

Asteraceae

of the

Pikes Peak Region



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Asteraceae (Compositae): Aster Family

The Aster family (sometimes called Daisy or Sunflower family) is large and complex, especially here in the Southwest. Its representatives occur in all habitats: wetlands and arid lands, plains to the highest tundra and talus slopes of the mountains. Although many of the representatives are superficially similar, at least at the generic level the taxa are fairly straightforward to identify, although they have specialized parts and terminology. Knowing the following terms will be essential for identification in this family:

Head: the type of inflorescence where specialized flowers (*ray* and *disk* flowers) work together as a reproductive unit.

Ray flowers: the flat petal-like flowers (what gets pulled off in the game “s/he loves me-s/he loves me not) that serve usually only as attractants for pollinators and are not fertile, although they typically contain a residual ovary and stigma.

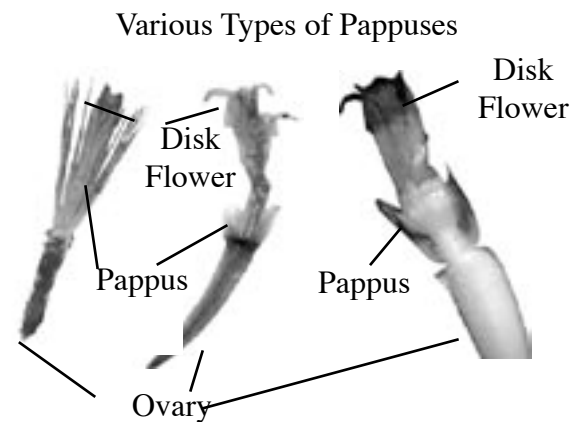
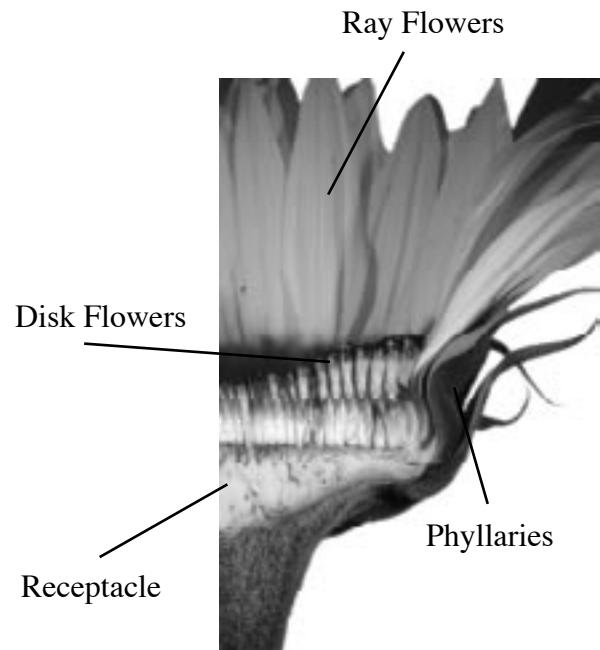
Disk flowers: the inner set of flowers. Usually a different color than the ray flowers; typically fertile, with a single inferior ovary and corolla of tiny fused petals.

Pappus: technically speaking, the modified calyx of the disk flowers that sits on the upper edge of the ovary. It can occur as hairs or bristles, scales, or short awns.

Receptacle: the top of the stem where the disk flowers are embedded. Usually a dome-shaped structure, and sometimes containing small flat scales called “chaff”.

Phyllaries: Small bracts beneath the inflorescence that look like and are positioned as sepals would be in a simple flower (see *pappus*). Color, shape, arrangement, and ornamentation of the phyllaries can be diagnostic at the generic and species levels. The *involucre* (a whorl of bracts below an inflorescence) refers to the phyllaries, collectively.

Overview of *Asteraceae* flower morphology



Given the size of the family, keys to identification are typically broken up into separate groups. The groups identified here are the usual segregations in the Asteraceae. Note that occasional mutants and/or rayless species occur in several species where ray flowers usually occur. These typically are found in groups C and D, where the disks are very prominent.

Keys to the Asteraceae

1. Flowers composed entirely of strap-shaped ray flowers, stems and leaves with milky sap.....*A (Dandelion-like group)*
1. Flowers not as above, plants lacking milky juice2
2. Both ray and disk flowers present 3
2. Only disk flowers presents5
3. Ray flowers yellow or orange4
3. Ray flowers white, pink, purple or blue**B (Daisy and Aster-like group)**
4. Pappus chaffy, or of firm awns or absent *C (Sunflower-like group)*
4. Pappus of capillary or plumose bristles*D (Senecio and Goldenrod-like group)*
5. Inflorescences spiny and bur-like OR phyllaries with either spines or broad papery
Margins.....*E (Thistle-like group)*
5. Inflorescence not as above6
6. Pappus of capillary or plumose bristles *F (Rabbitbrush-like group)*
6. Pappus absent or composed of scales, short awns, or teeth*G (Sagebrush-like group)*

Group A: Dandelion Group Plants with ray flowers only, sap milky.

1. Flowers blue, pink, purple or white2
1. Flowers yellow or orange.....9
2. Flowers sky blue, pappus a crown of blunt scales.....*Cichorium*
2. Flowers not sky blues, pappus composed of bristles, not scales.....3
3. Pappus plumose (feathery).....4
3. Pappus simple bristles, not feathery.....5
4. Leaves elongate and somewhat grasslike, stems tall and with few branches, heads large with swollen peduncle.....*Tragopogon*
4. Leaves short and inconspicuous, stems wiry and branched, heads small, peduncles not swollen.....*Stephanomeria*
5. Stems low and branched; leaves narrowly linear or very short and bractlike.....6
5. Stems tall and unbranched, leaves well developed.....7
6. Plants annual, pappus white.....*Shinneroseris*
6. Plants perennial, pappus brownish*Lygodesmia*
7. Leaves lanceolate, tips of lobes tapered to a point.....*Lactuca*
7. Leaves oblanceolate, tips rounded.....8
8. Leaves glabrous and glaucous, heads nodding.....*Prenanthes*
8. Leaves with hairs, not glaucous, heads erect;*Hieracium albiflora*
9. Leaves mostly basal, stem leaves reduced in size upwards on the stem.....10
9. Leaves not mostly basal, stem leaves not reduced in size on the stem.....19

10. Pappus of plumose (feathery) bristles, heads nodding; plants of montane and subalpine zones.....	<i>Microseris</i>
10. Pappus of simple bristles, plants not as above and in all elevations	11
11. Plants with a basal rosette of almost entire to denticulate leaves, heads less than 4, with a broad noticeable bract at the base.....	<i>Krigia</i>
11. Plants not as above.....	12
12. Heads single, stem leafless.....	13
12. Heads more than one, stem with at least 1, usually more, stem with noticeable leaves.....	15
13. Leaves with wavy margins carrying crinkly hairs.....	<i>Nothocalais</i>
13. Leaves not as above.....	14
14. Achenes with 10 ribs (appearing as lines), flowers orange or yellow; if yellow, then large with erect phyllaries.....	<i>Agoseris</i>
14. Achenes with 4-5 ribs; plants with large yellow flowers and down-curving phyllaries OR plants small and inconspicuous, growing in the alpine zone.....	<i>Taraxacum</i>
15. Ray flowers orange, stems with gland-tipped hairs and stiff, spreading hairs.....	<i>Hieracium</i>
15. Ray flowers yellow; pubescence otherwise or lacking.....	16
16. Pappus white.....	17
16. Pappus brown or reddish.....	<i>Hieracium</i>
17. Dwarf alpine plants of scree slopes; leaves simple and entire, succulent.....	<i>Crepis nana</i>
17. Plants of wet or dry meadows on the plains through the upper montane; plants not dwarf.....	<i>Crepis</i>
18. Leaves simple, not toothed or divided.....	<i>Tragopogon</i>
18. Leaves toothed or divided.....	19
19. Leaves ovate, dentate, pappus lacking.....	<i>Lapsana</i>
19. Leaves not as above, pappus present.....	20
20. Pappus plumose, leaves lobed, margins not sharply toothed.....	<i>Scorzonera</i>
20. Plants not as above; leaf margins sharply toothed.....	21
21. Fruits beaked, involucre below the heads cylindrical.....	<i>Lactuca</i>
21. Fruits not beaked; involucre broad.....	<i>Sonchus</i>

Group B: Aster or Daisy-like group; plants with both ray and disk flowers; ray flowers white, pink, purple, or blue

1. Plants growing in low, tight cushions with heads recessed deeply into the linear-lanceolate leaves; plants of the shale or chalk barrens in the Arkansas River drainage.....	<i>Bolophyta</i>
1. Plants not as above.....	2
2. Lower leaves opposite.....	3
2. Lower leaves alternate.....	6
3. Ray flowers pink, purple, or bluish.....	4
3. Ray flowers white.....	5
4. Leaves pinnatisect, plants of the Black Forest region and adjacent plains.....	<i>Cosmos</i>
4. Leaves simple, plants of sandy areas on the plains.....	<i>Palafoxia</i>

5. Plants perennial, low, bushy, and somewhat woody at the base; heads 1 cm or more in diameter	<i>Melampodium</i>
5. Plants annual, tall and slender, head <0.5 mm in diameter	<i>Galinsoga</i>
6. Receptacle “chaffy: with broad scale-like enations among the ovaries or achene.....	7
6. Receptacle not chaffy.....	9
7. Ray flowers purple, “chaff” stiff and pointed.....	<i>Echinacea</i>
7. Ray flowers white or creamy, “chaff” not stiff and pointed.....	8
8. Leaves finely dissected and aromatic, heads with few broad ray flowers.....	<i>Achillea</i>
8. Plants not as above, leaves in basal rosettes, stems tall and lacking leaves; ray flowers many.....	<i>Hymenopappus</i>
9. Pappus lacking.....	10
9. Pappus present, composed of bristles.....	11
10. Leaves simple to pinnasect, heads >1 cm in diameter, plants not distinctly aromatic and smelling of pineapple.....	<i>Leucanthemum</i>
10. Leaves finely pinnatisect, head<1 cm in diameter, plants smelling like pineapple.....	<i>Matricaria</i>
11. Leaves cordate-triangular with sagittate base and white hairs below.....	<i>Petasites</i>
11. Leaves not as above.....	12
12. Pappus of rigid bristles, plants low, bushy cushions, often stemless.....	<i>Townsendia</i>
12. Pappus of long capillary bristles, plant not as above.....	13
13. Phyllaries in rows and appearing layered, not leaflike nor with chartaceous bases that contrast with green tips.....	14
13. Phyllaries more or less equal and leaflike or in several layers with a chartaceous base and green tips.....	17
14. Ray flowers numerous, very narrow and short.....	15
14. Ray flowers few or numerous but not narrow and short.....	16
15. Ray flower “ligule” (the single petal) minute, hardly noticeable, involucre <0.5 mm.....	<i>Conyza</i>
15. Ray flower “ligule” conspicuous, or involucre >0.5 mm.....	<i>Erigeron</i>
16. Plants perennial, often with woody caudices or deep rhizomes.....	<i>Erigeron</i>
16. Plants annual, biennial, or short-lived perennial.....	<i>Erigeron (divergens group)</i>
17. Plants annual, pappus conspicuous and appearing like a powderpuff when in fruit.....	<i>Brachyactis</i>
17. Plants perennial, pappus not as above.....	18
18. Leaves linear.....	19
18. Leaves usually not linear (but see <i>Aster, virgulus-group</i> also)	20
19. Leaves <1 cm long, plants low and bushy branched; dry areas on the plains.....	<i>Leucelene</i>
19. Leaves >3 cm long, plants taller and little branched, rays white with pale yellow disk flowers.....	<i>Unamia</i>
20. Leaves toothed or divided.....	<i>Machaeranthera</i>
20. Leaves entire.....	21
21. Involucre 3-4 mm, leaves linear-oblong and short.....	<i>Aster -”virgulus” group</i>
21. Involucre >4 mm, leaves broader and long.....	<i>Aster</i>

Group C: Plants with both ray and disk flowers; ray flowers yellow or orange, pappus “chaffy” or of firm awns or absent. Note: Ray flowers are sometimes lacking in *Bidens* and *Grindelia* that will key here. See description of the genus.

1. Phyllaries sticky or gummy with sap.....	2
1. Phyllaries not sticky or gummy.....	4
2. Gummy sap on phyllaries occurring in narrow lines, leaves opposite.....	<i>Flaveria</i>
2. Sap on phyllaries not occurring in narrow lines, leaves alternate.....	3
3. Leaves broad, lanceolate-oblong, heads > 1 cm in diameter.....	<i>Grindelia</i>
3. Leaves narrowly linear, heads < 0.5 cm in diameter.....	<i>Gutierrezia</i>
4. Receptacle holding “chaff” (scale-like projections) or bristles (use a lens).....	5
4. Receptacle lacking chaff or bristles (use a lens).....	19
5. Receptacle with bristles, ray flowers typically bi-colored yellow and orange-red.....	<i>Gaillardia</i>
5. Receptacle with chaff, ray flowers not bi-colored.....	6
6. Phyllaries broad and rounded at the tip, plants low w/slightly twisted linear lanceolate leaves....	<i>Zinnia</i>
6. Plants not as above.....	7
7. Achenes flattened at right angles to the radius of the head.....	8
7. Achenes not flattened or if flattened, then parallel to the radius of the head.....	12
8. Leaves scratchy to the touch.....	9
8. Leaves not scratchy to the touch.....	10
9. Plants less than 1 m tall, plants of dry prairie and roadside	<i>Englemannia</i>
9. Plants very tall, up to 2m, plants of moist prairie.....	<i>Silphium</i>
10. Pappus of 2-4 barbed awns (appearing like short horns), leaves entire or pinnatifid.....	<i>Bidens</i>
10. Pappus of 2 minute teeth or entirely lacking, leaves pinnate, basal.....	11
11. Lobes of disk flowers equal, triangular, plants of wet areas.....	<i>Coreopsis</i>
11. Lobes of disk flowers unequal, oblong to linear-lanceolate, plants of dry areas.....	<i>Thelesperma</i>
12. Phyllaries in a single row, glandular, ray flowers very short, plants sticky.....	<i>Madia</i>
12. Phyllaries not as above.....	13
13. Receptacle prominently elongate or conical, so disk sticks up as a lump.....	14
13. Receptacle flat or only slightly convex.....	18
14. Receptacle elongate, ray flowers often with a maroon color, leaves with narrow divisions.....	<i>Ratibida</i>
14. Receptacle conical, ray flowers all yellow, leaves simple or with broad divisions.....	15
15. Ray flowers with well-developed styles (use a lens), flower heads large, over 3 cm diameter, disk flowers greenish or dark brown.....	<i>Rudbeckia</i>
15. Ray flowers lacking styles, flower heads smaller, disk flowers brown or reddish.....	16
16. Leaves alternate, silvery white, pubescent below; weedy species of low elevations.....	<i>Ximenesia</i>
16. Leaves opposite, green, plants native,	17
17. Leaves entire.....	<i>Heliomeris</i>
17. Leaves serrate on the margins.....	<i>Heliopsis</i>
18. Pappus persistent, achenes flattened, plants of the montane zone.....	<i>Helianthella</i>
18. Pappus deciduous, achenes plump, not obviously flattened, plants of low elevations.....	<i>Helianthus</i>
19. Leaves divided to pinnatifid.....	20
19. Leaves simple.....	24

20. Plants lacking basal rosettes.....	21
20. Plants with basal leaf rosettes.....	22
21. Plants perennial, not strongly aromatic.....	<i>Picradeniopsis</i>
21. Plants annual, aromatic.....	<i>Dyssodia</i>
22. Rosette of basal leaves with many divisions, tips rounded.....	<i>Bahia</i>
22. Rosette of basal leaves with few divisions, tips pointed.....	23
23. Plants of lower and middle elevations, heads <2 cm in diameter, phyllaries in 2 rows.....	<i>Picradenia</i>
23. Plants of the tundra, heads > 3 cm in diameter, phyllaries in 1 series.....	<i>Rydbergia</i>
24. Plants woolly pubescent, ray flowers becoming papery in age.....	<i>Psilostrophe</i>
24. Plants not as above.....	25
25. Plants annual, leaves opposite.....	26
25. Plants perennial, leaves alternate.....	27
26. Plants with a lemony smell, leaves linear.....	<i>Pectis</i>
26. Plants not lemony smelling, leaves lanceolate.....	<i>Flaveria</i>
27. Leaves linear lanceolate, plants with basal leaves or appearing as a tight cushion.....	<i>Tetraneuris</i>
27. Plants not as above.....	28
28. Leaves decurrent on the stem, top of peduncle not woolly pubescent.....	<i>Helenium</i>
28. Leaves not decurrent on the stem, top of peduncle woolly, ray flowers slightly droopy.....	<i>Dugaldia</i>

**Group D: plants with disk flowers and yellow rayflowers; pappus composed of bristles
(Senecio-Goldenrod group)**

1. Leaves opposite.....	<i>Arnica</i>
1. Leaves alternate.....	2
2. Phyllaries mostly in a single series (may be a few smaller ones at the base).....	3
2. Phyllaries in 2 or more series.....	7
3. Heads turbinate, usually nodding when young, leaves somewhat succulent and often aromatic.....	<i>Senecio</i> “ <i>Ligularia</i> ” group
3. Plants not as above.....	4
4. Leaves reduced in size on upper portion of stem, heads erect, plants with woody caudices... <i>Senecio</i> “ <i>Packera</i> group”	
4. Leaves with noticeable cauline leaves	5
5. Leaves entire to dentate, with minute callous teeth on the leaf margins. <i>Senecio</i> “ <i>lugentes</i> group”	
5. Leaves lacking minute callous teeth on the margins.....	6
6. Plants with numerous stems forming bushy clumps, leaves linear..... <i>Senecio</i> “ <i>suffruticosi</i> group”	
6. Plants with few or single stems, leaves not linear..... <i>Senecio</i> “ <i>triangulares</i> group”	
7. Heads small and numerous.....	8
7. Heads few and relatively large.....	9
8. Leaves all linear.....	<i>Euthamia</i>
8. Leaves broader, or only a few upper leaves linear.....	<i>Solidago</i>
9. Leaves pinnatifid.....	<i>Machaeranthera pinnatifida</i>
9. Leaves entire or only toothed.....	10

10. Plants annual, leaves spinulose dentate, resembling <i>Grindelia</i>	<i>Rayjacksonia</i>
10. Plants perennial, not as above.....	11
11. Leaves not mostly basal, always entire.....	12
11. Leaves mostly basal.....	14
12. Involucre ca 1 cm in height, pappus brownish.....	<i>Oönosis</i>
12. Involucre <1 cm in height, pappus white.....	13
13. Pappus double, consisting of short outer bristles or scales and longer inner bristles, phyllaries narrow.....	<i>Heterotheca</i>
13. Pappus single, phyllaries broad.....	<i>Oreochrysum</i>
14. Plants with heads solitary on long peduncles.....	<i>Pyrocoma</i>
14. Plants with heads on short peduncles, barely longer than basal leaves.....	<i>Tonestus</i>

Key E: Plants with involucre a spiny bur (Thistle-like group)

1. Leaves with spiny margins.....	2
1. Leaves lacking spiny margins.....	4
2. Pappus bristles plumose, receptacle bristly.....	<i>Cirsium</i>
2. Pappus bristles simple, receptacle barbed.....	3
3. Receptacle not honey-combed or fleshy.....	<i>Carduus</i>
3. Receptacle fleshy, honey-combed on the surface.....	<i>Onopordum</i>
4. Heads spherical, phyllaries slender with hooked tips, leaves very large, cordate-ovate.....	<i>Arctium</i>
4. Plants not as above.....	5
5. Phyllaries fused into a simple spiny bur.....	6
5. Phyllaries separate, spines, if present, occurring along margins..	<i>Centaurea</i>
6. Heads small, less than 1 cm tall, spines not hooked.....	<i>Ambrosia</i>
6. Heads over 1 cm tall, “bur” spines hooked.....	<i>Xanthium</i>

Key F: Pappus with plumose bristles (Rabbitbrush-like group)

1. Plants true shrubs.....	2
1. Plants herbaceous or woody only at the base.....	5
2. Plants dioecious.....	<i>Baccharis</i>
2. Plants with perfect flowers.....	3
3. Leaves scabrous, flowers white or greenish.....	<i>Brickellia</i>
3. Leaves not scabrous, flowers yellow.....	4
4. Phyllaries +/- of equal length. Plants low shrubs, with white hairy leaves.....	<i>Tetradymia</i>
4. Phyllaries in several imbricate rows; Plants low or tall shrubs, sometimes whitish.....	<i>Chrysothamnus</i>
5. Plants woody at the base.....	6
5. Plants herbaceous.....	9
6. Flowers yellow.....	7
6. Flowers white or cream-colored.....	<i>Brickellia</i>

7. Heads small, involucre less than 1 cm high.....	<i>Chrysothamnus</i>
7. Heads larger, involucre more than 1 cm high.....	<i>Oenopsis</i>
8. Leaves opposite or whorled.....	9
8. Leaves alternate.....	11
9. Flowers yellow.....	<i>Arnica</i>
9. Flowers white or pinkish purple.....	10
10. Leaves opposite, flowers white to creamy.....	<i>Ageratina</i>
10. Leaves in whorls around stem, flowers pinkish purple.....	<i>Eupatorium</i>
11. Flowers all alike, perfect (look for anthers present).....	12
11. Flowers not all alike, outer flowers all female or plants dioecious.....	17
12. Flowers yellow or orange.....	13
12. Flowers lavender, pink, or white to creamy white.....	15
13. Plants annual, garden weeds, heads lacking ray flowers.....	<i>Senecio vulgaris</i>
13. Plants perennial, not as above.....	14
14. Heads turban shaped, nodding, succulent.....	<i>Senecio "Ligularia" group</i>
14. Heads erect.....	<i>Senecio "Packera" group</i>
15. Flowers white or creamy.....	<i>Brickellia</i>
15. Flowers purple.....	16
16. Flowers in spikelike racemes.....	<i>Liatris</i>
16. Flowers in flat topped clusters.....	<i>Vernonia</i>
17. Basal leaves large, over 10 cm long, triangular cordate.....	<i>Petasites</i>
17. Leaves not as above.....	18
18. Plants with tap roots.....	19
18. Plants with fibrous roots, often in mats or with stolons.....	21
19. Plants annual, with a single ball-like leaf cluster.....	<i>Evax</i>
19. Plants annual or perennial, stem leafy.....	20
20. Heads small, less than 5 mm in diameter, stem < 20 cm tall.....	<i>Gnaphalium</i>
20. Heads larger, over 5 mm in diameter, stem >30 cm tall.....	<i>Pseudognaphalium</i>
21. Basal leaves present, stem often with rhizomes or stolons, plants forming patches.....	<i>Antennaria</i>
21. Basal leaves usually lacking, plants sometimes with rhizomes but lacking stolons.....	<i>Anaphalis</i>

Key G: Pappus not plumose, consisting of scales, teeth or awns or entirely lacking (Sagebrush group)

1. Phyllaries sticky gummy, tips recurved.....	<i>Grindelia</i>
1. Phyllaries not sticky gummy with recurved tips.....	2
2. Heads of separate sexes: staminate and carpellate, involucre of male heads with hooked bristles or spines; corollas inconspicuous, greenish.....	3
2. Heads not as above.....	4
3. Female involucre with hooked spines.....	<i>Xanthium</i>
3. Female involucre with straight spines or knobs.....	<i>Ambrosia</i>

4. Leaves opposite.....	5
4. Leaves alternate or basal.....	8
5. Leaves triangular, long attenuate at the tip; plants low, rounded bushes.....	<i>Pericome</i>
5. Leaves not triangular, plants not as above.....	6
6. Plants tall and weedy with cordate, sunflower like leaves.....	<i>Iva xanthifolia</i>
6. Plants low annuals with dissected leaves.....	7
7. Phyllaries with glandular spots, plants aromatic.....	<i>Dyssodia</i>
7. Phyllaries not glandular, plants not strongly aromatic.....	<i>Schkuhria</i>
8. Receptacle chaffy or bristly.....	9
8. Receptacle not chaffy or bristly, sometimes hairy.....	10
9. Leave oblong, heads single in leaf axils, nodding.....	<i>Iva axillaries</i>
9. Leaves large, triangular-ovate, heads in panicles.....	<i>Iva xanthifolia</i>
10. Pappus consisting of scales.....	11
10. Pappus absent, or only a minute set of teeth.....	13
11. Leaves entire, flowers pink.....	<i>Palafoxia</i>
11. Leaves pinnatisect.....	12
12. Phyllaries with papery tips.....	<i>Hymenopappus</i>
12. Phyllaries with green tips.....	<i>Chaenactis</i>
13. Phyllaries in 1 series, leaves linear, plants glandular annuals.....	<i>Madia</i>
13. Phyllaries in several series, annuals, perennials or shrubs.....	14
14. Flowers yellow, in flat topped clusters or solitary.....	15
14. Flowers greenish yellow, in spikes, panicles, or racemes.....	<i>Artemisia</i>
15. Plants low herbs, smelling of pineapples.....	<i>Matricaria</i>
15. Plants taller, aromatic with a medicinal odor.....	<i>Tanacetum</i>

Achillea “yarrow”

Achillea lanulosa Nuttall

Plants up to 1 m tall, but usually less in our region, especially at higher elevations. Stems woolly hairy; leaves finely divided and fern-like, distinctly aromatic. Heads of white ray flower and pale diskflowers, in terminal, somewhat flat-topped clusters.

Habitat: Meadow and fields, from the plains to the tundra.

Notes: A native species, but closely related to (and indistinguishable from) the cultivated Eurasian species *A. millefolium*. Its aroma is unmistakable, and has led to numerous suggested medicinal uses for the plant.

Ageratina “thoroughwort”

Ageratina herbacea (A. Gray) King & Robinson

Syn. *Eupatorium herbacea*

Plants perennial, stems to 80 cm. Leaves opposite, ovate to triangular ovate, bases truncate to somewhat cordate, margins obscurely toothed, apex acute. Flowers 10-20 per head, white to somewhat purplish.

Habitat: Pine forests, gravelly foothills of Pikes Peak.

Notes: Somewhat uncommon here; look for the pale flowers and opposite leaves. Easily confused with *Brickellia*, from which it differs in having a herbaceous habit.

Agoseris “mountain dandelion”

Agoseris species resemble dandelions, but lack the recurved phyllaries of our most common species, the weedy *Taraxacum officinalis* or common dandelion. They are native in our area.

Agoseris aurantiaca (Hooker) Greene

Plants up to about 0.5 m in height; leaves somewhat narrow to oblanceolate, entire to deeply divided. Heads few, flowers deep orange, drying to a purplish color.

Habitat: Meadows, from the montane to the subalpine.

Notes: Relatively small headed in comparison to *A. glauca* and the orange flowers are distinctive.

Agoseris glauca (Pursh) Rafinesque

Plants highly variable in size and degree of pubescence. Leaves also variable in size and shape, primarily basal. Heads generally relatively large, up to 2 cm or more in width.

Habitat: Meadows, montane to subalpine.

Notes: An extremely variable species in all aspects and very common in montane meadows.

Ambrosia “ragweed”

The ragweeds are the bane of all hayfever sufferers, a late season blast of pollen. None are showy plants, and all but a few species are regarded as unpleasant weeds. The spike of small heads (male or female, since the genus is monoecious) is characteristic. The pistillate heads (look below the staminate heads with the pollen) have a burlike involucre, with tubercles or spines that are often diagnostic for the species. The leaves are quite diverse in this genus. Some of the ragweed species were formerly placed in the genus *Franseria*, which is now included under *Ambrosia*. Ripe fruits are often necessary for positive identification to species.

Ambrosia acanthicarpa Hooker

Plants annual, to about 1 m tall. Leaves mostly lobed, alternate above and opposite below. Leaves with stiff hairs. Fruits with several circles of stiff sharp spines.

Habitat: Fields, gardens, and roadsides.

Notes: An abundant, apparently native, weed.

Ambrosia artemisiifolia L.

Plants annual, up to or over 1 m tall when mature. Stem and leaves blue-green, leaves pinnately divided, segments narrow, leaves appearing grayish beneath. Fruits with a row of spines on one side.

Habitat: Roadsides, usually at lower elevations.

Notes: Uncommon or little collected in our region; easily confused with *A. acanthicarpa*, but lacking the sharp spines on the carpellate burs and with more pubescence on the lower surface of the leaves.

Ambrosia confertifolia DeCandolle

Plants perennial, stem to about 0.5 m, hirsute with appressed or spreading hairs. Leaves to 15 cm. Bipinnatifid into oval

or linear segments. Heads glandular puberulent or gland dotted. Fruit with hooked spines.

Habitat: Dry prairie, roadsides, Arkansas River drainage.

Notes: Known from the southern portion of our region in Pueblo County and possibly southern El Paso Co.

Ambrosia grayi (Nelson) Shinnery

Plants perennial, forming clonal colonies, stems erect to spreading. Leaves petiolate, with only a few broad lobes, silvery pubescent. Pistillate heads in upper leaf axils. Fruits with long slender spines and hooked tips.

Habitat: Sandy soils, plains, often in disturbed areas.

Notes: Look for the few lobed leaves and long silvery pubescence.

Ambrosia linearis (Rydberg) Payne

Plants relatively low, usually less than 20 cm tall. Leaves narrowly linear with few divisions, ca 1 cm long, sessile. Leaf margins revolute, showing as green edges against a white tomentose underside. Fruit with spines in a single whorl at the apex.

Habitat: Roadsides, playa lake basins on the plains.

Notes: This species is an endemic of the eastern plains of south-central Colorado. It is relatively common along roadsides where moisture gathers off road surfaces, but the native habitat may be the seasonally wet lake and lowland basins of the plains. Look for the bicolored leaves with curled margins.

Ambrosia psilostachya De Candolle

Plants perennial, with deep taproots. Stems 30-80 cm tall, canescent-strigose. Leaves bipinnatifid, with relatively broad segments, gray strigose on both sides, somewhat thick. Fruit with short stout projections (“tubercles”).

Habitat: Disturbed areas on the plains through lower foothills.

Notes: Extremely common weedy native species.

Ambrosia tomentosa Nuttall

Plants perennial, to about 0.5 m. Stems villous tomentose, becoming glabrous and brown in age. Leaves doubly pinnatifid, segments narrow, dark green above and white-pubescent below. Fruit with long spines.

Habitat: Sandy areas on the plains.

Notes: A distinctive species, relatively uncommon or little collected in our region. Look for the very hairy stems.

Ambrosia trifida L.

Plants tall, stems to or exceeding 1 m in height. Leaves opposite, broadly ovate, palmately lobed with 3-5 lobes. Fruits 4-5 ribbed, with short conical spines.

Habitat: Disturbed areas, plains to lower foothills; especially common along roadsides and trails.

Notes: This adventive species is one of the worst offenders for hayfever. It is very distinctive with its tall stem and broad lobed leaves.

***Anaphalis* “pearly everlasting”**

Anaphalis margaritacea (L.) Bentham & Hooker

Plants to about 0.5 m tall, usually less. Stems single with narrow sessile leaves, lacking basal rosettes. Heads terminal on upper branches; phyllaries in several rows, outer peraly white and scarious. Ray flowers lacking; disk flowers mostly female, occasionally with a few central male flowers.

Habitat: Montane meadows and forests.

Notes: Resembling a larger, single stemmed *Antennaria*; common throughout our region, but especially in Teller County forests and meadows. The common name refers to the white phyllaries, which are prominent in late anthesis.

***Antennaria* “pussytoes”**

Antennaria is an easily recognizable genus, with prostrate mats of ovate to elliptical, often gray green, basal leaves abundant in the forests of the lower foothills to the tundra. Getting *Antennaria* to species level, however, can often be a challenge. It is difficult to identify whether species are sexual, dioecious, or apomictic, and some species hybridize! The descriptions here are general guidelines to the genus in our region.

Antennaria howellii Greene

Plants mat-forming with leafy stolons, leaves green above and heads all female.

Habitat: Pine forests of the foothills and montane; generally in cooler sites.

Notes: Look for leaves that are green above. Uncommon.

Antennaria media Greene

Plants mat-forming, with leafy stolons, leaves white-tomentose on both sides. Outer phyllaries blackish-green at the apex.

Habitat: Subalpine and alpine meadows.

Notes: One of the higher elevation species. Look for the white hairs on both sides of the leaves and the black-green phyllaries.

Antennaria microphylla Rydberg

Plants mat-forming, with leafy stolons, leaves white tomentose on both sides, obovate. Outer phyllaries yellowish green; inflorescence and upper stem leaves glandular.

Habitat: Dry areas, foothills and montane.

Notes: Look for the yellowish green phyllaries and glandular upper part of the stem.

Antennaria neglecta Greene

Plants mat-forming, with leafy stolons, leaves green above, heads with male and female sexes.

Habitat: Mesas and lower foothills.

Notes: Very similar to *A. howellii*, and probably much more common than that species.

Antennaria parvifolia Nuttall

Plants mat-forming, with leafy stolons. Leaves white tomentose on both sides, heads rather large, with an involucre to about 1 cm high.

Habitat: Montane forests and meadow edges.

Notes: Look for the large heads; one of our most common *Antennaria* species.

Antennaria pulcherrima (Hooker) Greene

Plants not mat-forming and lacking leafy stolons. Leaves with parallel venation.

Habitat: Dry meadows.

Notes: A very common species; lacking a stoloniferous mat growth form.

Antennaria rosea Greene

Plants mat-forming; with leafy stolons. Leaves white tomentose on both sides, heads small, often pinkish in color.

Habitat: Montane forests and lower foothills.

Notes: A very common species, similar to *A. parvifolia* but with smaller heads. Although this species is often pink in color, other species can also be pink, so look carefully at all the characters.

Arctium “burdock”

Arctium minus (J. Hill) Bernhardt

Plants biennial, with a rosette of large, cordate hairy leaves the first year; stems to 3 m the second years. **Leaves** hairy, margins somewhat wavy. Heads with purple flowers, numerous, typically from leaf axils or stem branches. Heads prominently covered with numerous long, slender, hooked spines.

Habitat: Disturbed areas, especially in the lower elevations.

Notes: A very common adventive species throughout our region. Look for the spiny fruits.

Arnica

The arnicas resemble some species of *Senecio* in having medium sized heads with bright yellow ray flowers, but can always be distinguished from *Senecio* by their opposite leaves (the leaves in *Senecio* are alternate).

Arnica cordifolia Hooker

Plants to about 0.5 m tall, stems single, soft hairy. Leaves petiolate, to about 10 in length, heart-shaped and soft hairy. Heads large, ray flowers bright yellow, about 3 cm long. Disk flowers yellow.

Habitat: Moist meadows and thickets, montane and subalpine zone.

Notes: A common and highly variable upper elevation species, with an unmistakable leaf shape.

Arnica fulgens Pursh

Plants usually less than 0.5 m, stems single, hairy glandular. Leaves lanceolate, petiolate at least on the upper stem, older leaf bases with brownish hairs in the axils. Heads solitary, ray flowers to about 3 cm.

Habitat: Meadows and forest openings, lower foothills to montane.

Notes: Occurs in somewhat drier habitats than *A. cordifolia*, and having distinctive hairs in the lower leaf axils.

Arnica latifolia Bongard

Plants relatively short, to about 23 cm tall. Stems slender, somewhat sticky glandular. Leaves sessile, oval to triangular, margins toothed. Heads about 3 per stem, ray flowers about 2 cm long.

Habitat: Moist shady areas in the forested zone, upper montane to subalpine.

Notes: Shares a habitat type with *A. cordifolia*, but differing in the leaf morphology and plant size.

Other species of *Arnica* that may occur in our region but have not yet been documented here include *A. parryi*, with rayless nodding heads, *A. chamissonis*, with tufts of white hairs on the tips of the phyllaries, and *A. rydbergii*, a tundra species similar to *A. fulgens*, but occurring on the tundra and lacking tawny hairs in the leaf axils.

***Artemisia* “sagebrush”**

No plant exemplifies the American West more than “sagebrush” and the sage of the movies refers usually to *Artemisia tridentata*, a tall, shrubby species with 3-toothed leaves that does not occur in the Pikes Peak region except as an occasional garden escapee. We have multiple other species, however. Some botanists split the genus into separate ones, including *Seraphidium* and *Oligosporus*, depending on whether ray flowers and/or fertile disk flowers are present or not. Since this is a difficult distinction to recognize, they are placed here in the inclusive and traditional genus *Artemisia*.

Artemisia absinthium L.

Plants perennial, herbaceous, stem leaves present but basal rosettes withering by flowering time; leaves pinnatisect with rounded lobes.

Habitat: Cultivated fields and disturbed areas; low elevations.

Notes: Uncommon adventive species.

Artemisia biennis Willdenow

Plants biennial, herbaceous, stem leaves present, basal rosettes withering; leaves pinnatisect, with sharp-pointed lobes.

Habitat: Disturbed areas, forest roads and trails, montane and foothills.

Notes: Somewhat uncommon or at least undercollected. Look for the sharply pointed leaf lobes.

Artemisia bigelovii A. Gray

Plants shrubby, usually less than 1 m high but often spreading into rounded bushes. Leaves gray green, with 3-lobed tips.

Habitat: Common on barrens, dry hillsides, and rocky outcrops in Pueblo and Fremont Counties; rare in El Paso County.

Notes: Similar to a short stubby *A. tridentata* with its 3-lobed leaf tips; this species almost always occurs on limestone or calcareous cherts or shales.

Artemisia campestris L. var. *caudatus* (Michaux) Palmer & Steyerl

Syn. *Artemisia caudatus*; *Oligosporus caudatus*

Plants biennial or monocarpic, leaves bright green, glabrous.

Habitat: Sandy soils, dunes on the plains.

Notes: A distinctive member of the plains sand community, Look for the bright green leaves.

Artemisia campestris L. var. *pacifica* (Nuttall) m. Peck

Syn. *Oligosporus pacifica*

Plants biennial or monocarpic, leaves silvery gray, in basal clumps the first year.

Habitat: Gravelly soils, montane zone.

Notes: These two varieties of *A. campestris* seem to be easily distinguished in our region: var. *pacifica* has very hairy leaves in comparison to var. *caudatus*. Some botanists separate them as distinct species.

Artemisia cana Pursh

Plants tall shrubs, with simple broadly linear, sometimes somewhat lobed, leaves. Stems grey-tomentose.

Habitat: Moist areas, along streams, lower elevations.

Notes: Distribution and abundance in our region are not yet fully known.

Artemisia carruthii Wood

Plants herbaceous but with slightly woody stem bases; stems to about 30 cm high, densely leafy with finely divided leaves; inflorescence a dense spike, plants often forming patches.

Habitat: Plains grasslands, in sandy soil.

Notes: A characteristic species of the plains.

Artemisia dracunculus L.

Syn. *Oligosporus dracunculus*

Plants perennial, herbaceous, lacking basal leaves at flowering, Leaves glabrous, simple, narrow, to about 2 mm wide. Not aromatic.

Habitat: Throughout the lower and middle elevations, mesas, forests, roadsides.

Notes: A very common species, with narrow leaves.

Artemisia filifolius Torrey

Plants shrubby, about 1 m tall and forming large clumps, often dominating the community. Leaves narrowly linear to filiform, silvery. Plants with a sage odor.

Syn. *Oligosporus filifolius*

Habitat: Sandy soil on the plains.

Notes: A very distinctive and beautiful species that dominates the sandsage prairie of southeastern El Paso and northern Pueblo Counties.

Artemisia franserioides Greene

Plants rhizomatous, heads in 1-sided (secund) spikes, leaf lobes with rounded apices. Sweetly aromatic.

Habitat: Rock slides and talus.

Notes: Somewhat uncommon or rarely collected since its habitat is difficult to access safely.

Artemisia frigida Willdenow

Plants herbaceous above and woody below, forming short silvery clumps with finely dissected leaves. Aromatic.

Habitat: Plains, mesas, dry meadows up to the alpine.

Notes: Extremely abundant and widespread species at all elevations.

Artemisia ludoviciana Nuttall

Plants herbaceous, rhizomatous, appearing as a single stems or a few together. Leaves extremely variable, from entire to divided, usually quite silvery. Inflorescence open, somewhat spreading. Aromatic.

Habitat: Plains to montane, often in disturbed areas including steep slopes, rock slides, and roadsides.

Notes: The variation in this species is enormous although most often the leaves are entire. Extremely common.

Artemisia pattersonii A. Gray

Plants herbaceous, usually less than 10 cm tall, leaves once pinnatisect; phyllaries with a narrow dark margin and appearing bicolored.

Habitat: Alpine tundra on Pikes Peak.

Notes: One of our tundra sages; it differs from *A. scopulorum* in having fewer heads and narrower dark margins on the phyllaries.

Artemisia scopulorum A. Gray

Plants herbaceous, usually less than 10 cm tall, leaves twice pinnatisect; phyllaries with a broad dark margin.

Habitat: Alpine and subalpine meadows.

Notes: Common on dry tundra and in subalpine meadows; similar to *A. pattersonii*.

Artemisia tridentata Nuttall

Syn. *Seriphidium tridentatum*

Plants tall robust shrubs to 1.5 m. Leaves 3-cleft at the apex to almost entire.

Habitat: Not native to the Pikes Peak region, but abundant on the west slope and in Wyoming. This is the well-known "big sage". It can occasionally be found as a horticultural escapee since it is planted for ornamental purposes and thrives in arid zones. The leaves are similar to *A. bigelovii* (native in the Pueblo-Cañon City area), but that species is very low and small, whereas *A. tridentata* is a large shrub.

Aster “aster”

Our aster species are numerous and abundant across the landscape, often very similar except for small differences in hairs or leaves. Some can be difficult to tell apart and to distinguish from daisies, the genus *Erigeron*. Modern genetic analysis will undoubtedly confirm the validity of splitting this large genus into different genera, and some several botanists have already suggested *Virgulus*, *Eucephalus*, *Almutaster*, and *Virgulaster* as possibilities. To distinguish *Aster* from *Erigeron*, it is often helpful to look at the phyllaries. In *Erigeron* they are typically in a single row, appearing all more or less of the same length, whereas *Aster* shows several rows, a “shingled” appearance. Asters often have leafy stems and broader ray flowers than daisies, but this difference is not always reliable! Check also that the phyllaries are not recurved: *Machaeranthera* species (tansy aster) looks like an aster but show the distinctive bent back phyllary that is never seen in *Aster*. The genus *Brachyactis*, formerly included in *Aster*, is separated out here on the basis of the distinctive puffy pappus and annual growth habit.

Purple-flowered Species

Aster foliaceus Lindley

Plants with stems around 1 m in height, leaves and stems often hairy and/or glandular. Leaves broad, > 4 cm long, heads 1-3 per stems with leaflike outer phyllaries; heads over 2 cm in diameter.

Habitat: Montane and subalpine meadows and rocky sites.

Notes: Very common, but also variable in leaf sizes. Usually distinguished by the leaflike phyllaries and upper bracts.

Aster laevis L.

Plants up to 1 m in height, leaves and stem glabrous, leaves somewhat glaucous, up to 20 cm long, lanceolate, margins entire to somewhat toothed, bases distinctly cordate and clasping the stem.

Habitat: Dry areas, including streambanks, plains through the montane. Extremely common.

Notes: The species name “smooth” (*laevis*) comes from the lack of hairs on this species; most other asters have some hairs on the stems or leaves. The clasping leaf bases are also diagnostic. The flowers on this species can be whitish in color.

Aster lanceolatus Willdenow ssp. *hesperius* (A. Gray) Semple & Chmielewski

Plants up to 1 m in height, stem with hairs below the heads in distinct lines extending below the base of the leaves, leaves clasping the stem. Ray flowers purple.

Habitat: Wet areas, lower elevations to montane.

Notes: Common species, and very distinct with the lines of hairs below the leaves.

Aster spathulatus Lindley

Syn. *Aster occidentalis*

Plants up to 0.5 m in height, stems pubescent; leaves on upper portion of stem much smaller than lower leaves. Phyllaries almost equal in length, appearing somewhat like an *Erigeron* in this respect. Ray flowers purplish.

Habitat: Montane meadows.

Notes: Can be mistaken for a large-flowered *Erigeron*.

White-flowered species (see also *Aster laevis*, sometimes white)

Aster junciformis Fries

Plants around 0.5 m in height, upper portion of stem pubescent. Leaves narrow, usually less than 5 mm wide. Heads few and relatively small, less than 1 cm high, ray flowers white.

Habitat: Relatively rare or uncommon in montane wetlands.

Notes: A fairly distinctive species with very narrow leaves (rushlike, hence the species name “*junciformis*”) and a wetland habitat; otherwise similar to *Aster porteri*.

Aster porteri A. Gray

Plants about 0.5 m in height, stems much branched from the base, with narrow, almost linear leaves, glabrous, heads numerous (about 10 per stem), ray flowers white, involucre about 5 mm high.

Habitat: Foothills and montane in relatively dry sites, especially in canyons, along logging roads and in dry meadows.

Notes: Extremely common in the late summer, one of several small-headed, white flowered asters. See also the *Virgulus*-group for several lookalike species. *A. porteri* can be distinguished by its glabrous stems and the branching from the base.

Aster: the “Virgulus” group

This group of *Aster*-like species can be challenging to discern, and it is not easy to provide easy distinctions in a key. All are somewhat to extremely weedy in our region, often appearing along roadsides or, in the case of *A. novae-angliae*, in creek drainages and floodplains. Pink or purple-flowered species include *A. novae-angliae* (probably a horticultural escape here) and *A. ascendens*, and our white-flowered species include the extremely common *A. falcatus*, *A. fendleri*, and *A. ericoides*. *Aster ascendens* can be white or purplish.

White -flowered Species

Aster ericoides L.

Syn. *Virgulus ericoides*

Plants less than 1 m in height, leaves linear to somewhat oblong, with a slightly spiny tip, less than 3 cm in length. Heads numerous, relatively small, less than 5 mm in height. Stems hairy, with hairs appressed or pointing upward.

Habitat: Meadows, roadsides on the plains and throughout the montane.

Notes: Common species of the late summer; easily confused with *A. falcatus*, *A. fendleri*, and *A. porteri*. *A. porteri* is glabrous, *A. falcatus* has spreading hairs, and *A. fendleri* (usually purple-flowered) has ciliate leaves.

Aster falcatus Lindley

Syn. *Virgulus falcatus*

Plants less than 1 m in height, stems much branched. Leaves linear, with a slightly spiny tip, less than 3 cm in length. Heads numerous, relatively small, less than 5 mm in height. Stems hairy with spreading hairs.

Habitat: Dry montane meadows, roadsides.

Notes: Common species of late summer. Easily confused with *A. falcatus*, but differing in having spreading rather than erect hairs.

See also *Aster fendleri*, which can have white flowers as well as purple ones and *Aster ascendens*, which can be purple or white-flowered.

Purple Flowers

Aster ascendens Lindley

Syn. *Aster chilensis*

Plants to about 0.5 m in height; stems clumped, wiry, somewhat reddish. Leaves lanceolate, to about 10 cm long, typically pointing upwards. Heads to about 3 cm in diam., ray flowers purple to white. Involucre strongly imbricate, lower phyllaries obtuse, with green centers and pale thickened margins.

Habitat: Roadsides, wetlands, middle elevations.

Notes: Look for the pale thickish margins on the phyllaries and the “ascending” look of the leaves.

Aster fendleri Gray

Syn. *Virgulus fendleri*

Plants less than 1 m in height, stems branched from the base; leaves linear, less than 3 cm in length, ciliate. Heads numerous, relatively small. Stems hairy, with spreading hairs.

Habitat: Meadows, roadsides, on the plains and throughout the montane.

Notes: Extremely common in late summer. See notes on *A. falcatus*, *A. fendleri*, and *A. porteri*.

Aster novae-angliae L.

Plants over 1 m in height, somewhat bushy, leaves over 3 cm long and broadly lanceolate. Rays bright red-purple, with dark phyllaries.

Habitat: Monument Creek floodplain; possibly present in other moist locations on the plains.

Notes: Although this species probably occurred in our region as a native at one time, it seems to occur here now only as a horticultural escapee. It is an eastern species of New England (hence its species name) and common west to the Great Plains where it occurs in wetland pockets with other cool-climate relicts. A very showy species! Plains locations away from habitation should be documented as possible native populations.

***Baccharis* “groundsel tree”**

Baccharis salicina Torrey & Gray

Plants tall shrubs usually over 1 m tall, stems leafy, somewhat resinous. Leaves to 5 cm long, oblong to oblong lanceolate or linear lanceolate. Heads in panicle clusters, involucre 4-8 mm high. Pappus white, elongating in fruit.

Habitat: Dry, saline soil in the Arkansas River drainage.

Notes: An uncommon species in our region, especially in the Pueblo area; more common in SE Colorado.

Baccharis wrightii A. Gray

Plants woody at the base only, stems relatively low, ca 0.5 m tall. Leaves linear, to 3 cm long. Heads to about 1 cm high.

Habitat: Rocky areas, mesas, low elevations.

Notes: Known from SE Colorado but not yet recorded in area although possibly present in Pueblo and Fremont Counties.

***Bahia* “field chrysanthemum”**

Bahia dissecta (A. Gray) Britton

Plants annual, consisting of a solitary stem up to 0.5 m tall, from a basal rosette of divided leaves. Heads relatively few, branches of inflorescence widely spreading, ca 1-2 cm diameter.

Habitat: Gravelly slopes. Plains through montane.

Notes: This species is quite distinctive when in flower, and common on the lower slopes of Pikes Peak on unstable gravels. It also occurs on the plains on floodplains of perennial creeks such as Black Squirrel.

***Bidens* “beggar’s ticks”**

The common name for this genus refers to the bur-like nature of the achenes. 2 awn-like pappus horns make the achenes stick to clothing or socks! Our species are all wetland species.

Bidens cernua L.

Plants tall, up to 2 m in height but sometimes shorter; peduncles recurved just below the head thus making them “nod”. Leaves simple, with serrate margins.

Habitat: Wet or muddy areas, from the plains to lower montane.

Notes: Common and somewhat weedy in that it occurs in disturbed areas.

Bidens frondosa L.

Plants up to about 1 m tall; heads not nodding, often lacking ray flowers. Leaves sometimes simple, but usually divided into 3 leaflets with serrate margins.

Habitat: Wet or muddy areas, from plains to lower montane.

Notes: Common, especially in the lowlands on the plains.

Bidens tenuisecta A. Gray

Plants up to about 1 m tall, heads not nodding. Ray flowers few. Leaves with narrowly linear segments.

Habitat: Gravelly areas, especially along roadsides and trails in the foothills and montane.

Notes: A distinctive species with narrow leaf segments; unlike *Bidens cernua* and *B. frondosa*, growing in gravelly soils not affiliated with wetlands.

***Bolophyta* “feverfew”**

Bolophyta tetraneuris (Barneby) Weber

Syn. *Parthenium tetraneuris*

Plants forming low dense cushions; leaves oblong to lanceolate, with 3 somewhat obscure veins; heads hidden deeply within the cushions. Disk flowers creamy white, ray flowers lacking.

Habitat: Chalk and shale barrens in the Arkansas River drainage.

Notes: Somewhat uncommon, but locally abundant and often in large cushions when found.

Appears very similar to *Tetraneuris acaulis* and to *Eriogonum lachnogynum*, which have similar leaves and occur in the same habitat. Look for the low, buried heads or receptacles in *Bolophyta*. Some botanists prefer to include this species under a more inclusive concept of *B. alpina*, which grows on similar habitats in n. Colorado, and differs primarily in having glabrous achenes. *Bolophyta* blooms very early in the spring (April) and often is subject to either spring frosts or early drought which damage the development of achenes.

Brachyactis

This genus was formerly included within *Aster*, but our 2 species are very distinctively different annuals, with ray flowers short or absent, a prominent puffy-looking pappus, and annual growth habit.

Brachyactis ciliata Ledebour

Syn. *Aster ciliata*; *Aster brachyactis*

Plants annual, stems about 0.5 m tall, branching, leaves 3-10 cm, linear, entire and more or less ciliate on the margins.

Ray flowers virtually absent. Pappus abundant, prominent when flowers are in fruit stage.

Habitat: Wet areas on the plains.

Notes: Similar to *B. frondosa*, but lacking ray flowers.

Brachyactis frondosa (Nuttall) Gray

Syn. *Aster frondosa*

Plants annual, stems to almost a meter in height, leaves linear, ciliate on the margins. Ray flowers purple, present but extremely short, no more than 2 mm. Pappus abundant, prominent when flowers are in fruit.

Habitat: Wet areas on the plains.

Notes: Similar to *B. ciliatus*, but with short ray flowers.

***Brickellia* “tasselflower, bricklebush”**

Brickellia is a genus of late summer, characterized by the creamy-colored heads composed of disk flowers only, and a preference for dry, often rocky habitats. Some species previously placed into *Kuhnia* are treated here under *Brickellia*.

Brickellia californica (Torrey & Gray) A. Gray

Plants shrubby, to about 1 m tall; much branched from the base; leaves triangular-ovate, margins crenate to almost entire. Heads small, less than 1 cm high, in dense axillary clusters.

Habitat: Rocky canyon-sides.

Notes: Common in Fremont County.

Brickellia eupatorioides (L.) Shinnery

Syn. *Kuhnia eupatorioides*

Plants herbaceous, but sometimes slightly woody at the base. Leaves lanceolate to rhombic, toothed on the margins. The inflorescence is somewhat dense and spike-like.

Habitat: Dry grasslands, lower elevations.

Notes: Common throughout our region, and possibly hybridizing with *B. rosmarinifolia*, which differs in having more linear leaves and more spreading inflorescences.

Brickellia grandiflora (Hooker) Nuttall

Plants herbaceous but somewhat woody at the base, to about 1 m tall; leaves triangular-ovate, margins deeply serrate or crenate. Heads larger than 1 cm tall, nodding.

Habitat: Rocky slopes, foothills to montane.

Notes: This species somewhat resembles *B. californica*, but differs in having larger flowers and a less shrubby growth habit.

Brickellia rosmarinifolia Ventenat

Syn. *Kuhnia chlorolepis*

Plants herbaceous but somewhat woody at the base. Leaves linear; inflorescence broad and spreading.

Habitat: Dry grasslands, lower elevations.

Notes: See *Brickellia eupatorioides*.

***Carduus* “musk thistle”**

Carduus nutans L.

Plants biennial, with stout stems up to 2 m tall. Leaf bases decurrent along the stem. Stem ribs spiny. Heads large, nodding, lacking ray flowers, disk flowers purple. Phyllaries broad, very stiff and sharp.

Habitat: Grasslands, roadsides, plains and foothills.

Notes: This thistle relative is a common noxious adventive weed in our region that poses problems for livestock grazing. It can be identified by the decurrent leaf bases, the broad sharp phyllaries, and the nodding heads.

***Centaurea* “knapweed”**

The large genus *Centaurea* is often split into several other segregate genera, including *Acroptilon* (Russian knapweed), *Acosta* (diffuse and spotted knapweed) and *Jacea* (brown knapweed). The blue horticultural species known colloquially as “cornflower” or “bachelor’s button”, is sometimes placed into the genus *Leucacantha*. For simplicity sake, and because many are known by their common names, they are all treated here under the more inclusive genus for knapweeds, although the more recent generic splits almost certainly reflects more appropriate relationships and nomenclature.

Centaurea cyanus L.

Plants to about 0.5 m tall, leaves lanceolate, stems somewhat branched. Flower heads relatively large, with bright blue disk flowers. Plants not spiny.

Habitat: Naturalized in a few areas, and especially common west of Palmer Lake in the lower foothills.

Notes: A horticultural species known as “bachelor’s button”, now naturalized but not causing the problems of other members of this group.

Centaurea diffusa Lamarck

Syn. *Acosta diffusa*

Plants perennial, to about 0.5 m tall, stems widely branched. Heads small, usually white but occasionally lavender.

Habitat: Disturbed areas, plains through foothills.

Notes: Adventive noxious weed species, especially common in northern El Paso County and apparently moving south. Currently it is the most common knapweed in El Paso County. The lack of a spot on the phyllaries distinguishes it from *A. maculosa*.

Centaurea repens L.

Syn. *Acroptilon repens*

Plants perennial, to about 0.5 m tall, stems much branched at the top, plants often forming large colonies from adventitious roots. Heads purple, phyllaries with papery margins, lacking a black spot.

Habitat: Disturbed areas, lower elevations.

Notes: Adventitious noxious weed species, relatively uncommon still in our region.

Centaurea maculosa L.

Syn. *Acosta maculosa*

Plants perennial, to about 0.5 m tall, stems with few branches. Heads about 1 cm tall, flowers purple; phyllaries with a distinctive purple spot.

Habitat: Disturbed areas, usually in the foothills.

Notes: Adventitious noxious weed species, increasing in our region especially in northern El Paso County.

***Chaenactis* “pincushion, false yarrow”**

Chaenactis douglasii (Hooker) Hooker & Arnott

Plants biennial, stem leafy showing remains of a basal rosette, to about 20 cm high; leaves deltoid in outline, 2-3 pinnate, heads several, flowers white to flesh-colored.

Habitat: Sandy gravelly soils, often on unstable slopes such as the Pikes Peak foothills.

Notes: Somewhat uncommon or probably undercollected in our region. Another species, *Chaenactis alpina*, occurs at high elevations in the subalpine or alpine in similar habitats. It has not yet been documented here, but possibly occurs on Pikes Peak.

***Chrysothamnus* “rabbitbrush”**

Our rabbitbrush species are a common component of the Southwest landscape, where they often go by the name “chamise” or “chamisso”. Their bright yellow heads of disk flowers and elongate leaves are distinctive. Some rabbitbrushes are being placed by botanists into the genus *Ericameria*, based primarily on molecular evidence, but the distinctions are difficult based on morphology alone.

Chrysothamnus nauseosus (Pallas ex Pursh) Britton

Syn. *Ericameria nauseosa*

Plants shrubby, quite variable in height from low to tall shrubs. Stems with a feltlike tomentum. Leaves linear-lanceolate, straight. Heads in cymes at the end of branches, flowers showy.

Habitat: Plains to montane, generally in somewhat dry habitats.

Notes: An extremely common and highly variable species. This is probably the most common species in the Pikes Peak region, but one where numerous races have been described. Look for the lack of prolonged phyllaries to distinguish this species from *C. parryi*.

Chrysothamnus parryi (A. Gray) Greene

Syn. *Ericameria parryi*

Plants shrubby, variable in height. Stems with a felt-like tomentum. Leaves linear-lanceolate, straight. Heads in spikes or racemes at the end of the branches, flowers showy, with phyllaries prolonged at the apex in long slender tips.

Habitat: Plains to montane, generally in somewhat dry habitats.

Notes: Common and variable, especially with respect to the leaf pubescence and numbers of flowers. The long-tipped phyllaries are distinctive, and serve to separate this species from *C. nauseous*. Several subspecies have been described. *Chrysothamnus viscidiflorus* (Hooker) Nuttall

Plants low shrubs, leaves narrow and distinctively twisted or spiraled; flowers not as showy as in our other species.

Habitat: Dry sites, middle elevations.

Notes: The twisted leaves and smaller size of the plants are diagnostic for this species.

Cichorium “chicory”

Cichorium intybus L.

Plants up to 1 m tall, usually somewhat shorter; upper branches broadly spreading. Leaves basal, toothed or pinnately divided, up to 10 cm or more long. Stem leaves smaller, much reduced in size. Flowers a striking bright sky blue.

Habitat: plains, roadsides, lower foothills.

Notes: Adventive, but locally common and naturalized throughout North America. The flowers close late in the afternoons and evenings.

Cirsium “thistle”

The thistle and thistle like group of species are placed here as an inclusive *Cirsium* complex since they are easily recognized together. The knapweeds have smaller flowers and leaves that are not spiny. Not all our thistles are problematic weeds; the native species do not appear to spread even in disturbed areas. See also *Onopordum* for another thistle-like group, the cultivated Scotch thistle that is naturalized in our area, and *Carduus* (musk thistle). Both of these generally resemble thistles, but have leaf bases decurrent along the stem so that they connect almost the entire length of the stem. In *Cirsium*, even species with some decurrent bases have separation between the leaves.

Cirsium arvense (L.) Scop.

Syn. *Breea arvensis*

Plants to ca 1 m tall; stems often branching. Plants forming extensive colonies from underground rhizomes. Leaves alternate, sessile, oblong to lanceolate, with spiny irregularly shaped lobes. Heads relatively small, to about 1 cm tall; flowers purple (rarely white).

Habitat: Roadsides, wet areas, especially along lowland streams, moist to mesic meadows, abundant at lower elevations but now extending well up into montane elevations.

Notes: An adventive noxious weed, one of our most damaging wetland plants. A very aggressive species that is almost impossible to eradicate. A race with tomentose lower leaf surfaces (*Cirsium/Breea incana*) is treated here under *C. arvense*.

Cirsium canescens Nuttall

Plants biennial, usually around 1 m tall. Leaves lacking decurrent bases; heads large 3-4 cm tall, phyllaries reflexed or spreading, flowers white or pale purple.

Habitat: Plains, mesas, usually in open grasslands.

Notes: A common native species, especially in sandy areas on the plains.

Cirsium eatonii (Gray) Robinson

Plants tall and robust, stems to about 1 m. Flowers large, in terminal clusters, heads purple to cream colored. Leaves narrow, very spiny.

Habitat: Wet meadows, montane to subalpine zones.

Notes: This species is known from Teller County wetlands around Pikes Peak. Uncommon or little collected here.

Cirsium hesperium (Eastwood) Petrak

Plants biennial, to about 1 m tall. Leaves lacking decurrent bases, heads deep purple in narrow spikes.

Habitat: Meadows, subalpine and montane zone.

Notes: Known from the southern portion of our region, and probably more common in Custer and Las Animas Counties in the Wet Mts. and Sangre de Christo Mts.

Cirsium ochrocentrum A. Gray

Plants biennial, to about 1 m tall and often forming clumps. Leaves with decurrent bases, densely pubescent below and with tufts of hair above, sharply spiny with yellowish spines. Heads relatively large, flowers purple, phyllaries with long, stout, spiny tips.

Habitat: Low elevations, plains to foothill valleys, usually in sandy soil.

Notes: A native species, relatively common.

Cirsium scariosum Nuttall

Syn. *Cirsium coloradense*

Plants consisting either of a large basal rosette of leaves with sessile flower heads in the center, or a tall stem with sessile flower heads in the leaf axils. Phyllaries glabrous, glandular with yellowish glands on the back surface. Flowers white.

Habitat: Subalpine and alpine meadows.

Notes: A common and distinctive native species frequent in the upper elevation zones. It can be distinguished from *C. scopulorum* by its glabrous phyllaries and lack of nodding heads. The usual growth form is the basal rosette of sessile flower heads.

Cirsium scopulorum (Greene) Cockerell

Plants perennial, up to about 0.5 m tall, heads congested in a dense cluster at the top of the stem, often nodding. Flowers yellow or pale purple, phyllaries with long multicellular hairs.

Habitat: Tundra and subalpine meadows.

Notes: Our highest elevation native thistle; common at high elevations throughout Colorado.

Cirsium undulatum (Nuttall) Sprengel

Plants similar to *C. ochrocentrum* but forming single stems rather than clumps. Heads with smaller flowers (corollas to <1 cm) and phyllaries with only weak spine tips and containing a glandular dorsal ridge. Flowers purplish to white.

Habitat: Plains, often in *Artemisia filifolia* communities.

Notes: Common at lower elevations but not usually locally abundant.

Cirsium vulgare (Savi) Tenore

Plants biennial, stems to over 1 m tall, stems stout, with many spreading branches. Upper leaf surface with many sharp spines, lower surfaces wooly pubescent. Leaf bases decurrent node to node as in *Carduus*. Flower heads dark purple, large, to 3 cm tall, with noticeable cobwebby pubescence.

Habitat: Disturbed areas, pastures, and roadsides in the lower elevations.

Notes: Adventive species, but not as aggressive or abundant as *Cirsium arvense*. It can be distinguished from Canada thistle by its larger flowers and spiny upper leaf surfaces.

***Conyza* “horseweed”**

Conyza canadensis (L.) Cronquist

Plants annual, tall, up to almost 2 m in height but often beginning to flower when much shorter. Stems branched at the top, with numerous narrowly lanceolate entire leaves, up to 10 cm long, reduced in size towards the upper portion of stem. Lower heads numerous, less than 5 mm in diameter and 3 mm high, crowded into terminal clusters. Ray flowers very short and hidden by the phyllaries.

Habitat: Roadsides, gardens, fields, plains through montane.

Notes: An abundant adventive weedy species.

Conyza coulteri Gray

Plants annual, with oblanceolate, somewhat toothed leaves, reduced in size upwards, and with minute golden glands and wooly hairs. Ray flowers lacking, pappus white.

Habitat: Montane forests.

Notes: Adventive, not common in the Pikes Peak region.

Conyza schiedeana (Lessing) Cronquist

Plants annual, with oblanceolate, somewhat toothed leaves, and minute glands and wooly hairs. Ray flowers present; otherwise similar to *C. coulteri*.

Habitat: Montane forests.

Notes: Adventive, but not common in the Pikes Peak region.

Coreopsis

Coreopsis tinctoria Nuttall

Plants often growing in patches, stems slender, erect, to 1 m tall. Leaves opposite, dark green, glossy, palmately divided into narrow segments. Ray flowers yellow with a reddish brown spot at the base; disk flowers also reddish.

Habitat: Plains wetlands, often around pond margins.

Notes: Not yet documented in our region, but likely to occur in the plains wetlands and playa basins of El Paso and Pueblo County.

***Cosmos* “cosmos”**

The common garden cosmos is a taller version of this species, but the relationship is immediately obvious. Garden cosmos does not seem to have naturalized in this region, but *C. parviflora* has been found in several locations in the Black Forest (as well as Custer County) and seems to be well established there. It has been suggested that *C. parviflorus* perhaps was established here by the Spanish some centuries ago, since it is more common in regions much to the south of us, including Texas, Arizona, and Mexico. It is an intriguing addition to our flora.

Cosmos parviflorus (Jacquin) Humboldt

Plants annual, around 0.5 m in height; leaves opposite, pinnatifid with narrow leaf segments. Ray flowers pink to purplish, about 3 cm in diameter.

Habitat: Meadows and pine forests, gravelly floodplains on the eastern plains; Black Forest Region.

Notes: Appears to be a delicate, smaller version of the cultivated species of cosmos.

***Crepis* “hawk’s-beard”**

The large, diverse, and somewhat unwieldy genus *Crepis* is often split by botanists into several different segregate genera under the names *Askellia* and *Psilochenia*. The sound-alike genus *Chlorocrepis* is treated here under the inclusive name *Hieracium*. Although diverse in growth rate and ecology, “*Crepis*” in its traditional sense shows medium sized heads of yellow ray flowers. *Crepis (Askellia) nana*, is a somewhat rare plant of high tundra scree slopes, not yet documented from Pikes Peak though it is likely to occur there. Our other species somewhat resemble *Krigia* and *Hieracium*, and should be carefully distinguished. Check for descriptive comments under those genera.

Crepis atribarba Heller

Syn. *Psilochenia atribarba*

Plants 15-70 cm tall, leaves pinnately lobed into segments; heads few to many, involucre about 1 cm tall, usually with hairs, flowers yellow.

Habitat: Dry montane forests.

Notes: Apparently somewhat uncommon in our area; thus far collected only in Teller County but probably present elsewhere.

Crepis nana Richards

Syn. *Askellia nana*

Plants diminutive, somewhat sprawling, with succulent, ovate basal leaves on long petioles, margins entire to lyrate with a few broad teeth. Heads few, flowers yellow, involucre less than 1 cm in height.

Habitat: Scree and talus slopes, among boulders on the tundra, generally over 3,000 m.

Notes: Not yet documented in our area and generally rare or rarely collected in Colorado. It may occur here on scree slopes of the upper reaches of Pikes Peak, especially where late snowbeds provide moisture.

Crepis runcinata James ex Torrey

Syn. *Psilochenia runcinata*

Plants up to 30 cm tall, with basal leaves that are divided to entire; variable in amount of hairs; sometimes entirely glabrous. Involucre up to 1.5 cm in height, flowers yellow, few to several in loose terminal clusters.

Habitat: Wet meadows, on the plains to the subalpine.

Notes: This species is somewhat similar to the rare *Krigia biflora* and shares a similar habitat in the Black Forest and high plains; however, *Krigia* has a distinctive large bract below the inflorescence, and very different phyllaries in two distinct rows.

***Dugaldia* “sneezeweed”**

Dugaldia hoopesii (A. Gray) Rydberg

Plants often over 1 m tall, with a stout and leafy stem. Heads large, over 4 cm in diameter, with yellow orange ray flowers that typically droop.

Habitat: Moist montane and subalpine meadows and aspen groves.

Notes: A beautiful and common element in our upper elevation meadows. The common name refers to its pollen and the effect it can have on those inclined towards hay fever.

***Dyssodia* “fetid marigold”**

Both of our species have a strong rank odor that reminds one of an intense, slightly off marigold. Walking or driving over them releases the odor. *Dyssodia papposa* is extremely common and weedy species here; *D. aurea* is considerably more common in SE Colorado than it is here. The two species can be distinguished by the size of the flowers and whether the leaves are spiny tipped or not.

Dyssodia aurea (A. Gray) A. Nelson

Plants low, about 10 cm tall, with conspicuous ray flowers up to 4 mm long. Pappus scales lacking bristles, leaf divisions lacking spiny tips.

Habitat: Sandy or gravelly soils on the plains.

Notes: This species was formerly abundant in the gravelly soils and low mesas of southern El Paso County, but a number of populations there have been destroyed by development south of Fountain. It probably still occurs in Pueblo and possibly Fremont County, as the species is abundant in the region to our south.

Dyssodia papposa (Ventenat) A. S. Hitchcock

Plants low, about 10 cm tall, with minute ray flowers. Pappus scales with bristles, leaf divisions with spiny tips.

Habitat: Sandy and gravelly areas at low elevations, especially in disturbed areas along roads and trails.

Notes: Extremely common throughout our region, and blooming in late summer.

***Echinacea* “coneflower”**

The familiar garden coneflower, well known as a medicinal plant, has a close native relative that at least formerly occurred in our region on the plains. As the plains have become drier, however, and overcollecting has occurred to extirpate native populations, this species may have become extinct in Colorado. It has not been found in recent decades in the Pikes Peak region.

Echinacea angustifolia de Candolle

Plants up to about 0.5 m tall, stems pubescent below; leaves narrow, basal leaves petiolate, upper leaves with petioles short or lacking; heads up to 3 cm in diameter, ray flowers purple, somewhat drooping; receptacle conical and very prominent.

Habitat: Known previously from moist meadows on the plains.

Notes: Known only from a few historical records, and probably now extinct in our area. Similar to *E. purpurea*, a garden species naturalized in the wild and often locally abundant in northern Colorado. *Echinacea purpurea* differs in having longer ray flowers, and much broader leaves than *E. angustifolia*.

***Englemannia* “Englemann daisy”**

This genus occurs commonly in the mid-west prairies, and in regions to our south. It looks like a short *Silphium* with is lacinate leaves (in our species), and broad yellow ray flowers. Its occurrence here as a native is uncertain; it grows along roadsides in the Colorado Springs area, and may have been introduced via a seed mix or from a xeriscape garden.

Englemannia pinnatifida A. Gray

Syn. *Englemannia peristenia*

Plants perennial, stems to about 0.5 m tall, leaves alternate, pinnate, to about 15 cm long. Heads about 3 cm in diam., ray flowers bright yellow.

Habitat: Roadsides, dry prairie.

Notes: Blooms in June, one of the early yellow composites. Its native status here is not certain.

***Erigeron* “daisy”**

The true daisy belongs to the genus *Erigeron*, and can usually be distinguished from asters by the uniform row(s) of straight phyllaries, and the typically less leafy stem. However, not all species are easily distinguished this way without certain experience with the genus, so it is always best to try the alternative genus if any plant does not seem to fit. Some botanists split daisies into segregate genera *Trimorpha*, *Stenactis*, and *Eucephalus*, which are included here under *Erigeron*. Because the genus is so diverse in our region, several groups are separated out here by ecological zone when they are restricted to that zone in question. Otherwise, the species can be somewhat broadly distributed over the elevational gradient listed.

Low Elevation Species (plains through lower montane)

For plants collected in the Black Forest or high plains areas in El Paso County, see also *E. lonchophyllus*.

Erigeron bellidiastrum Nuttall

Plants with ascending or arcing branches, usually about 20 cm in height; stem hairs ascending and curved inward, pappus of a single row of bristles. Heads less than 1 cm in height, ray flowers white, narrow.

Habitat: Sandy soils on the plains.

Notes: Common in the sandy areas, especially Chico Basin and eastern El Paso County. A delicate species with small flowering heads.

Erigeron canus Gray

Plants to about 20 cm in height, stems few, stems and leaves gray with stiff pubescence. Heads usually ca. 1 cm in diam., rays white or purplish, wide.

Habitat: Plains, lower foothills, in sandy or gravelly soil.

Notes: Somewhat similar to *E. bellidiastrum*, but a much more robust species with single heads.

Erigeron pumilus Nuttall

Plants dwarf, forming a dense clump with many caudices, stem and leaves with spreading hairs, sometimes glandular. Heads less than 1 cm in height and diameter, rays white, rosy, or purple.

Habitat: Dry plains.

Notes: Common early blooming species.

Erigeron colo-mexicanus A. Nelson

Plants with small solitary heads on leafless stems from basal rosettes and developing stoloniferous shoots. Stems with spreading hairs.

Habitat: Gravelly floodplains and meadows on the plains, mesas, and lower foothills.

Notes: Very similar to *E. flagellaris* but with spreading stem hairs instead of appressed ones.

Erigeron compositus Pursh

Plants forming low clumps; leaves 3-lobed, grayish green; heads solitary, ray flowers usually white but occasionally lavender.

Habitat: Gravelly areas from the plains to the alpine. Common on old railroad beds near Falcon, and on higher elevation gravelly slopes.

Notes: Common species, somewhat resembling *E. pinnatisectus* with which it grows in the higher elevations, but having only 3 lobes on the leaf tips.

Erigeron divergens Torrey & Gray

Plants with multiple stems, erect, and strongly pubescent, containing numerous small heads with white to pinkish ray flowers.

Habitat: Disturbed sites, including roadsides and floodplains.

Notes: The “*divergens*” group of species includes *E. divergens*, *E. colo-mexicanus*, *E. flagellaris*, *E. strigosus*, and *E. bellidiastrum*. They are quite similar in appearance and habitat, but differ in whether or not they have stolons (*E. flagellaris* and *E. colo-mexicanus*), or whether the stems are single. Check hairs and stem characteristics carefully!

Erigeron flagellaris A. Gray

Plants with small solitary heads on leafless stems from basal rosettes and developing stoloniferous shoots. Stems with appressed hairs.

Habitat: Gravelly floodplains and meadows on the plains, mesas, and lower foothills.

Notes: Very similar to *E. colo-mexicanus* but with appressed stem hairs instead of spreading ones.

Erigeron strigosus Muhlenberg

Syn. *Stenactis strigosus*

Plants annual or biennial, 3-7 dm tall, stems finely strigose or rarely glabrous. Basal leaves oblanceolate to elliptic, stem leaves relatively few, reduced in size above, linear to oblanceolate. Heads several to many in a flat-topped inflorescence; involucre small, 3-5 mm, ray flowers up to ca. 6 mm, white or pink to lavender. Pappus double, at least on the ray flowers.

Habitat: Disturbed areas, sandy or gravelly soils, lower to middle elevations.

Notes: This species is often placed in *Stenactis* based on its unusual double pappus, where an inner row of fragile bristles (they break off easily) contrast with an outer row of short scales.

Erigeron vetensis Rydberg

Plants dwarfed and somewhat clumped, with entire linear-lanceolate basal leaves <5 mm wide; leaves and stem usually glandular. Ray flowers pinkish or lighter in color.

Habitat: Gravelly slopes, occasionally on the high plains on sandstone outcrops, through the foothills. **Notes:** Common, plants blooming early in the summer.

Erigeron vreelandii Rydberg

Plants to about 0.5 m tall. Stems leafy, leaves glandular or glandular-scabrous.

Habitat: Canyons, rocky forested slopes.

Notes: Uncommon in El Paso County, more common to the south, to be expected in Fremont Co.

Middle to High Elevation Species

Erigeron compositus Pursh

Plants forming low clumps; leaves 3-lobed, grayish green; heads solitary, ray flowers usually white but occasionally lavender.

Habitat: Gravelly areas from the plains to the alpine. Common on old railroad beds and creek floodplains near Peyton, and on higher elevation gravelly slopes.

Notes: Common species, somewhat resembling *E. pinnatisectus* with which it grows in the higher elevations, but having only 3 lobes on the leaf tips.

Erigeron grandiflorus Hooker

Plants with entire leaves, involucre woolly villous with hairs having crosswalls visible under a microscope or lens, involucre and upper stem with shaggy hairs. Heads relatively large, ray flowers purple.

Habitat: Tundra meadows.

Notes: Pikes Peak, uncommon. Similar to *E. simplex* (very common) but differing in the shaggy hairs.

Erigeron leiomerus Gray

Plants loosely clumped, with entire, oblanceolate glabrous leaves; involucre not woolly villous but often glandular; heads with purple ray flowers.

Habitat: Scree and talus slopes on at high elevations.

Notes: The habitat and appearance of this species is quite distinct from other alpine species.

Erigeron pinnatisectus (A. Gray) A. Nelson

Plants clumped, with pinnately divided somewhat hairy leaves. Stems less than 3 cm, with relatively large heads up to 3 cm in diameter; ray flowers purple.

Habitat: Tundra meadows.

Notes: A common species, the only one in our region with pinnatisect leaves. Be careful about confusing it with *E. compositus*, which has 3-lobed leaves and can also occur at high elevations.

Erigeron simplex Greene

Plants in small clumps or solitary, leaves entire, somewhat hairy. Stems less than 10 cm, usually about 5 cm or less, with relatively large heads; ray flowers purple. Involucres densely hairy but not glandular.

Habitat: Tundra meadows.

Notes: Similar to but much more common than *E. grandiflorus* and distinguished by the lack of shaggy hairs on the involucre.

Erigeron elatior (A. Gray) Greene

Plants up to about 0.5 m tall, stems leafy with broad leaves not much reduced in size upward; heads relatively large and few, with purple ray flowers. Phyllaries woolly villous with pinkish multicellular hairs.

Habitat: Aspen groves, subalpine meadows and forests.

Notes: A common and beautiful species.

Erigeron eximius Greene

Plants up to about 0.5 m tall, stems uniformly leafy, heads relatively large and few, with purple ray flowers. Phyllaries

hairy but not woolly villous and lacking pinkish color. Pappus of long and short bristles.

Habitat: Aspen groves, subalpine meadows and forests.

Notes: Very similar to the more common *E. peregrinus* but differing in having a double rather than single pappus, and in having rhizomes leading to leafy shoots.

Erigeron formosissimus Greene

Plants up to about 0.5 m tall, stems curved at the base, leafy but with stem leaves much reduced in size, heads relatively large with purple ray flowers. Phyllaries glandular-viscid and often hairy.

Habitat: Meadows, upper montane zone through the subalpine.

Notes: The curving stem and glandular phyllaries is quite distinctive on this species.

Erigeron glabellus Nuttall

Plants up to about 0.5 m tall, stems leafy, though leaves somewhat reduced in size upward. Leaves pubescent on both surfaces, phyllaries not glandular. Heads usually several per stem.

Habitat: Montane and subalpine meadows.

Notes: Differs from *E. subtrinervis* in having appressed hairs and lacking glands on the phyllaries.

Erigeron lonchophyllus Hooker

Syn. *Trimorpha lonchophylla*

Plants very narrow stem leaves, heads with extremely short (<2 mm) pinkish ray flowers, and appearing as if in bud. Pappus white. Leaves and stem without glands.

Habitat: Rocky high elevation meadows; moist benches and swales in the Black Forest and Peyton area.

Notes: The two “*trimorpha*” species in our region have very distinct heads with extremely short ray flowers. They differ in habitat, and whether or not the stem and leaves are glandular.

Erigeron acris L.

Syn. *Trimorpha elongata*, *Erigeron elongata*

Plants very narrow stem leaves, heads with extremely short (<2 mm) pinkish ray flowers, and appearing as if in bud. Pappus reddish. Leaves and stem glandular.

Habitat: Moist subalpine meadows.

Notes: See *E. lonchophyllus*.

Erigeron peregrinus (Banks) Greene

Plants up to about 0.5 m tall, stems leafy, heads relatively large and few, with purple ray flowers. Phyllaries hairy with red-tipped glands, upper stems with white multicellular hairs and glands.

Habitat: Subalpine meadows and tundra slopes.

Notes: Very similar to *E. eximius*, but differing in having a single pappus, and lacking rhizomes. The red-tipped glands are also very distinctive on this species.

Erigeron speciosus (Lindley) de Candolle

Plants up to about 0.5 m tall, stems leafy with upper leaves +/- the same size as the lower leaves; leaves hairy on margins and veins. Phyllaries sometimes glandular; ray flowers purple.

Habitat: Subalpine meadows, aspen groves, and upper elevation conifer forests.

Notes: Very similar to *E. subtrinervis*, but with less visible veins and less pubescence on the leaves.

Erigeron subtrinervis Rydberg

Plants up to about 0.5 m tall, stems leafy with upper leaves +/- the same size as the lower leaves; leaves hairy on both surfaces with 3 prominent veins. Phyllaries sometimes glandular; ray flowers purple.

Habitat: Subalpine meadows and upper elevation conifer forests.

Notes: Very similar to *E. speciosa*, but with 3 prominent leaf veins and more pubescence on the leaves.

***Eupatorium* “Joe pyeweed, thoroughwort”**

Eupatorium maculatum L.

Plants up to or over a meter in height, somewhat bushy, with purple spotted stems and with broad, serrate, opposite or whorled leaves lacking petioles. Heads with disk flowers only, purplish to whitish.

Habitat: Wet areas, currently known from the Black Forest and the lower foothills of Pikes Peak along streams.

Notes: A large and unmistakable species with its whorled leaves. Although native, some populations that occur near

old cabins may be garden escapees that have persisted since this species was often planted horticulturally for medicinal purposes.

***Euthamia* “western goldenrod”**

This species strongly resembles the true goldenrods (*Solidago*), but differ in having narrowly linear leaves and a flat-topped inflorescence shape.

Euthamia occidentalis Nuttall

Plants perennial, to about 1 m tall. Stems slender, glabrous. Leaves narrowly linear, to about 8 cm long, bases clasping the stem, with 3 prominent veins. Heads small, ray and disk flowers bright yellow, heads numerous and forming an elongate, interrupted inflorescence.

Habitat: Moist sites, plains and lower foothills.

Notes: Uncommon in our region. This genus common in the Great Plains strongly resembles our typical goldenrods (the genus *Solidago*), but differs in having all very narrow leaves.

***Evax* “rabbit tobacco”**

Evax prolifera Nuttall

Plants annual, small, usually less than 15 cm in height. Stems broadly branching, leaves, when present, spatulate, woolly tomentose, sometimes lacking. Heads in tight woolly clusters at the end of the stems, which often branch from these clusters.

Habitat: Plains, often in overgrazed areas

Notes: Appears like a leafless *Gnaphalium*. Look for the branching stems and the tight flower clusters at the tips.

Flaveria

Flaveria campestris J. R. Johnston

Plants annual; stems leafy, to ca. 0.5 m tall. Leaves opposite, narrow, sessile, to about 6 cm long. Heads in small leafy clusters at the ends of the stems. Involucre cylindrical, ca 5 mm high, ray flowers few, yellowish, very short and inconspicuous, ca. 2 mm.

Habitat: Lower elevations, alkaline soil on the plains.

Notes: An odd plant with its inconspicuous ray flowers; uncommon or undercollected here.

***Gaillardia* “blanket flower”**

Gaillardia aristata Pursh

Plants perennial, stems to 0.5 m tall. Leaves 5-20 cm, linear to lanceolate, entire to coarsely lobed but not pinnatifid. Heads to 5 cm in diameter, ray flowers yellow with maroon bases, tips usually lobed.

Habitat: Plains, roadsides, lower foothills. Often used as a highway planting, but native to our region.

Notes: A very distinctive and beautiful species of mid to late summer. The blooming time and leaf morphology distinguish it from *G. pinnatifida*.

Gaillardia pinnatifida Torrey

Plants perennial, stems to 0.5 m tall. Leaves basal or on lower part of stem, to 8 cm, pinnatifid. Heads to 3 cm in diameter, ray flowers yellow with maroon

Notes: This species is most common in southern El Paso County through Pueblo County, and blooms earlier in the summer than *G. aristata*.

***Galinsoga* “quickweed”**

Galinsoga parviflora Cavanilles

Plants annual, stems about 0.5 m tall. Leaves opposite, serrate. Involucre <5 mm in height, ray flowers white, very short, <2mm. Phyllaries with scarious margins.

Habitat: Gardens, disturbed soil along roadsides and trails.

Notes: A common weed, blooming late in the summer.

***Gnaphalium* “cudweed”**

Gnaphalium resembles *Antennaria* somewhat in having woolly white heads, but lack the basal leaf mats. The flowerheads appear to be imbedded in a ball of fuzzy white wool. They are all annuals, and somewhat weedy in that they prefer disturbed ground with little competition; both our species are native, however.

Gnaphalium palustre Nuttall

Plants tomentose to white pubescent throughout; stems up to 20 cm tall, often forming spreading patches; leaves alternate, entire, and somewhat oblong. Heads small, imbedded in leaf axils and at the ends of branches, subtending leaves about as long as the heads, phyllaries pale in color.

Habitat: Moist sites that are drying out, such as ephemeral ponds, typically from the foothills to the montane, but occasionally lower.

Notes: Look for the pale phyllaries with short-leafed bracts below the heads.

Gnaphalium uliginosum L.

Plants whitish pubescent throughout with appressed pubescence. Stems to about 25 cm tall, sometimes spreading. Leaves alternate, entire, generally around 3 mm wide or less. Heads small, in the leaf axils and at the ends of the branches, subtending leaves much longer than the heads, phyllaries dark.

Habitat: Moist sites that are drying out, generally from the foothills to the montane, occasionally lower.

Notes: Look for the dark phyllaries with long-leafed bracts below the heads.

***Grindelia* “gumweed”**

As a group, the gumweeds are unmistakable, a sign of late summer with bright yellow round heads, recurved, sticky-gummy phyllaries and leathery leaves. It can be somewhat difficult to determine the species: critical features include whether or not ray flowers are present, whether basal leaves are present, and how the stem leaves clasp the stem. Our most common species, abundant in disturbed areas and roadsides throughout our region, is *G. squarrosa*.

Grindelia aphanactis Rydberg

Plants with heads lacking ray flowers, phyllaries not strongly resinous. Leaves narrow at the base and not strongly clasping the stem, serrulate on the margins, apex acute.

Habitat: Roadsides, gravelly areas.

Notes: Most common in the Custer County region, but occurring also in Pueblo and Fremont Counties, although somewhat uncommon there.

Grindelia decumbens Greene

Plants with ray flowers, involucre only slightly resinous if at all. Basal leaves present at flowering time.

Habitat: Roadsides, gravelly areas.

Notes: More abundant south of our region, but occasional in the vicinity of the Wet Mts.

Grindelia inornata Greene

Plants with heads lacking ray flowers, phyllaries strongly resinous. Leaves sharply dentate on the margins, apex acute, sessile and clasping the stem.

Habitat: Barrens, mesas, roadsides, and shale outcrops.

Notes: Thus far known only from Pueblo and Fremont Counties, but probably undercollected.

Grindelia revoluta Steyermark

Plants with ray flowers, plants perennial with basal leaves present at flowering time. Phyllaries strongly resinous.

Habitat: Plains grasslands.

Notes: Uncommon or undercollected; if basal leaves are not included, this species strongly resembles *G. squarrosa*, and possible misidentifications may occur.

Grindelia squarrosa (Pursh) Dunal

Plants with ray flowers, plants annual or biennial, lacking basal leaves at flowering time. Phyllaries strongly resinous. Stem leaves oblong, lacking petioles and clearly clasping the stem.

Habitat: Grasslands, mesas, roadsides, often in disturbed areas.

Notes: An extremely abundant species; be careful with identification since occasional rayless heads can occur. Check several heads on several plants, and determine if basal leaves are present or not.

Grindelia subalpina Greene

Plants with ray flowers, plants annual or biennial, lacking basal leaves at flowering time. Phyllaries strongly resinous. Stem leaves oblanceolate, narrowed at the base and not clasping the stem.

Habitat: Foothills to subalpine, often in dry grasslands.

Notes: Easily confused with *G. squarrosa*, but generally occurring at higher elevations than that species, and with

different leaf morphology.

***Gutierrezia* “snakeweed”**

Gutierrezia sarothrae (Pursh) Britton & Rusby

Plants bushy, less than 0.5 m tall, perennial, usually suffrutescent at the base, somewhat resinous in the inflorescence. Stems leafy, with linear lanceolate leaves. Heads small, numerous, with imbricate phyllaries. Ray flowers yellow, few.

Habitat: Grasslands, low elevations.

Notes: Snakeweed is an abundant component of the lowland grasslands, often occurring where overgrazing or disturbance has disturbed the cover. It resembles a smaller, more delicate *Chrysothamnus*.

***Helenium* “sneezeweed”**

Helenium autumnale L.

Plants up to about 1 m tall, often growing in clumps. Stems leafy, leaves alternate, entire or toothed. Phyllaries linear, subulate, spreading or becoming reflexed. Ray flowers bright yellow, ca 1 cm long, toothed at the apex.

Habitat: Moist meadows, montane and Black Forest region.

Notes: This is a beautiful species, with multiple flower heads. The short ray flowers have a “chopped off”: appearance.

***Helianthella* “little sunflower”**

The sunflowers and sunflower mimics are many and abundant in the late summer landscape. To tell the genera apart, look carefully at the pappus characteristics and the achenes. *Helianthella* and *Helianthus* are particularly easy to confuse, so check under both genera if determinations are unclear.

Helianthella parryi A. Gray

Plants relatively low and slender, less than 1 m tall. Heads usually less than 2 cm in diameter; leaves not leathery, less than 10 cm long.

Habitat: Forests of the montane zone, usually with ponderosa pine or aspen.

Notes: A generally diminutive species, and occurring at higher elevations than other true sunflowers.

Helianthella quinquenervis (Hooker) Gray

Plants tall and relatively stout, over 1 m tall. Heads up to 5 cm in diameter; leaves leathery with 5 prominent veins; 20-50 cm long.

Habitat: Montane zone, usually under aspens.

Notes: Easily distinguished by its size and the veination of the leaves.

***Helianthus* “sunflower”**

Sunflowers are a cheerful sight on the late summer landscape, but can be difficult to identify to species since some species can hybridize, and they often resemble other genera (see *Helianthella* and *Heliomeris* especially).

Helianthus annuus L.

Plants annual, often up to 2-3 m tall, stems stout. Leaves roughly scabrous, alternate, up to 20 cm long, somewhat ovate. Heads large, ray flowers up to 4 cm long but sometimes smaller. Pappus of 2 scales. Phyllaries hispid ciliate, ovate with acuminate tips.

Habitat: Grasslands, roadsides, at lower elevations.

Notes: Abundant and variable, probably hybridizing with *H. petiolaris*, and often a sign of disturbance or overgrazing.

Helianthus nuttallii Torrey & Gray

Plants perennial, stems somewhat slender, up to 1 m tall. Leaves alternate or opposite, 1.3-3 cm wide, lanceolate; inflorescence in panicles. Ray flowers 2-3 cm long.

Habitat: Moist areas, lowlands.

Notes: A distinctive species with its narrow leaves, and one of the few large yellow composites growing in wetlands. Be careful not to confuse it with *Bidens*, another tall, wetland composite!

Helianthus petiolaris Nuttall

Plants annual, stems stout, to about 1 m tall. Leaves scabrous, variable in shape from narrowly lanceolate to ovate. Heads large, ray flowers to about 2 cm long. Phyllaries not hispid ciliate.

Habitat: Grasslands, roadsides, at lower elevations.

Notes: Abundant and variable, easily confused with *H. annuus*.

Helianthus pumilus Nuttall

Plants perennial, stems stiffly hairy, relatively low and bushy branching from the base, less than 1 m tall. Leaves mostly somewhat opposite, ovate.

Habitat: Mesas, lower foothills.

Notes: This species has a distinctive growth habit, with the bushy branching appearance unlike other sunflowers that grow as single upright stems.

Helianthus rigidus (Cassini) Desfontaines

Plants perennial, stems stout, up to 1 m tall. Leaves mostly opposite, highly variable in shape but typically somewhat rhomboidal and reduced in size on the upper portion of stem. Phyllaries in several series, imbricate; disk flowers usually reddish, sometimes yellow.

Habitat: Mesas, lower foothills.

Notes: The reddish color of the disk flowers is distinctive.

Helianthus tuberosus L.

Plants tall, over several meters in height, stems slender, scabrous. Leaves variable, mostly opposite. Heads many, relatively small, ray flowers up to 3 cm long.

Habitat: Near cultivated areas, Arkansas River Valley.

Notes: This is the cultivated Jerusalem artichoke, with edible starchy tubers on the roots. It can proliferate in fields and gardens, and occurs in the cultivated zone along the Arkansas River as an adventive species.

***Heliomeris* “goldeneye”**

Heliomeris multiflora Nuttall

Plants up to 1 m in height, much branched above. Heads numerous, relatively small, with ray flowers up to ca 2 cm long. Leaves opposite, narrowly elliptic.

Habitat: Montane meadows.

Notes: This genus is very similar to *Helianthus*, the true sunflower, but differs in the more conical receptacle. It looks like a small-headed sunflower growing in the montane zone. The many flowers and opposite, elliptic leaves are diagnostic.

***Heliopsis* “oxeye, false sunflower”**

This genus is one of the sunflower lookalikes, but differs in having ray flowers that persist, becoming papery in age.

Heliopsis helianthoides (L.) Sweet

Plants up to 1 m tall, stems and leaves scabrous, leaves opposite, 5-10 cm long, cordate at the base, margins serrate. Heads on long peduncles, ray flowers conspicuous, to 3 cm long, persistent and turning papery in age.

Habitat: Prairie grasslands.

Notes: A midwest prairie species uncommon in our region. The opposite scabrous leaves and persistent ray flowers are a useful way of distinguishing this from true sunflowers.

***Heterotheca* “golden aster”**

Heterotheca species are typically low, somewhat scrubby looking yellow composites, resembling short sunflowers more than the aster or daisy group. They are always yellow, and often grow in open or disturbed soil; all of our species are common.

Heterotheca canescens (de Candolle) Shinnars

Plants usually about 30 cm or less tall, stems unbranched, heads several, leaves less than 3 cm, with dense, appressed pubescence, appearing grayish; leaves numerous, alternate, heads relatively small.

Habitat: Low elevations, plains grasslands.

Notes: Look for the single unbranched stem, small heads, and gray-green appearance.

Heterotheca fulcrata (Greene) Shinnars

Syn. *Heterotheca foliolosa*

Plants 30 cm or more tall often branched, heads several, leaves over 3 cm long, oblong-lanceolate, heads larger than in *H. canescens*, with leaves and bracts densely clustered below the inflorescence.

Habitat: Plains, mesas, lower foothills.

Notes: An extremely common species, often in disturbed or overgrazed ground or along roadsides.

Heterotheca villosa (Pursh) Shinnery

Plants to 30 cm, loosely branched, heads several, leaves coarsely hirsute, ciliate and glandular, appearing green.

Habitat: Foothills, canyons and rocky slopes, through the lower montane.

Notes: An abundant, weedy and highly variable species.

Heterotheca pumila, subalpine rock slide species found in other parts of the Front Range, has not yet been collected in our region but may well be present here. It can be distinguished by its single head with longer ray flowers. It grows at higher elevations than any other species of *Heterotheca*.

***Hieracium* “hawkweed”**

Hieracium albiflora Hooker

Syn. *Chlorocephalus albiflora*

Plants up to about 0.5 m tall, with basal leaves but few stem leaves. Basal leaves with petioles, blades oblong, hairy with tawny hairs. Heads numerous in panicles, flowers white to creamy.

Habitat: Dry areas in conifer forests in the foothills and montane.

Notes: The white flowers on this species make it easy to distinguish.

Hieracium aurantiacum L.

Plants 20-30 cm tall, basal leaves somewhat club-shaped and covered with stiff hairs, margins entire.

Heads few to many, in terminal clusters; flowers bright orange; phyllaries with black hairs.

Habitat: Garden weed, naturalized in the foothills especially west of Palmer Lake.

Notes: This is an adventive species, well known to gardeners, but apparently becoming more common in the foothills where it is spreading rapidly. The orange-colored flowers are very distinctive.

Hieracium fendleri Schultz-Bipontinus

Syn. *Chlorocephalus fendleri*

Plants 20-50 cm tall, basal leaves hairy, with few stem leaves. Heads relatively few, in panicles, flowers yellow.

Habitat: Forests and meadows in the montane to subalpine zones.

Notes: Less common than *H. albiflora*, and distinguished by its yellow flowers. *Krigia* has larger flowers, a prominent bract below, and glabrous leaves.

Hymenopappus

Hymenopappus filifolius Hooker

Plants perennial with a basal rosette of pinnatisect leaves and multiple caudices. Stems tall with reduced leaves if any, sometimes with wooly tomentum in the leaf axils. Heads few, ray flowers lacking, disk flowers bright yellow.

Habitat: Lowlands, in grasslands, and more often in pinon-juniper communities.

Notes: Common throughout our region and distinguished by the multiple caudices and color of the disk flowers.

Hymenopappus newberryi (A. Gray) I. M. Johnston

Plants tall, with basal rosette of pinnatisect leaves. Heads relatively large, with prominent white ray flowers.

Habitat: Dry hillsides in the lowlands, especially Pueblo and Fremont Counties.

Notes: Uncommon here, where it is on the northern edge of its range.

Hymenopappus tenuifolius Pursh

Plants biennial, with a basal rosette of pinnatisect leaves and only single (rarely more) caudices. Stems tall with reduced leaves if any. Heads few, ray flowers lacking, disk flowers cream colored.

Habitat: Dry grasslands on the plains, especially in sandy soils of El Paso and Pueblo Counties.

***Iva* “poverty sumpweed”**

Iva axillaris Pursh

Plants perennial, to 40 cm tall. Stems erect, much branched; leaves numerous, opposite, sessile, narrowly oblong and scabrous to the touch. Heads with disk flowers only, occurring in the leaf axils.

Habitat: Disturbed ground, often in pastures, railroad gravels or cropland; salt tolerant.

Notes: A native species, but weedy in its growth and ecology.

Iva xanthifolia Nuttall

Syn. *Cyclachaena xanthifolia*

Plants annual, tall, often to 2 m or more in height. Leaves opposite or upper alternate, with long petioles. Leaf blades ovate, to 30 cm long and resembling those of cockleburs in shape; veins prominent, margins dentate. Inflorescence in dense crowded spikes in upper leaf axils and stem apex; flowers minute, greenish white.

Habitat: Damp areas such as stream banks or gravels, or around road culverts.

Notes: Native, but somewhat weedy; causes hayfever and/or skin rashes in some people.

***Krigia* “dwarf dandelion”**

Krigia biflora (Walter) S. F. Blake

Plants up to 0.5 m tall (hardly dwarf!) and resembling a dandelion or hawkweed with few, relatively large yellow heads and slightly denticulate to almost entire basal leaves. Heads subtended by a distinctive large bract; pappus also distinctive: double, consisting of small outer scales and inner capillary bristles.

Habitat: Moist meadows in the Black Forest.

Notes: Very rare, and increasingly losing habitat to wetland drainage, development, and weed incursions. Known only from a few sites in the Black Forest. One of the species that comprises the relictual eastern element of our flora.

***Lapsana* “nipplewort”**

Plants annual, to 1 m or more, branched. Leaves alternate, petiolate, broadly ovate with dentate margins, often with paired lobes at the base. Upper leaves narrower, becoming entire. Heads small, phyllaries in a single series, flowers yellow, lacking a pappus.

Habitat: Known from only a single location here, a moist thicket in the Broadmoor region, west side of Colorado Springs.

Notes: Adventive eastern species, very uncommon in Colorado. The small flowers and ovate dentate leaves are distinctive.

***Lactuca* “wild lettuce”**

Lactuca biennis (Moench) Fernald

Plants biennial, with a basal rosette of broad, triangular, pinnatifid leaves. Flowers blue or purplish in color, pappus brownish.

Habitat: Foothills and montane.

Notes: Apparently uncommon in our area.

Lactuca canadensis L.

Plants biennial or annual, with a tall glabrous stem up to a meter high. Leaves sinuate-pinnatifid, but lacking spines. Flowers yellow, pappus white, achenes blackish.

Habitat: Canyons in the lower foothills, in moist areas.

Notes: Uncommon species here.

Lactuca serriola L.

Plants biennial or annual, with a tall stem up to 2 m in height. Leaves blue-green, deeply lobed with the lobes pointing backwards and clasping the stem. Margins sharply toothed to prickly, and often midveins spiny as well. Flowers yellow.

Habitat: Fields and gardens.

Notes: Adventive, very common throughout our region. *Lactuca serriola* is very similar to *Sonchus*, which also has yellow flowers, and clasping spiny leaves. *Lactuca* can be distinguished by its narrowly cylindrical involucre below the heads; *Sonchus* has a broad more rounded involucre.

Lactuca tatarica (L.) C. A. Meyer

Plants perennial, up to 1 m tall. Leaves linear to lanceolate, exhibiting a great diversity in degree of toothing, lacking spines. Flowers blue, pappus white.

Habitat: Meadows, roadsides, lower to middle elevations.

Notes: An abundant native species, especially common in the Black Forest.

***Leucanthemum* “ox-eye daisy”**

Leucanthemum vulgare Lamarck

Plants tall and somewhat leafy stemmed. Heads relatively large, few, several cm in diameter, with bright white ray flowers and yellow disk flowers.

Habitat: Foothills and montane, especially around mining towns and old cabins.

Notes: Often planted in the mining days, and now naturalized throughout the mountains of Colorado.

Leucelene “sand aster”

Leucelene ericoides (Torrey) Greene

Syn. *Aster arenosus*

Plants low, clumped, with short, sharp, linear leaves. Heads about 1 cm in diameter, single on a branch, with narrow white ray flowers.

Habitat: Common in dry grasslands and barrens on the plains and throughout the Arkansas drainage.

Notes: Look for the low bushy growth habit and small heads. Blooms in May and June. It is easy to see then, but is more difficult to identify later in the summer.

Liatris “gayfeather”

Liatris ligulistylis (A. Nelson) K. Schumann

Plants to about 0.5 m tall, sometimes less. Heads in broad purple spikes, clusters large with many florets, in separate segments on the stems. Leaves linear lanceolate.

Habitat: Wet meadows, plains to lower foothills.

Notes: A threatened species in Colorado, and rare in our region. Thus far it is known only from historical collections in the wet meadows of the Black Forest region, and from recent collections in the wet canyons west of Palmer Lake. It is distinctly more robust than our common species, *Liatris punctata*.

Liatris punctata Hooker

Plants to 30 cm tall, sometimes less in dry areas. Heads in relatively narrow spikes, clusters only indistinctly separated and with few florets. Leaves linear-lanceolate.

Habitat: Dry areas, plains, mesas, and lower foothills.

Notes: Extremely common. This is an abundant species in late summer.

There is an historical record of *Liatris squarrosa* from sandy soils in Pueblo Country, but this species has not been collected in recent times. It can be distinguished from *L. punctata* by the greater number of florets per head, and the more distinctive separation of the heads. It may well still occur in SE El Paso or Pueblo Counties, and should be looked for in those regions where the soil is exceptionally sandy.

Lygodesmia “skeletonweed”

Lygodesmia juncea (Pursh) D. Don

Plants perennial, up to 0.5 m high, much branched, with leaves reduced to small scales. Stems often showing globose galls created by wasps. Pappus simple bristles, brownish white.

Habitat: Common in dry grasslands and overgrazed pastures at lower elevations.

Notes: Very similar to *Stephanomeria*, but differing in the smaller leaves and in pappus characters. See comments under *Stephanomeria* for how to tell the two genera apart.

Machaeranthera “tansy aster”

The tansy asters resemble true asters and daisies, but differ in having distinctly recurved phyllaries. Although most of our species are purple-flowered, *M. pinnatifida* is yellow.

Machaeranthera bigelovii (A. Gray) Greene

Syn. Includes also the dubiously distinct *M. pattersonii* (A. Gray) Greene, which is part of an interbreeding species complex about which botanists argue the correct nomenclature.

Plants somewhat bushy and branched, but occasionally stems single, up to about 0.5 m. Leaves toothed to entire. Heads with glandular phyllaries and purple ray flowers, disk flowers yellow. A highly variable species, apparently intergrading into *M. canescens*.

Habitat: Plains to tundra, extremely common, and somewhat weedy, occurring often along roadsides.

Notes: Extremely common, but often difficult to reliably distinguish from *M. canescens* on the plains.

Machaeranthera canescens (Pursh) A. Gray

Plants bushy and branched, leaves toothed to entire. Phyllaries chartaceous with green tips, not glandular.

Intergrading with *M. bigelovii*.

Habitat: Dry areas on the plains and along roadsides.

Notes: A common weedy species, often difficult distinguish from *M. bigelovii*.

Machaeranthera coloradoensis (Gray) Osterhout

Plants low, prostrate to mat forming, with suffrutescent base. Heads usually over 2 cm in diameter, solitary on short peduncles.

Habitat: Gravelly slopes, roadsides.

Notes: Known only in our region from sporadic occurrences in Fremont County near the Park County line. This species is currently believed rare in Colorado, but its total distribution and abundance is still unclear.

Machaeranthera pinnatifida (Hooker) Shinnars

Plants relatively short, with few stems. Leaves pinnatifid, spiny tipped. Ray flowers yellow.

Habitat: Dry areas on the plains; especially common on overgrazed prairie.

Notes: A very common species and like most of the genus, highly variable. This is the only one of our *Machaeranthera* species that is yellow.

Machaeranthera tanacetifolia (Humboldt, Bonpland, & Kunth) Nees

Plants annual, somewhat sprawling, leaves pinnatifid, heads relatively large (up to 2 cm), with purple ray flowers.

Habitat: Dry areas on the plains.

Notes: Distinguished by its larger purple heads, and annual growth habit.

***Madia* “tarweed”**

Madia glomerata Hooker

Plants annual, stems erect, 20-70 cm tall. Stems and leaves sticky glandular, rankly aromatic. Leaves narrowly lanceolate, heads clustered at the ends of the branches, inconspicuous and partially enclosed by leaves.

Habitat: Roadsides and disturbed areas.

Notes: Alien weed, relatively uncommon in our region.

***Matricaria* “chamomile, pineapple weed”**

Matricaria matricarioides (Lessing) Porter

Syn. *Chamomilla suaveolens*; *Lepidotheca suaveolens*

Plants low, usually somewhat sprawling. Leaves pinnatifid, with a strong pineapple scent. Heads lacking ray flowers, cone-shaped, yellowish-green.

Habitat: Disturbed areas, fields.

Notes: A relatively common adventive weed, with a very characteristic and pleasant medicinal odor.

***Melampodium* “blackfoot daisy”**

Melampodium leucanthum Torrey & Gray

Plants low and bushy, woody at the base and herbaceous above. Leaves narrowly lanceolate; heads to 2 cm broad, ray flowers white; phyllaries very broad and rounded.

Habitat: Barrens, rocky outcrops, and sandy or gravelly soils in the southern part of our region.

Notes: Common in Pueblo and Fremont Counties, less abundant in El Paso County.

Microseris

Microseris nutans (Geyer) Schultz-Bipontinus

Plants perennial, to about 0.5 m, leaves entire to lobed. Heads yellow, lacking ray flowers, resembling *Agoseris* but nodding rather than erect, and typically several per stem. Involucres usually somewhat turbinate.

Habitat: Dry meadows and forests, foothills and montane to subalpine.

Notes: Somewhat uncommon, or at least undercollected here. Look for the several flowers per stem; possibly confused with the rare *Krigia*, but lacking the distinctive bract and phyllaries of that species and occurring in drier habitats.

***Nothocalais* “false dandelion”**

Nothocalais cuspidata (Pursh) Greene

Plants perennial, resembling a dandelion with entire leaves. Leaf margins distinctly wavy, with white crispy hairs. Flowers yellow, heads relatively large.

Habitat: Meadows and rocky areas, plains to lower foothills.

Notes: An early spring bloomer, and one of the many species that go by the common name of “false dandelion”. The wavy-margined, entire leaves are diagnostic.

***Onopordum* “Scotch thistle”**

The cultivated “Scotch thistle” is very clearly a thistle with its spiny leaves and sharp-spiny purple heads; it differs from the true thistles (*Cirsium*) in their extremely large size, and robust growth habit. They do not appear to spread to the point of being a noxious weed here, but have naturalized in the local area.

Onopordum acanthium L.

Plants biennial, to almost 3 m tall. Stems with broad spiny wings; leaves spiny, large, densely tomentose with fine hairs and appearing grayish. Heads numerous, to 3 cm in diameter, flowers purple.

Habitat: Fields, roadsides, at lower elevations.

Notes: The two species are similar in appearance, but differ in whether the leaves have hairs or not.

Onopordum tauricum Willdenow

Plants biennial, to almost 3 m tall. Stems with broad wings, leaves spiny, large, glabrous. Heads numerous, to 3 cm in diameter, flowers purple.

Habitat: Fields, roadsides, at lower elevations.

Notes: Less common than *O. acanthium*, mostly occurring in the southern part of our region. Look for the glabrous leaves on this species.

***Oönnopsis* “goldenweed”**

Oönnopsis resembles a somewhat bushy *Heterotheca*, but with larger heads and blooming in the early to middle part of the summer. It often occurs with *Artemisia bigelovii* in Fremont and Pueblo Counties.

Oönnopsis foliosa (Gray) Greene

Plants low rhizomatous herbs to about 30 cm, somewhat woody at the base. Leaves gray green, oblong, to about 4 mm wide. Heads relatively large, to 3 cm high, erect, multiple in clusters at the stem tips. Phyllaries erect.

Habitat: Dry grasslands, barrens, and open soil in the southern part of our region.

Notes: Very common in the Arkansas River drainage.

Oönnopsis puebloensis n. sp. ined. (G. Brown, Univ. of Wyoming).

Plants low rhizomatous herbs to about 30 cm, somewhat woody at the base. Leaves oblong. Heads relatively large, to 3 cm high; phyllaries distinctively recurved.

Habitat: Chalk and calcareous shale barrens, Pueblo and Fremont Counties.

Notes: Uncommon or rare in our region; apparently endemic to the Niobrara barrens outcrops, especially around Pueblo Reservoir. Currently this has not yet been published officially as a separate species, but widely regarded by botanists as distinctive and deserving of species status.

***Oreochrysum* “goldenweed”**

Oreochrysum parryi (A. Gray) Rydberg

Syn. *Happlopappus parryi*

Plants perennial, herbaceous, stems to 50 cm, usually less; leaves bright green, lanceolate, entire, glabrous to puberulent; heads few to many, in open clusters, pappus bristly, copious.

Habitat: Conifer forests and aspen groves, montane to subalpine.

Notes: Common, and appearing somewhat like a glabrous *Heterotheca*.

Palafoxia

Palafoxia sphacelata (Nuttall) Cory

Plants herbaceous, stems leafy, to about 50 cm tall, often less in dry sites; leaves linear-lanceolate, 3-8 cm long; heads composed of ray flowers only, pink, 3-lobed at the apex.

Habitat: Sandy areas on the plains, uncommon in our region but more abundant to the south.

Notes: A very distinctive and pretty species with its pink heads of 3-lobed ray flowers.

***Pectis* “fetid marigold”**

Pectis angustifolia Torrey

Plants low, bushy branched annuals with a lemon scent. Leaves narrowly linear, dotted with glands and containing stiff cilia at the base.

Habitat: Dry, usually sandy soils on the plains.

Notes: Uncommon in our region, mostly occurring in the southern portion.

Pericome

Pericome caudata A. Gray

Plants herbaceous but somewhat woody at the base and appearing shrub-like as hemispheric bushes up to 1 m tall; stems leafy with opposite, triangular leaves with long acuminate apex; heads composed of bright yellow disk flowers only.

Habitat: Rocky cliffsides, foothills and lower montane.

Notes: A beautiful and distinctive species with its long leaf tips and bright yellow heads; blooming abundantly in canyons in late summer.

Petasites “sweet coltsfoot”

Petasites sagittatus (Banks) Gray

Plants herbaceous, with large, triangular-cordate basal leaves, green above and white below from dense tomentum. Heads in racemes with white ray and disk flowers.

Habitat: Cold wet bogs, subalpine to lower alpine.

Notes: An unmistakable species common in wetter parts of the Colorado mountains, but relatively uncommon here. It was probably more common on Pikes Peak before the reservoirs were created around the alpine lakes there.

Picradenia

Picradenia richardsonii Hooker

Syn. *Hymenoxys richardsonii*

Plants perennial, bushy branched with numerous woody stems up to 0.5 m high. Leaves forming basal tufts around the stem, usually divided into 3-7 linear segments, somewhat fleshy. Heads in flat-topped corymbs, ray flowers yellow.

Habitat: Gravelly areas, montane.

Notes: Common in South Park, known from Teller and Fremont Counties.

Picradeniopsis

Picradeniopsis oppositifolia (Nuttall) Rydberg

Plants perennial, stems much branched, with woody bases up to 25 cm high. Leaves opposite, divided into 3-5 linear segments, canescent-strigose with impressed punctate dots. Ray flowers few, yellow.

Habitat: Roadsides and gravelly or disturbed areas, plains and lower foothills.

Notes: A common weedy species. Although *Picradenia* and *Picradeniopsis* are superficially similar, they can be distinguished by size and elevational range, as well as differences in the leaf morphology. Look for the distinctly glandular achenes (and ovaries in the disk flowers) in *P. oppositifolia*.

Prenanthes “white lettuce”

Prenanthes racemosa Michaux

Plants perennial, up to 1 m in height. Stems glabrous, somewhat glaucous, leaves oval to oblanceolate with long winged petioles. Heads 8-16 in spikelike panicles; involucre around 1 cm in height.

Habitat: Moist areas in the montane, especially willow carrs along streams.

Notes: Uncommon or rarely collected in our region.

Pseudognaphalium “cudweed”

This genus is very similar to *Gnaphalium* but differs in having larger heads (>5 mm high) that are not imbedded in leafy bracts; the stems are generally taller than in *Gnaphalium* as well.

Pseudognaphalium canescens (de Candolle) Weber

Syn. *Gnaphalium wrightii*

Plants to about 30 cm tall; leaves tomentose on both sides; heads with white or only slightly straw-colored phyllaries.

Habitat: Sandy or gravelly soil, plains and mesas.

Notes: These species differ primarily in habitat and in characteristics of their phyllaries; look for the white phyllaries in this species to distinguish it from *P. stramineum*, which has straw-colored phyllaries and a wetter habitat.

Pseudognaphalium stramineum (Humboldt, Bonpland, & Kunth) Weber

Syn. *Gnaphalium chinense*

Plants to about 30 cm tall; leaves tomentose on both sides; heads with straw-colored phyllaries.

Habitat: Wet areas, pond margins, in the lowlands.

Notes: See *P. canescens*.

Pseudognaphalium viscosum (Humboldt, Bonpland, & Kunth) Weber

Syn. *Gnaphalium macounii*

Plants to about 30 cm tall, leaves bi-colored: green and glandular above and white tomentose below.

Habitat: Forest openings, roadsides, montane.

Notes: Generally occurs at higher elevations than the other species in the genus; look for bicolored leaves with glands and white tomentum.

***Psilostrophe* “paperflower”**

Plants perennial, woolly tomentose on the stems and leaves; stems to about 0.5 m. Leaves narrow. Heads with yellow ray flowers to about 1 cm long, 3 lobed, becoming papery in age.

Habitat: Plains grasslands.

Notes: Not documented in our region, but a possibility on the eastern plains of El Paso and Pueblo County. It has been collected just to the east of our region in Lincoln County and is common in Texas and Arizona.

***Pyrrocoma* “goldenweed”**

Pyrrocoma is a yellow flowered genus similar to *Tonestus*, but taller and with a distinct cluster of basal leaves. The pappus is tawny rather than white. Two species occur on the margins of our region but have not yet been collected here. *Pyrrocoma uniflora* (Hooker) Greene occurs at high elevation in the Mosquito Range; it has a single flower on a prostrate, ascending stem. *Pyrrocoma clementis* Rydberg occurs in alkaline sites of Park County. It is distinguished by phyllaries with pale, thickened basal edges.

***Ratibida* “coneflower”**

The elongate, elevated receptacle of this genus provides a distinctive profile for the central disk flowers of this classic genus of the plains grasslands.

Ratibida columnifera (Nuttall) Wooton & Standley

Plants perennial, stems to 80 cm tall, leafy with alternate pinnately divided leaves. Heads terminal; receptacle long columnar, 10-40 mm high, with deep brown ray disk flowers. Ray flowers yellow, conspicuous, 8-30 mm long.

Habitat: Mesas and plains, lower elevation grasslands and shrub zone.

Notes: This species can hybridize with *R. tagetes*. The hybrids tend to have reddish ray flowers and shorter receptacles, with a morphology intermediate between the two species.

Ratibida tagetes (James) Barnhart

Plants perennial, stems relatively short, to ca. 0.4 m. Stems leafy, with pinnately divided leaves. Heads terminal, receptacle globular to ellipsoid, 6-15 mm high, with brown disk flowers. Ray flowers yellow, typically with reddish bases, less than 10 mm long.

Habitat: Plains, especially in southern El Paso and Pueblo Counties; often in areas with spring moisture or standing water such as playa basins where it occurs with *Buchloe* (buffalo grass).

Notes: See notes on possible hybrids with *R. columnifera*. The “pure” strains of this species are very distinctive, with shorter reddish ray flowers and a less columnar central portion.

***Rayjacksonia* “goldenweed”**

This odd Great Plains genus resembles the gumweeds and a sand dune genus called *Prionopsis*. It is named for the botanist Ray Jackson, and is a relatively uncommon late-blooming species of sandy areas in southern El Paso and Pueblo County. This particular group has fallen under many different names over the years, but the species is quite distinctive. Check the achenes to distinguish it from *Prionopsis*, which it resembles closely. *Prionopsis* has glabrous achenes, this species has distinctly hairy ones. They both resemble annual *Grindelias*!

Rayjacksonia annua R.M. Hartman and M.A. Lane

Syn. *Happlopappus annua*, *Machaeranthera annua*

Plants annual, to about 30 cm tall. Leaves spinulose-dentate, narrowed at the base. Phyllaries somewhat recurved, and entire plant sticky gummy, resembling *Grindelia*. Pappus of stiff bristles, achenes hairy.

Habitat: Sandy areas on the plains, often in overgrazed alkaline soils. Thus far known only from Pueblo County, but probably occurring in southeastern El Paso county as well.

Notes: Resembles an annual *Grindelia* but with a distinctive pappus and lacking basal leaves.

***Rudbeckia* “black-eyed Susan”**

The dark centers of the dry meadow species *Rudbeckia hirta* provides the classic view of this genus, one that is often used horticultural. Our montane wetland species, *R. ampla*, has a distinctive greenish yellow center and does not live up to the common name of the genus! Perhaps it should be called “green-eyed Susan”!

Rudbeckia ampla Nelson

Plants perennial, tall, with stems typically about 1 m in height. Leaves alternate, toothed, lobed or divided. Ray flowers yellow, 3-6 cm long, disk flowers yellow or greenish.

Habitat: Lower foothills and montane, around streamsides and springs.

Notes: A tall and beautiful species, with a diagnostic greenish yellow center surrounded by long yellow ray flowers.

Rudbeckia hirta L

Plants perennial, stems about 0.5 m tall, erect, pubescent and often with purple dots. Lower leaves broad, upper leaves become linear. Ray flowers yellow, to about 3 cm long, disk flowers deep black.

Habitat: Dry montane meadows.

Notes: Look for the deep black centers and long yellow ray flowers.

***Rydbergia* “old man of the mountain”**

The striking large, nodding heads of this tundra species is a common sight for alpine hikers. No other true sunflowers are found at the high elevations.

Rydbergia grandiflora (Torrey & Gray) Greene

Plants relatively short, to about 15cm tall. Stems stout, with grayish woolly pubescence. Heads single, with yellow ray flowers to about 4 cm long.

Habitat: Alpine tundra meadows.

Notes: Occurring in our region only on Pikes Peak, but common throughout the Colorado mountains.

***Schkuhria* “threadleaf”**

Syn. *Bahia neomexicana*

Plants annual, stems to 20 cm, slender and branched from the base. Leaves opposite to alternate, divided into linear filiform segments. Heads with ray flowers lacking, involucre about 5 mm high.

Habitat: Plains, typically in sandy soils.

Notes: This is an uncommon or undercollected species of the plains; rather nondescript and easily overlooked. Look for the branching stems and small, rayless heads. Often blooms late in the season

***Scorzonera* “false salsify”**

Scorzonera laciniatum L.

Syn. *Podospermum laciniatum*

Plants annual or biennial, stems 1-several, typically branched above. Leaves, esp. the basal ones, pinnatisect, alternate, to 20 cm long. Disk flowers lacking, ray flowers yellow, resembling *Tragopogon*. Pappus noticeably plumose. Juice abundant, milky, staining deep brown.

Habitat: Roadsides, disturbed areas, fields, lower elevations.

Notes: Adventive species, becoming relatively common around the Colorado Springs urban area. The plumose pappus is distinctive, and distinguishes this species from *Tragopogon*, which it somewhat resembles.

***Senecio* “groundsel”**

This large group of species posed a number of taxonomic problems, and there is much debate about how to subdivide the genus; undoubtedly more than a single genus is represented in this eclectic group, but differentiating them on morphological grounds alone is a challenge. In general, the “*Packera* group” and the *Ligularia* group are most easily pulled out and treated as separate genera, but this is often debated by botanists. Check all groups of *Senecio* to be certain of identification when in doubt.

Ligularia group

These species typically has succulent, often somewhat aromatic leaves. If identification is uncertain, both *Senecio* and the *Ligularias* should be checked. Most are high elevation species, except for *L. pudica*.

Ligularia bigelovii (A. Gray) W. A. Weber

Plants to about 0.5 m, ray flowers lacking. Heads nodding, relatively large, turban-shaped, thick and fleshy and appearing as if they were buds. Leaves lanceolate.

Habitat: Montane meadows, aspen groves and other moist sites.

Notes: A common species in the moist meadow of middle elevations; the rayless, thick flower heads are quite distinctive.

Ligularia holmii (Greene) Weber

Plants relatively small, with rounded or cordate basal leaves. Leaves petiolate, tapered to the base, strongly dentate. Reddish tinged on the petioles only. Heads with relatively long yellow ray flowers.

Habitat: Alpine tundra.

Notes: Common on the tundra.

Ligularia pudica (Greene) W. A. Weber

Plants tall, to 0.5 m, ray flowers lacking. Heads nodding, relatively small, turban-shaped. Leaves linear-lanceolate.

Habitat: Canyons and rocky hillsides, foothills to montane.

Notes: Somewhat resembling *L. bigelovii* but with smaller heads, and occurring in lower, drier sites.

Ligularia taraxacoides (A. Gray) W. A. Weber

Plants low and dwarfed, leaves runcinate to pinnatifid, with cobwebby pubescence especially around the petioles. Ray flowers present.

Habitat: Tundra, often among rocks.

Notes: Uncommon or undercollected in our region.

Packera group

All species are herbaceous, and some books treat them all under the inclusive genus *Senecio*. However, their different chromosome base number and appearance (generally though not always, shorter, basal leaves with winged petioles, often toothed margins, the lack of distinct stem leaves, and the woody caudices) are justification for recognizing them at the generic level, and most botanical treatments now place them as a separate genus *Packera*.

Packera cana (Hooker) Weber & Löve

Plants with stems usually less than 0.5 m; stems with a few conspicuous stem leaves, otherwise with usually entire basal leaves (sometimes with lobes) that are conspicuously tomentose.

Habitat: Meadows, lower foothills to upper montane.

Notes: Look for the white tomentum and grayish appearance of the plant, and the few stem leaves.

Packera crocata (Rydberg) Weber & Löve

Plants with stems with few leaves but those present having enlarged, clasping bases, basal leaves sometimes slightly toothed or lobed; ray flowers bright orange.

Habitat: Wet subalpine meadows.

Notes: Look for the bright orange ray flowers; somewhat uncommon here.

Packera dimorphophylla (Greene) Weber & Löve

Plants with basal leaves having winged petioles; heads several, about 15 mm high; stem leaves few but relatively large, with enlarged, clasping bases. Ray flowers yellow.

Habitat: Upper montane and subalpine, usually occurring over 10,000 ft.

Notes: Similar to *P. crocata* but differing in flower color. Look also for the big, clasping stem leaves.

Packera fendleri (A. Gray) Weber & Löve

Plants to 0.5 m tall, basal leaves with wavy margins to deeply pinnately lobed margins, somewhat folded, white tomentose. Inflorescences coming from top of stem, appearing somewhat umbellate.

Habitat: Gravelly areas, middle elevations.

Notes: look for the lobed leaves with white tomentum. Leaf lobing can be quite variable.

Packera neomexicana (A. Gray) Weber & Löve

Plants with stem leaves lacking clasping bases, entire or only slightly dentate; basal leaves tomentose when young and glabrate later. Stems bearing inflorescences branching from axils of cauline leaves.

Habitat: Somewhat uncommon, forested areas, middle elevations.

Notes: Very similar to *P. fendleri*, but with lobes having denticulate tips and differing somewhat in habitat. Both species lose their tomentum in age.

Packera plattensis (Nuttall) Weber & Löve

Plants with stem leaves lacking clasping bases, pinnatisect to lyrate; basal leaves tomentose when young and glabrate later.

Habitat: Plains, mesas.

Notes: A common early spring species on the plains.

Packera pseudaurea (Rydberg) Weber & Löve

Plants with long petioolate basal leaves, blades ovate-cordate, regularly crenate along the margins.

Habitat: Wet meadows and streambanks, middle elevations.

Notes: The rounded basal leaves are diagnostic for this wetland species.

Packera tridenticulata (Rydberg) Weber & Löve

Plants with stem leaves lacking clasping bases, basal leaves narrowly oblanceolate, with a 3-toothed apex.

Habitat: Extremely common, gravelly areas, lower to middle elevations.

Notes: Has a tendency to hybridize with other species in the genus, but in pure stands, the 3-lobed apex of the basal leaves is diagnostic.

Packera wernerifolia (A. Gray) Weber & Löve

Plants low and relatively rounded clumps; basal leaves somewhat thick, ovate-lanceolate to elliptic, toothed near the apex. Heads sometime solitary.

Habitat: Rocky slopes and talus, boulder fields, subalpine and alpine on Pikes Peak.

Notes: One of our high elevation species, common in the mountains.

Senecio: the “lugentes” group:

Plants in this group are generally taller than *Packera*, leaves entire or denticulate, with minute callous teeth (denticles) on the margins.

Senecio atratus Greene

Plants tall, to about 1 m in height; usually growing in large groups; leaves long, to 30 cm, somewhat fleshy and marked by black denticles on the margins. Heads small, to about 1 cm in diameter, in clusters at the end of stems.

Habitat: Rocky slopes in the montane and subalpine.

Notes: Look for the black-toothed leaf margins.

Senecio crassulus Gray

Plants to about 50 cm tall, often growing in clumps; leaves to about 12 cm long, somewhat fleshy, margins slightly toothed; heads few, on long stalks, with few ray flowers.

Habitat: Moist areas, stream banks and wet meadows, montane to subalpine.

Notes: Look for the few heads with widely spaced ray flowers and the moist habitat.

Senecio integerrimus Nuttall

Plants to about 0.5 m in height; stems stout, hollow, and somewhat cobby-pubescent, at least when young. Heads small, about 1 cm in diam., in clusters. Leaves lanceolate, often clasping the stem, grayish.

Habitat: Meadows, foothills to subalpine.

Notes: Look for the hollow, cobby stem and grayish leaves.

Senecio wootonii Greene

Plants less than 0.5 m in height, stems usually single or only a few together; glabrous and somewhat glaucous, lower leaves oblanceolate to ovate, entire to sinuate dentate; stem leaves few. Heads relatively few, to about 2 cm in diameter.

Habitat: Dry forests, middle elevations.

Notes: Look for the few stems, with a glaucous appearance.

Senecio: the “triangulares” group

Plants in this group are relatively tall, single or few-stemmed, with broad leaves more or less equal in size throughout the stem.

Senecio eremophilus Richardson ssp. *kingii* (Rydberg) Douglas & Ruyle-Douglas

Plants to about 1 m in height, with leafy stems; leaves pinnately lobed or deeply cut in an irregular fashion; heads multiple; to about 2 cm in diam.

Habitat: Gravelly areas, especially along trails and roadsides, foothills to subalpine.

Notes: Look for the pinnately lobed leaves.

Senecio fremontii Torrey & Gray ssp. *blitoides* (Greene) Cronquist

Plants low, succulent, and many stemmed (anomalous for this group) with multiple leaves; leaves ovate, succulent, to about 3 cm long; margins coarsely dentate.

Habitat: Rocky areas, including talus and boulder fields, at high elevation.

Notes: Look for the low, bushy growth habit, and coarsely toothed succulent leaves.

Senecio serra Hooker

Plants to about 0.5 m, stems with lanceolate leaves, margins finely serrate-dentate.

Habitat: Streamsides, moist areas, foothills to montane.

Notes: Uncommon in our region; look for the finely toothed leaves.

Senecio triangularis Hooker

Plants to almost 2 m tall, stems stout, clumped, with broadly triangular leaves, to about 30 cm long, coarsely toothed.

Habitat: Moist areas, generally montane to subalpine.

Notes: A very large distinctive species; look for the tall stems and triangular leaves.

Senecio: the “suffruticosi” group

Plants in this somewhat woody group grow in mid-sized bushy clumps, leaves linear, sometimes pinnately divided.

Senecio flaccidus Lessing var. *douglasii* (de Candolle) Turner & Barkley

Plants with wooly, tomentose leaves, sometimes somewhat divided.

Habitat: Dry plains, generally in the southern part of our region but noted as far north as Fountain.

Notes: Look for the prominent wooly pubescence on the leaves.

Senecio multicapitatus Greenman

Plants with pinnately divided leaves lacking wooly tomentum; heads very small, less than 5 mm in diam.

Habitat: Sandy areas, mostly in southern Colorado, but probably occurring in Pueblo or Fremont Counties.

Notes: Look for the very small heads, and irregularly pinnatifid leaves. A similar species, *S. riddellii*, has pinnately divided leaves and much larger heads. It also grows in sandy soils, and may occur in our region although it has not yet been documented here.

Senecio spartioides Torrey & Gray

Plants with simple, glabrous leaves. Heads about 3 cm in diameter, bright yellow.

Habitat: Grasslands, mesas, plains to the middle elevations.

Notes: Extremely common in late summer.

“True” *Senecio*

Senecio vulgaris L.

Plants annual, lacking ray flowers. Leaves somewhat succulent, pinnatifid.

Habitat: Gardens, waste areas.

Notes: This is the only representative of the broad *Senecio* group that is clearly affiliated with the type species for the genus. It is very different from others placed in the genus, and quite distinctive with its annual growth habit and rayless heads. It is an extremely common adventive weed in gardens, especially where the soil is moist from sprinklers.

***Shinnersoseris* “skeletonweed”**

Some botanists place this genus in a broader concept of *Lygodesmia*.

Shinnersoseris rostrata (Gray) Tomb.

Plants annual, usually less than 0.5 m tall with stiff wiry branches. Flowers in pinkish heads. Leaves much reduced in size to almost scales on the upper branches. Pappus bright white.

Habitat: Grasslands on the plains.

Notes: Apparently uncommon in our area, or perhaps mistaken for the common lookalike species *Lygodesmia juncea*. See comments under *Stephanomeria* for how to tell *Stephanomeria*, *Lygodesmia*, and *Shinnersoseris* apart.

***Silphium* “compass plant”**

Silphium laciniatum L.

Plants deeply taprooted, stems very tall, to 2 m or more. Leaves leathery, up to 30 cm long, deeply notched nearly to the midrib. Stem leaves alternate, becoming smaller. Ray flowers yellow, to 5 cm long. Disk flowers dark brown to black.

Habitat: Moist prairie.

Notes: The common name of this species refers to the frequent north-south orientation of the leaves. The species is common on the Great Plains, but known in Colorado only from an old population in Palmer Lake that is now extinct. It is possible but unlikely, that the species may still exist in our region.

***Solidago* “goldenrod”**

The genus *Solidago* is a late summer yellow composite, readily recognized to genus by the arching spikelike inflorescence of small heads. Basal and stem leaves, hair patterns, and size of the plants are all important for identification purposes. See also the genus *Euthamia*, a goldenrod like genus with very narrow leaves and a flat-topped inflorescence. *Unamia alba* (formerly *Solidago ptarmicoides*) has also been linked to the goldenrods, but is distinctive with its white ray flowers.

Solidago canadensis L.

Plants relatively tall to 1.5 m in height, stems pubescent, leafy throughout with an inflorescence in a spreading, somewhat one-sided panicle. Leaves somewhat leathery, margins serrate.

Habitat: Wet meadows, streambanks, moist canyons, lower elevations.

Notes: A characteristically tall and leafy species with a broad, spreading inflorescence.

Solidago gigantea Aiton

Plants tall, up to 2 m in height, stems glabrous, leafy, with an inflorescence in a spreading, somewhat one-sided panicle. Leaves lanceolate, margins serrate.

Habitat: Wet meadows, streambanks, lower elevations.

Notes: Somewhat similar to *S. canadensis*, but taller, and having glabrous stems.

Solidago missouriensis Nuttall

Plants to about 0.5 m in height, stems glabrous, clumped. Stems glabrous, with oblanceolate lower leaves, upper leaves reduced in size. Inflorescence a spreading, somewhat one-sided panicle.

Habitat: Dry or rocky areas, plains through montane.

Notes: An extremely common species; look for the clumped growth habit, and smaller upper leaves in comparison to the lower.

Solidago mollis Bartling

Plants to about 0.5 m in height, stems leafy, lacking basal leaves at flowering and having middle stem leaves the largest. Stems and leaves uniformly short pubescent; heads in an oblong spike form panicle at the top of the stem.

Habitat: Plains, lower foothills.

Notes: Look for the soft pubescence on the leaves, and the lack of basal leaves at flowering. The inflorescence is much less branched than in other species.

Solidago multiradiata Aiton var. *scopulorum* A. Gray

Plants relatively short, 0.5 m or usually less at higher elevations. Stems growing in clumps, somewhat reddish; leaves mostly basal, with petiole bases containing ciliate margins. Heads in a narrow, unbranched panicle.

Habitat: Open areas, rocky slopes, montane to subalpine, occasionally on the tundra.

Notes: Common, similar to *S. simplex* but with larger heads; look also for the diagnostic ciliate petioles.

Solidago nana Nuttall

Plants to about 0.5 m in height, stems and leaves short pubescent. Stems with basal leaves at flowering; stem leaves reduced in size upwards. Heads in an oblong spike at the top of the stem.

Habitat: Plains, lower foothills.

Notes: Similar to *S. mollis*, but with distinctive basal leaves at flowering.

Solidago nemoralis Aiton

Plants to about 0.5 m in height, basal leaves oblanceolate to spatulate, upper stem leaves smaller. Basal rosette present at flowering time; leaves with 1 prominent vein. Heads in a spreading panicle.

Habitat: Canyons, foothills.

Notes: Similar to the more common *S. sparsiflora*, but with 1 single vein in the basal leaves.

Solidago rigidum L.

Syn. *Oligoneuron rigidum*

Plants to about 1 m in height, stems stout, densely pubescent. Leaves oblong to ovate, very thick and rigid, pubescent on both surfaces. Heads in dense cymes.

Habitat: Lower foothills, plains and Black Forest meadows.

Notes: A characteristic and common species of the lower elevations. The thick, pubescent stem and leaves are diagnostic.

Solidago simplex Humboldt, Bonpland, & Kunth

Syn. *Solidago spathulata* var. *neomexicana*.

Plants to about 0.5 m. Stems with mostly basal leaves, leaves oblanceolate to spatulate; petiole bases lacking ciliate hairs.

Habitat: Montane and subalpine zones, meadows, and forest openings.

Notes: Very similar to *S. multiradiata*, but lacking the ciliate petiole bases.

Solidago speciosa Nuttall var. *pallida* T. C. Porter

Plants to about 80 cm in height. Stem and leaves glabrous, leaves obovate to lanceolate, entire, pale on lower surface.

Habitat: Gravelly slopes, foothills.

Notes: Look for the pale coloration on the lower leaves especially, but the whole plant tends to have a more blue-green coloration than other *Solidago* species.

Solidago velutina de Candolle

Syn. *Solidago sparsiflora*

Plants to about 80 cm, in clumps with somewhat wiry stems. Heads in 1-sided racemes, flowers small, relatively few. Basal leaves ovate but usually not present at flowering time; stem leaves smaller; leaves with 3 prominent veins.

Habitat: Lower foothills, plains.

Notes: Look for the 3 veined leaves and lack of basal rosette at flowering time.

***Sonchus* “sow thistle”**

Sonchus arvensis L.

Plants perennial, off spreading horizontal rootstocks, stems up to 1 m tall. Leaves lanceolate, deeply lobed with prickly margins and clasping the stem with backward pointing lobes. Flowers yellow, involucre broadly campanulate, somewhat glandular.

Habitat: Gardens and fields.

Notes: Adventive, very similar to *Lactuca serriola*, but differing in the shape of the involucre. See comments under *Lactuca*.

Sonchus asper (L.) Hill

Plants annual, stems often over 1 m in height. Leaves shallowly lobed, with a prominent rounded basal lobe clasping the base and spiny margins. Flower yellow, involucre broadly rounded at the base.

Habitat: Roadsides, fields, and gardens.

Notes: Common adventive species; distinguished by its rounded clasping base on the leaves.

Sonchus oleraceus L.

Plants annual, stems over 1 m in height. Leaves deeply lobed, with prickly margins. Base of leaves pointed, clasping the stem and bent backwards. Flowers yellow, involucre broadly campanulate, glabrous and not glandular.

Habitat: Roadsides, fields, and gardens.

Notes: Common adventive species. Most similar to *S. arvensis*, but distinguished by its annual growth habit and the lack of glands or hairs on the involucre.

***Stephanomeria* “wire lettuce”**

Stephanomeria pauciflora (Torrey) Nelson

Plants perennial. Stems up to 0.5 m tall, with stiff ascending branching. Leaves linear, with slight toothing. Heads solitary or few on the branches; involucre about 1 cm high with a brownish pappus.

Habitat: Grasslands and lower foothills.

Notes: *Stephanomeria* is very common and has a stiff look to it. It resembles two other species: the much less common *Shinneroseris*, which is an annual (check whether there is a substantive root system or not and has a whitish, not tawny brown, pappus), and another stiff, skeletal-looking perennial, *Lygodesmia juncea*, which has simple, not plumose bristles in the pappus. The bristles are a dirty whitish color, tinged brown but not tawny as in *Stephanomeria*.

***Tanacetum* “tansy”**

Plants tall, often to 2 m. Leaves aromatic, alternate, pinnately compound with dentate margins on leaf segments. Heads in flat-topped umbellate clusters, bright lemon yellow.

Habitat: Adventive species, roadsides and disturbed areas.

Notes: Not yet documented here except as an occasional garden escapee in our area, but common and spreading elsewhere in Colorado. Look for the bright yellow flower clusters and strong aroma. Sometimes included in xeriscape and revegetation seed mixes.

***Taraxacum* “dandelion”**

Dandelions are usually instantly recognizable to all, but watch out for mistaking some of our dandelion look-alikes for the common *T. officinale* (see especially *Krigia* which is rare, or *Agoseris glauca* which is very common). *Taraxacum officinale*, the ubiquitous adventive common dandelion, occurs in all habitats, and is immediately recognizable by its large yellow heads with recurved (back-bending) phyllaries below. Other dandelion species are native in our mountains and lack the recurved phyllaries. Although *T. ovinum* is the only other dandelion documented thus far in our region, *T. scopulorum*, a tiny alpine boulder field species with lyrate leaves and blackish phyllaries, and *T. eriophorum*, a small tundra species with brownish hairs in the leaf axils, may be present here on Pikes Peak and simply not yet collected.

Taraxacum officinale G. H. Weber ex Wiggers

Plants diverse in size and leaf characters, but always with basal rosette of glabrous, somewhat lobed or divided leaves and few large heads of yellow flowers with greenish black recurved phyllaries below.

Habitat: Everywhere, even on the tundra.

Notes: One of our most common species in virtually all habitats. It forms asexual populations that are highly variable in morphology. The recurved phyllaries are characteristic of this species and distinguish it from other species of dandelion.

Taraxacum ovinum Rydberg

Plants resembling *T. officinale*, but with appressed rather than recurved phyllaries, and with distinctive horn-shaped swellings on the tips.

Habitat: Tundra and subalpine meadows.

Notes: Relatively common. Look for the “horns” on the phyllaries.

***Tetradymia* “horsebrush”**

Tetradymia canescens de Candolle

Plants low, bushy, and stiffly-branched shrubs, white hairy throughout. Leaves alternate, narrowly lanceolate to linear, often with fascicles in the leaf axils. Involucre with few flowers, yellow.

Habitat: Meadows, middle elevations, especially in Teller and Fremont Counties.

Notes: Similar in appearance to a low, gray hairy *Chrysothamnus* but with a stiff, overall hairy appearance and smaller flower heads.

***Tetraneuris* “actinea, perky Sue”**

Tetraneuris acaulis (Pursh) Greene

Syn. *Hymenoxys acaulis*

Plants perennial from a multiheaded woody caudex, with stems to about 20 cm tall. Leaves basal, entire or divided, with silky pubescence. Ray flowers yellow, tips 3-lobed, to about 1 cm long, sometimes lacking.

Habitat: Plains grasslands, mesas, barrens, and rock outcrops.

Notes: An extremely common and variable species. A relatively common mutant occurs that lacks ray flowers! This rayless version is the most common morph of the Arkansas River Valley around Pueblo.

Tetranneuris brevifolia Greene

Plants densely caespitose cushions, with stems lacking or extremely short. Ray flowers yellow, tips 3-lobed, to about 1 cm long.

Habitat: Alpine tundra, rocky ridges in the montane.

Notes: Typically a relatively uncommon alpine species, but occurring at lower elevations in the Tarryall Mts. Not yet documented in Teller or Fremont Counties, but possibly occurring there.

Tetranneuris ivesiana Greene

Plants with stems to 30 cm tall. Leaves basal, similar to *T. acaulis* except for the height.

Habitat: Grasslands, Black Forest.

Notes: A somewhat mysterious species, known mostly from regions to our west, but a form strongly resembling that species has been collected several times in the Black Forest. The degree of variability that occurs in the *T. acaulis* complex suggests that this may be one extreme form of that species, but currently it is kept distinct under its own species name.

***Thelesperma* “threadleaf”**

The genus *Thelesperma* can always be identified by its distinctive phyllaries, which consist of a double row where the outer ones are linear and spreading, and the inner ones broad, fused bracts that look like a cup.

Thelesperma filifolium (Hooker) A. Gray

Plants variable in height, occasionally up to 0.5 m but usually shorter. Leaves deeply divided into narrow segments, ca 2 mm wide and about 3 cm long. Stems with leaves scattered along the stems. Heads with ray flowers, ray flowers yellow, slightly drooping, ca 1 cm long.

Habitat: Dry grasslands, plains to lower foothills.

Notes: Our most common species, blooming in early summer and often forming bright displays on the grasslands. The presence of stem leaves and ray flowers distinguishes it from the other species in the genus.

Thelesperma megapotamicum (Sprengel) Kuntze

Plants up to 40 cm in height. Leaves deeply divided, segments filiform. Heads ray flowers lacking, or extremely short.

Habitat: Dry grasslands, plains to lower foothills.

Notes: Blooms later in the summer than *T. filifolium*, and characterized by its rayless heads.

Thelesperma subnudum A. Gray

Plants up to 40 cm in height. Leaves mostly basal, deeply divided, segments filiform, Heads with yellow ray flowers, ca 1 cm long.

Habitat: Grasslands and barrens, southern portion of our region, primarily known from Pueblo and Fremont Counties.

Notes: This species is common in the very southern portion of Colorado, but does not appear to be particularly abundant in the Pikes Peak region. The basal leaves distinguish it from *T. filifolium*.

***Tonestus* “pygmy goldenweed”**

Tonestus pygmaeus (Torrey & Gray) A. Nelson

Plants forming low cushions with a woody caudex; leaves narrowly spatulate, thick, pubescent with long hairs. Heads single, about 2 cm in diam. Phyllaries obtuse.

Habitat: Rocky areas on the tundra.

Notes: A distinctive tundra species with flower heads on short stems. Another species in the genus, *Tonestus lyallii*, occurs in the central mountains but has not yet been collected on Pikes Peak. It differs in having taller, erect stems rather than a cushion growth form and both stem and leaves are noticeably glandular.

***Townsendia* “Easter daisy”**

The early blooming species of *Townsendia* are a common and welcome sight in early spring on the mesas and foothills. They differ from true daisies (*Erigeron*) in growing as low, bushy clumps and in having a pappus of rigid bristles.

Townsendia exscapa (Richardson) Porter

Plants very low, appearing as stemless clumps. Leaves linear, heads single, about 3 cm in diameter, ray flowers pink to whitish. Phyllaries narrowly linear, lacking a tuft of hairs at the apex.

Habitat: Gravelly or open slopes, foothills and mesas.

Notes: A common early spring flower; it is difficult to distinguish from *T. hookeri*, but look for the cilia character (the tuft

of hairs on the phyllaries) to distinguish them.

Townsendia fendleri A. Gray

Plants decumbent, stems branched and sprawling. Heads to about 3 cm in diameter. Ray flowers white.

Habitat: Dry hillsides, Arkansas River drainage and lower foothills on the west side of Pueblo County.

Notes: A relatively common species, blooming in summer. The sprawling growth habit is characteristic.

Townsendia grandiflora Nuttall

Plants erect, with basal leaf rosettes and often branching stems. Heads large, over 4 cm in diameter, ray flowers white to pinkish.

Habitat: Foothills, lower montane.

Notes: Look for the large heads; summer blooming.

Townsendia hookeri Beaman

Plants very low, appearing as stemless clumps. Leaves linear, heads single, about 3 cm in diameter, ray flowers white to pale pink. Phyllaries narrowly linear, with a tuft of hairs at the apex.

Habitat: Foothills, plains, often on rocky outcrops at lower elevations.

Notes: A common spring wildflower and difficult to distinguish from *T. exscapa*-look for the hairs at the apex of the phyllaries.

***Tragopogon* “salsify, goatsbeard”**

Tragopogon dubius Scopoli

Plants up to 1 m tall. Stem below the head swollen. Leaves narrow, and undivided. Ray flowers pale lemon yellow, shorter than the phyllaries.

Habitat: disturbed areas, especially in the lower elevations.

Notes: Common, especially around dwellings and towns, but often in open grasslands as well. Our three *Tragopogon* species are easily distinguished by size: *T. dubius* has the small flower and longer phyllaries; *T. pratensis* has a large head, and *T. porrifolius* has purple rather than yellow ray flowers. It can sometimes hybridize with *T. dubius* and produce unusually pale flowers. All three are adventive in North America, but common in all elevations except the high tundra.

Tragopogon porrifolius L.

Plants less than 1 m tall. Stem below the head swollen. Ray flowers purple, longer than the phyllaries.

Habitat: disturbed areas, fields, at lower elevations.

Notes: Somewhat uncommon in our area.

Tragopogon pratensis L.

Plants up to 1 m tall, usually somewhat shorter. Ray flowers bright yellow, head several centimeters in diameter.

Phyllaries shorter than the ray flowers.

Habitat: meadows, foothills to subalpine.

Notes: Common, and often abundant adventive species.

***Unamia* “prairie goldenrod”**

The common name for this species is misleading, since it resembles a white aster much more than a goldenrod. It is one of the relictual midwest prairies species, common in our region in the Black Forest and on the moist plains of El Paso County around Peyton and Falcon, but uncommon or rare elsewhere in the state.

Unamia alba (Nuttall) Rydberg

Syn. *Solidago ptarmicoides*

Plants perennial, stems to about 0.5 m, often multiple. Stems leafy with narrowly lanceolate leaves. Heads with creamy white ray flowers, and creamy, not bright, yellow disk flowers. Ray flowers about 1 cm long.

Habitat: Grasslands, primarily known from the Black Forest and eastern El Paso County, but also collected in moist grasslands of Teller County around Woodland Park and Florissant Fossil Beds, as well as the lower foothills on the west side of Colorado Springs.

Notes: This species at first glance resembles one of the leafy white asters, but is distinguished by its paler centers, and longer ray flowers. It has fewer leaves than any of the species in the *Aster ericoides/falcatus/porteri* group, although it often grows with them. It is quite common and locally abundant in eastern El Paso County.

Vernonia “ironweed”

Vernonia marginata (Torrey) Rafinesque

Plants perennial, stems leafy, to about 80 cm; leaves linear to lanceolate, entire or minutely serrulate, punctate especially on lower surfaces. Inflorescence flat-topped, ray flowers lacking, disk flowers purple or rose colored; pappus double: inner of long capillary bristles and outer of short scales or bristles.

Habitat: Moist areas, plains.

Notes: Rare and possibly extinct here since it has not been collected for many decades; a distinctive species with the rose-colored, flat-topped inflorescence.

Xanthium “common cocklebur”

Xanthium strumarium L.

Plants tall, often over 1 m in height; stems branched, spotted, and scabrous. Leaves large, alternate, triangular to cordate, long petioled. Flowers small, in axils of upper leaves; monoecious. Female flowers producing burs about 3 cm long, with hooked bristles.

Habitat: Disturbed areas, plains, foothills to lower montane; often in moist areas, especially around drying ponds.

Notes: A common adventive species, annoying to ranchers because of the burs that attach themselves to livestock.

Ximenesia “cowpen daisy”

Ximenesia encelioides Cavanilles

Syn. *Verbesina encelioides*

Plants annual, tall, often to 2 m or more. Stems stout, often branched, leafy, with leaves mostly alternate, up to 10 cm long, triangular with dentate margins; lower surfaces white pubescent, and appearing gray-green in color. Flower heads single, heads to about 4 cm in diameter, ray flowers yellow, disk flowers yellowish or yellowish orange.

Habitat: Roadsides and disturbed areas, mostly at lower elevations.

Notes: A coarse adventive species, resembling *Helianthus*, but distinguished by the leaf morphology and more yellowish disk flowers.

Zinnia “plains zinnia”

Zinnia grandiflora Nuttall

Plants perennial, low, much branched and somewhat woody at the base. Leaves narrowly linear-lanceolate, to about 2 cm long, typically somewhat twisted. Margins entire. Flower heads numerous, ray flowers somewhat broad, yellow, drooping, persistent in age. Disk flowers reddish in color.

Habitat: Sandy areas on the plains.

Notes: Common in the early summer on the plains. Look for the twisted leaves when not in bloom.

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