FLOWERS

Native Herbaceous Perennials for Colorado Landscapes

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By I. Shonle, L.G. Vickerman and J.E. Klett[1]

Quick Facts...

A Colorado native perennial is defined as a plant existing in Colorado prior to European settlement.

Native plant gardens create wildlife habitat for a variety of birds, mammals and insects.

Landscaping with native plants makes a significant contribution to biodiversity that otherwise would be lost to development.

Native plant communities in Colorado vary due to differences in exposure, elevation, rainfall, soils and temperature extremes. These plant communities make Colorado visually distinct from other parts of the country.

Why Grow Native Herbaceous Perennials?

There are many benefits to using Colorado native herbaceous perennials for home and commercial landscapes. They are naturally adapted to Colorado's climates, soils and environmental conditions. When they are correctly sited, they make ideal plants for a sustainable landscape. Native herbaceous perennials require less external inputs such as watering, fertilizing and other cultural factors when the planting site mimics the plant's native habitat.

Using Colorado natives in landscapes may attract a variety of wildlife including mammals, birds, butterflies and other beneficial insects. Rapid urbanization in the state is reducing biodiversity (the number of different species found in a given area) as habitat is removed for building and road construction. Landscaping with natives on a large, or small, scale helps maintain biodiversity that otherwise would be lost to development.

The perennials listed in Table 1 were specifically chosen because they require low or moderate amounts of water. Not all perennials listed are available at all nurseries and garden centers, so it may be necessary to contact a number of commercial outlets to find a specific plant. If a perennial is not sold in the trade, asking for it may improve its future availability. Native perennials should not be collected from the wild because this reduces biodiversity, causes a disturbed area that may be invaded by weeds, and may be illegal. Transplanting a wild plant to the garden is rarely successful because of root damage and transplant shock.

Most of the perennials listed in Table 1 are available as container-grown plants. Native perennials often do not have as great a visual impact in the container or immediately after planting as do traditional horticultural species. Over time, however, they will reward the homeowner with their natural beauty.

Where to Grow Native Herbaceous Perennials

Due to Colorado's varying elevation and topography, native plants are found in a variety of habitats. To maximize survival with minimal external inputs, plants should be selected for your site's life zone and the plant's moisture, light and soil requirements. Even if a plant is listed for a particular life zone, the aspect (north, south, east or west facing) of the proposed site should match the moisture requirement. For example, a prairie zinnia, which requires full sun and has a very low moisture requirement, should not be sited with plants requiring higher moisture needs. Similarly, a prairie zinnia should not be planted on the north side of a building, where an abundance of shade and moisture could severely affect its growth and appearance.

Growing native perennials does not exclude using adapted non-native plants. There are many non-native plants that are adapted to Colorado's climate

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Figure 1: *Callirhoe involucrata* (Purple poppy mallow).

Figure 2: *Gaillardia aristata* (Blanket flower).

Figure 3: *Penstemon strictus* (Rocky Mountain penstemon).

Figure 4: *Tradescantia occidentalis* (Spiderwort).

Figure 5: *Campanula rotundifolia* (Harebells).

and can be used in a native landscape as long as moisture, light and soil requirements are similar. Even if a site has a non-native landscape that requires additional inputs (such as an irrigated landscape on the plains), dry land native plants can be used in non-irrigated pockets within the non-native landscape. These native "pocket gardens" can be located in areas such as parkways and next to hardscapes that are difficult to irrigate.

Some communities regulate landscape appearance or the type of plants which may be used. Before initiating a landscape design, check with local authorities, including homeowner's associations, to discover any regulations that may affect the design.

Life Zones of Colorado

Colorado can be divided into five life zones that are broadly defined by the plant communities that occur at the approximate elevations described below. The **Plains life zone**, 3,500 to 5,500 feet, is located in eastern Colorado where the majority of Colorado's population resides. It is dominated by grasslands and streamside cottonwoods. In western Colorado, the **Upper Sonoran life zone** is located at altitudes below 7,000 feet, and in the San Luis Valley, below 8,000 feet. This zone is characterized by semi-desert shrublands and piñon pine-juniper woodlands at its upper limit.

The **Foothills life zone** occurs from 5,500 to 8,000 feet and is dominated by dry land shrubs such as Gambel oak and mountain-mahogany, and in southern and western Colorado, piñon-juniper woodlands and sagebrush. The **Montane zone** consists of ponderosa pine, Douglas-fir, lodgepole pine, and aspen woodlands at elevations of 8,000 to 9,500 feet. Dense forests of subalpine fir and Engelmann spruce dominate the Subalpine zone at 9,500 to 11,500 feet. The **Alpine zone** above 11,500 feet is a treeless zone made up of grasslands called tundra. Species requiring medium to high moisture occur along watercourses throughout all zones.

Culture and Maintenance

There are three ways to establish a native herbaceous planting: 1) use nursery grown transplants, 2) direct seeding, or 3) using a combination of transplants and seeding. Successful establishment of native transplants requires supplemental moisture from a few months to several years after planting, but this can gradually be reduced. Seedings benefit from supplemental watering until plants are established. Weed control prior to planting seed is critical for success. Nursery grown transplants are best planted in spring or early fall. Seeds can be planted from early to late spring or preferably in late fall.

Native plants can often be successfully grown in unamended soils. Most natives do not require nutrient rich, high organic content soil, and can often become overgrown or short lived in such soils. However, many native plants require well-drained soils. To amend clay soils, add 10 percent compost and 15 percent small aggregate (i.e., pea gravel) by volume to clay/clay loam and incorporate into the root zone. To amend excessively well-drained sandy or rocky soils, add 3 percent compost by volume.

A diverse planting of native herbaceous perennials can support a wide variety of wildlife throughout the season. Leave vegetation standing after the first hard frost to provide over-wintering sites for beneficial insects and birds.

Using native herbaceous perennials offers many benefits in addition to reduced maintenance. The need for fertilizers and pesticides can be greatly reduced or eliminated. Once established, native plantings can help conserve water. Our native plant communities make Colorado visually distinct from other parts of the country and each plant contributes to the biodiversity of the state.

Table 1. Native herbaceous perennials for Colorado landscapes.

Scientific name[1] Common name	Planting Elevation[2]	Bloom time[3]	Exposure	Moisture[4]	Color	Height	Comments
Allium cernuum Nodding onion	To 10,000'	M	Sun to part shade	l-m	pink	5-24"	Waxy foliage; nodding flowers from bulbs; attracts butterflies; well-drained soils.
Anaphalis margaritacea Pearly everlasting	To 10,500'	M	Sun	l-m	White	12-20"	Silvery foliage; button-like clusters on top of upright stems; excellent dried flower; most soils.
Anemone multifida Windflower	To 10,000'	E-M	Sun to part shade	l-m	White to pink-red	12-24"	Deeply cut dark green leaves form a rounded clump; flowers borne on wiry stems; organic soils.
Antennaria parvifolia and A. rosea Pussytoes	To 11,000'	E-M	Sun to part shade	l-m	Cream to pink	2-6"	Spreading mat of silver gray foliage; flowers in small clusters resemble cat toes; good between flagstones or in rock gardens; well-drained soils.
Aquilegia caerulea Blue columbine, Colorado Columbine	To 11,000'	E-M	Part shade	m	Blue/purple and white	12-36"	Delicate lobed leaves; large spurred flower; Colorado state flower; attracts hummingbirds; foliage often turns reddish in fall; organic soils.
Aquilegia chrysantha Golden columbine	To 11,000'	E-M	Sun to part shade	l-m	Yellow	24-36"	Robust plant with lobed leaves; many spurred flowers; attracts hummingbirds; reseeds readily; Plant Select®; clay or organic soils.
Artemisia frigida Fringed sage	To 10,000'	N/A	Sun	l	N/A	8-24"	Aromatic feathery silver foliage; evergreen; subshrub; insignificant bloom; well-drained soils.
Artemisia ludoviciana Prairie sage, Silver sage	To 10,000'	N/A	Sun	l	N/A	15-30"	Coarse silver foliage; insignificant bloom; aggressive grower; well-drained soils.
Berlandiera lyrata Chocolate flower, greeneyes	To 8,000'	M	Sun	l-m	Yellow with green/red centers	12-18"	Mounded rosette of lyre-shaped leaves; daisy like flowers with chocolate scent; thrives in heat; Plant Select®; well-drained soils.
Callirhoe involucrata Purple poppy mallow, Wine cups	To 7,000'	M-L	Sun	l-m	Magenta with white centers	4-10"	Spreading groundcover with scalloped leaves; long blooming; likes heat; Plant Select®; dry clay soils.
Calylophus lavandulifolius Sundrops	To 7,000'	M	Sun	l	Lemon yellow (spent flowers turn orange)	4-8"	Spreading habit; green narrow leaves; four-petaled flowers solitary on stems; long blooming; likes heat; well-drained soils.
Calylophus serrulatus Plains yellow primrose	To 7,000'	M	Sun	l	Yellow	15"	Mounding subshrub with narrow leaves; heavy bloomer; well-drained soils.
Campanula rotundifolia Harebells	To 13,000'	M-L	Sun to part shade	l-m	Purple	8-15"	Narrow delicate foliage; nodding bell shaped flowers; most soils.
Dalea purpurea Purple prairie clover	To 7,500'	M	Sun	l	Purple	24-36"	Narrow leaflets; slender stems; cylindrical heads of fragrant flowers; fixes nitrogen; well-drained soils.
Erigeron speciosus Aspen daisy, Showy daisy	To 9,500'	M	Sun to part shade	l-m	Lavender blue with yellow center	12-18"	Rich green foliage; daisy-like flowers; attracts butterflies; most soils.

Table 1 (con't): Native herbaceous perennials for Colorado landscapes.

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Eriogonum umbellatum Sulphur flower	To 10,500'	M	Sun	l	Sulphur yellow ages to rust brown	6-12"	Mat of leathery green foliage with silver undersides; turns reddish in fall; flowers attract butterflies; well-drained soils.
Gaillardia aristata Blanket flower	To 9,000'	M	Sun	l	Yellow (to yellow/red) with red/brown centers	18-24"	Fuzzy gray-green leaves; large daisy flowers; well-drained soils.
Geranium viscosissimum Sticky geranium	To 9,500'	E-M	Sun to part shade	l-m	Pale pink to rose/purple with darker veins	12-24"	Lobed leaves turn red in fall; open clusters of flowers with sticky stems; well-drained soils.
Geum triflorum Prairie smoke	To 10,000'	E	Sun to part shade	l-m	Cream to deep pink	6-12"	Rosettes of gray-green fernlike foliage; nodding flowers followed by long pink feathery seed heads; prefers moist clay or organic soils.
Helianthus maximiliana Maximilian sunflower	To 6,500'	L	Sun	l-m	Yellow	60-120"	Lance-shaped leaves on stout stems; showy flowers; spreads aggressively by rhizomes, esp. in moister soils; most soils.
Ipomea leptophylla Bush morning glory	To 7,000'	M-L	Sun	l	Lavender purple	24-36"	Spreading mounded plant with linear leaves; huge tap root; morning glory-like flowers; long lived; sandy or sandy loam soils.
Ipomopsis aggregata Scarlet gilia, Fairy trumpets	To 9,000'	M	Sun	l	Red, pink and white	12-30"	Rosette of finely divided leaves; trumpet-shaped flowers; attracts hummingbirds; biennial; reseeds readily; well-drained soils.
Liatris punctata Gayfeather, Blazing star	To 7,500'	L	Sun	l	Rose purple	12"	Rigid linear leaves; stout spikes of fringed flowers; attracts butterflies; well-drained soils.
Linum lewisii Blue flax	To 9,500'	Mid	Sun, part shade	l-m	blue	12-24"	Fine blue-green foliage; saucer-shaped flowers; reseeds readily; well-drained soils.
Lupinus argenteus Silver lupine	To 10,000'	M	Sun	l	White to deep purple	12-36"	Palm-shaped leaf; spikes of pea-like flowers; attracts butterflies; well-drained soils.
Mondarda fistulosa Bee balm, Wild bergamot	To 9,000'	M	Sun	l-m	Pink to lavender	12-36"	Upright growth with fragrant foliage; profuse wispy flowerheads; good air circulation will lessen powdery mildew; well-drained soils.
Mirabilis multiflora Desert four o'clock	To 8,000'	M-L	Sun, part shade	l	Pink to purple	12-30"	Blue-green leaves; wide spreading mounded habit; trumpet-shaped flowers with yellow stamens open late morning; well-drained soils.
Oenothera caespitosa White-tufted evening primrose	To 9,000'	M	Sun	l	White with pink buds	6-12"	Dense rosette of dark gray/green leaves; fragrant flowers open in late afternoon, fade the next morning; well-drained soils.
Pulsatilla patens Pasque flower	To 9,000'	E	Sun	l-m	Lavender	6-12"	Wooly foliage with cup-shaped flowers followed by feathery seed heads; well-drained soils.

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Scientific name[1] Common name	Planting Elevation[2]	Bloom time[3]	Exposure	Moisture[4]	Color	Height	Comments
Penstemon ambiguus Bush or sand penstemon	To 6,500'	M-L	Sun	l	Whitish pink	24-30"	Freely branching bushy plant with woody base; phlox-like flowers clustered towards top of stem; sandy soils.
Penstemon angustifolius Pagoda or narrow-leaved penstemon	To 7,500'	M	Sun	l	Sky blue	12"	Narrow blue-green foliage can be evergreen; numerous tubular flowers encircle stalks; requires well-drained soils.
Penstemon barbatus Scarlet bugler penstemon	To 9,000'	M	Sun	l	Scarlet to red	24-36"	Slender tall stalks with foliage clustered at base; tubular flowers favored by hummingbirds; well-drained soils.
Penstemon caespitosus Mat penstemon	To 9,000'	E-M	Sun	l	Blue to violet	4-6"	Mat forming with trailing stems; excellent for rock gardens; well-drained soils.
Penstemon glaber Smooth penstemon	To 9,000'	M	Sun	l	Deep blue/ purple	12-18"	Stout upright stems; tubular flowers; well-drained soils.
Penstemon grandiflorus Shell leaf penstemon	To 8,500'	M	Sun	l-m	White, pink, and purple	24-36"	Waxy blue-green semi-evergreen foliage; large tubular flowers; can be short lived but reseeds readily; well-drained soils.
Penstemon secundiflorus Sidebells penstemon	To 9,500'	M	Sun	l-m	Pink/purple	6-18"	Waxy blue-green foliage; tubular flowers emerge from one side of the stalk; rocky soils.
Penstemon strictus Rocky Mountain Penstemon	To 10,000'	M	Sun to part shade	l-m	Blue to blue-purple	12-30"	Robust grower; narrow glossy green leaves; tubular flowers in open spikes; developes powdery mildew if crowded; well-drained soils.
Penstemon virens Bluemist penstemon	To 10,000'	E-M	Sun to part shade	l-m	Light blue to blue/violet	6-12"	Dense basal rosette of bright green leaves; profuse clusters of small flowers; good for rock gardens; rocky soils.
Penstemon virgatus Wand bloom penstemon	To 10,000'	M	Sun	l-m	Pale blue to violet	12-30"	Erect slender stalks; linear upright leaves; tubular flowers; well-drained soils.
Penstemon whippleanus Whipple's penstemon	To 12,000'	M	Sun to part shade	l-m	Wine purple or white	10-20"	Clustered stems; whorls of nodding tubular flowers; adaptable to moister soils.
Ratibida columnifera Prairie coneflower, Mexican hat	To 7,500'	M-L	Sun	l	Yellow	12-24"	Upright slender stalks; finely divided leaves; prominent central cone surrounded by drooping petals; short-lived but reseeds; well-drained soils.
Rudebeckia hirta Black-eyed Susan	To 9,000'	M	Sun to part shade	m	Yellow with brown to black center	12-24"	Fuzzy green leaves with daisy-like flowers; biennial to short lived perennial; reseeds; most soils.
Solidago canadensis Goldenrod	To 7,000'	M	Sun to part shade	l-m	Yellow	12-36"	Upright stems; spreads by underground rhizomes; spikes of flowers; attracts butterflies and bees; mistakenly blamed as cause of hayfever; clay or loam soils.

Table 1 (con't): Native herbaceous perennials for Colorado landscapes.

Scientific name[1] Common name	Planting Elevation[2]	Bloom time[3]	Exposure	Moisture[4]	Color	Height	Comments
Sphaeralcea coccinea Scarlet globemallow	To 8,000'	E-M	Sun	l	Coral red, orange	8-12"	Hairy gray-green leaves; vigorous rhizomes; small hollyhock-like flower; well-drained coarse soils.
Stanleya pinnata Prince's plume	To 9,000'	M	Sun	l	Yellow	24-48"	Gray-green leaves; large plume-shaped flower spikes; can be short lived; well drained soils.
Thelesperma filifolium Navajo tea, Greenthread	To 8,000'	M-L	Sun	l-m	Yellow	16-24"	Vase-shaped clump; finely dissected leaves; profuse daisy-like flowers over long period; well-drained soils.
Thermopsis divaricarpa Golden banner	To 11,000'	E-M	Sun to part shade	l-m	Yellow	18-24"	Spreads vigorously by rhizomes; needs room; showy spikes of pea-like flowers; well-drained soils.
Tradescantia occidentalis Spiderwort	To 8,000'	M	Sun to part shade	l-m	Purple/blue	12-24"	Upright stalks above grass-like foliage; clusters of three petaled flowers each lasting a day; most soils.
Verbena bipinnatifida Spreading vervain	To 8,000'	E-L	Sun	l	Rose/purple	6-10"	Sprawling stems with deeply cut leaves; prolific bloomer; attracts butterflies; well-drained soils.
Viguera multiflora Showy goldeneye	To 10,000'	L	Sun	l	Yellow	18-30"	Heavily branched with narrow leaves; prolific sunflower-like flowers; available only from seed; reseeds aggressively; well-drained soils.
Zinnia grandiflora Prairie zinnia, Golden paperflower	To 6,000'	M-L	Sun	l	Yellow	6-8"	Mounding habit with wispy leaves; prolific bloomer; flowers have a papery texture; requires well-drained soils.

[1]As commonly sold in the trade. For equivalents, see botanical publications.
[2]Planting elevations are estimates of where plants may be successfully grown as landscape plants. In many cases, species may be successfully planted at a lower elevation with supplemental irrigation or at higher elevations with protection.
[3]Bloom time E=Early (March through end of May); M=Mid (June through Mid-August); L=Late (Mid-August through frost).
[4]Moisture requirement l=Low; m=Moderate.
Plant Select® is a program that seeks and distributes information about the best plants for gardens from the high plains to the intermountain region. It is a cooperative program administered by the Denver Botanic Gardens and Colorado State University Cooperative Extension, together with landscape and nursery professionals throughout the Rocky Mountain region and beyond.

Figure 6: *Monarda fistulosa* (Bee balm).

Figure 7: *Mirabilis multiflora* (Desert four o'clock).

Figure 8: *Zinnia grandiflora* (Prairie zinnia).

[1]*I. Shonle, Colorado State University Cooperative Extension agent, Gilpin county; L.G. Vickerman, Extension horticulture agent, El Paso county; and J. Klett, Extension landscape horticulture specialist and professor, department of horticulture and landscape architecture*

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