and

**Notes:** The stellate pubescent is very distinctive.

### ***Euphorbia* “spurge”**

The spurges are a large, diverse group, and a number of botanists prefer to split the genus into several smaller ones. As a whole, they have milky juice, and lack any petal-like bracts or appendages that are colorful attractants. They range from native species to very problematic weeds.

*Euphorbia brachyceras* Englemann

Syn. *Tithymalus brachyceras*; *E. robusta*

**Plants** perennial, stems to 30 cm tall, clustered and usually erect. Involucres on umbellate clusters at the top of the stem; involucres with long, crescent shaped glands. Leaves ovate or oblong ovate, sessile, thick and somewhat succulent.

**Habitat:** Pine forests, open areas on the mesas and lower foothills and occasionally in sandy areas on the high plains.

**Notes:** Native species, not a problematic weed; look for the clustered stems and thickish leaves.

*Euphorbia dentata* Michaux

Syn. *Poinsettia dentata*

**Plants** annual, stems to 50 cm tall, erect. Leaves opposite, at least on the top of the stem, ovate-lanceolate or oblong lanceolate, coarsely serrate, cuneate at the base, petiolate. Involucres clustered at the ends of the branches.

**Habitat:** Dry soils, roadsides, mesas, grasslands and lower foothills.

**Notes:** A common species, resembling a small, green, and nonshowy poinsettia.

*Euphorbia esula* L.

Syn. *Tithymalus esula*, *T. uralensis*

**Plants** perennial, rhizomatous; stems to 50 cm tall, unbranched. Leaves alternate, linear, somewhat yellow green in color, to 5 cm long. Involucres subtended by large, yellow, heart-shaped bracts.

**Habitat:** Meadows, grasslands throughout our region; noxious weed abundant in pastures of northern El Paso County and elsewhere in Colorado.

**Notes:** Some botanists recognize two species of “leafy spurge”: *E. esula* and *E. uralensis*, that differ in leaf shape; others combine the two species under a single name. This is an extremely problematic species that destroys pastures for grazing, rapidly spreading throughout the Black Forest.

*Euphorbia myrsinites* L.

Syn. *Tithymalus myrsinites*

**Plants** low, sprawling perennials. Leaves oblanceolate, mucronate at the apex, thick and succulent.

Involucres with yellow-green bracts, blooming in late spring.

**Habitat:** Adventive species often planted in gardens, and now escaping to be pervasive along roadsides, mesas and lower foothills in the Colorado Springs region.

**Notes:** Increasingly becoming established and problematic in our region. Look for the sprawling habit and succulent leaves. Remove whenever possible!

*Euphorbia spathulatus* Lamarck

Syn. *Tithymalus spathulatus*; *E. dictyosperma*

**Plants** annual, stems to 50 cm, branching above. Leaves 1-3 cm long, oblong or oblong spathulate, upper ovate; serrulate on the margins.

**Habitat:** Sandy soils on the plains.

**Notes:** Native species, occurring on sandy ridges and streambanks at lower elevations.

### ***Tragia* “noseburn”**

This arid-land member of the family gets its common name from the stinging, nettle-like hairs that occur over the entire plant. More than a few botanists taking an exploratory smell have gotten a stinging surprise from them.

*Tragia ramosa* (Müller-Argoviensis in de Candolle) Torrey

**Plants** perennial, stems to 30 cm., much branched. Leaves triangular to lanceolate, 1-2 cm long, prominently coarsely and sharply serrate. Flowers monoecious. Entire plant covered with stinging hairs.

**Habitat:** Dry rocky areas, southern portion of our region, often in the piñon-juniper zone.

**Notes:** Very common in Fremont and Pueblo Counties.