



Foliage herbaceous or subshrub

Shape

Leaves mats of basal leaves

Penstemon attenuatus



Plant in bloom easy to flower

Corolla: (flower)

color blue or blue-purple, occasionally white, cream yellow

size

shape

Penstemon attenuatus

Inflorescence (arrangement of flowers along flowering stalk; all the flowers on the stalk): **open** (as opposed to congested)

height few inches to 2'

shape densely clustered or congested (capitate); compact verticillaster of flowers, usually numerous and showy

Calyx: (sepals on underside of flower, collectively; outermost part of the flower)



Penstemon confertus

Cultivation needs

Ease of cultivation most are easy

Moisture regular irrigation is best, but somewhat drought tolerant

Sun

Heat tolerance good

Cold tolerance good

Shade pm shade is helpful

Soil light

Drainage provide good drainage with even moisture

Climate preference cool, moist; for some, low humidity

Longevity long-lived

Display recommendations many suited for the rock garden

Pollinated by Most penstemons are visited by several bee species including honeybees and bumblebees. While hummingbirds prefer red penstemons, they commonly are seen at most penstemon species.



Penstemon cinicola



Penstemon watsonii

Species

<i>attenuatus</i>	<i>flavescens</i>	<i>laxus</i>	<i>rydbergii</i>
<i>cinicola</i>	<i>glaucinus</i>	<i>peckii</i>	<i>spatulatus</i>
<i>confertus</i>	<i>globosus</i>	<i>pratensis</i>	<i>washingtonensis</i>
<i>euglaucus</i>	<i>heterodoxus</i>	<i>procerus</i>	<i>watsonii</i>



Penstemon procerus

Table 27. *Penstemon Penstemon Proceri*

Key
 Column 1 SPECIES: species name; plant height when in bloom; color(s) of flower; fill in lavender =popular; parenthesis = not reported in cultivation
 Column 3 CULTIVATION SUGGESTIONS:
 Row 1 SIZE OF FLOWER: **very large**= >1 ½ “ **large**=1-1 3/8” **medium**= ½ - 1” **small**= < ½ “
 Row 2 GENERAL DESCRIPTION
 Row 3: DISPLAY SUGGESTIONS
 Row 4: WHERE SPECIES HAS BEEN SUCCESSFULLY CULTIVATED OUT OF NATIVE HABITAT

☀ full sun ☀ partial shade

Species	Bloom Season in Native Habitat	Cultivation Suggestions	Cultivation Needs			Elevation and Habitat	Distribution	Reported cold hardiness in cultivation
			Garden Soil	Moisture	Sun			
<p><i>attenuatus</i></p> <p>4-27”</p> <p>blue to blue-violet; occasionally other colors</p> <p>EASY</p>	<p>May-July</p>	<p>medium flower</p> <p>good display, four varieties are exceedingly variable, perhaps reflecting differences in progenitors; varieties may interbreed; inflorescence (the arrangement of flowers along a flowering stalk) of 3-7 loose or crowded verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk) which are moderately to many-flowered</p> <p>basal rosette with mostly lance-shaped to ovate (rounded) leaves; stem leaves are smaller, but same shape</p> <p>long lived</p> <p>varieties <i>attenuatus</i> (blue form) <i>attenuatus</i> (yellow/white form) <i>pseudoprocerus</i> lavender <i>militaris</i> deep purple-blue</p> <p>make a good garden display</p> <p>cultivated in: do very well in CO, MT, WOR tolerates rock gardens, but lives longer in troughs; seeds frequently offered suggesting widespread cultivation</p>	<p>gravelly; alkaline-neutral</p>	<p>in arid areas,</p> <p>low to moderate watering</p>	<p>☀</p>	<p>5200-8200’</p> <p>meadows, pine woods, rocky slopes in gravelly soil,</p>	<p>WA, e. OR, ID, w. WY, MT</p> 	<p>probably zone 5</p> <p>-20°F in Denver 2007 under heavy snow cover</p>

<p><i>cinicola</i></p> <p>6-10"</p> <p>dark blue to purple</p>	<p>June-July</p>	<p>small flower</p> <p>well liked by some and seen as less desirable by others because of it's ranginess</p> <p>slender, upright stems, few to several growing in a tuft (cluster); inflorescence (the arrangement of flowers along a flowering stalk) is narrow with 3-7 many flowered verticillasters (two cymes/stems bearing flowers , cymes arise from a node on the bloom stalk) which are well spaced below, but crowded toward the top; lighter or white in the throat of the corolla</p> <p>leaves which may be arched and channeled, add an attractive aspect; no basal rosette</p> <p>produces many flowers in compact heads; cut back to get re-bloom</p> <p>rock garden; trough for close viewing</p> <p>cultivated in: many areas; seeds and plants frequently offered</p>	<p>volcanic gravel, low humus</p>	<p>needs moisture; winter snowpack, dry summers in native habitat make it moderately xeric in the garden</p>	<p>☀ best</p> <p>☀ tolerates some</p>	<p>4000-7400'</p> <p>dry rocky to sandy volcanic soils in openings in the forests with sagebrush</p>	<p>n. CA, OR</p> 	<p>probably zone 5</p> <p>tolerated -20°F in Denver 2007</p>
<p><i>confertus</i></p> <p>8-20"</p> <p>cream to yellow and pink; EASY in moist climates</p>	<p>May-Aug</p>	<p>small flower</p> <p>confertus means dense or crowded</p> <p>crowded thyrse (densely compact inflorescence) at the top of the inflorescence (the arrangement of flowers along a flowering stalk)</p> <p>one or few stems, sometimes with leafy shoots at the base or somewhat mat-forming at the base;</p> <p>basal leaves with smooth edges (entire), bright green and thin; evergreen; leaves in a rosette and mainly elliptical (somewhat narrow, but rounded) in shape; leaves on flowering stalk lance-shaped, narrow and quite small</p> <p>bright green mat; evergreen;</p> <p>may hybridize with <i>P. procerus</i> making pink flowers</p> <p>white color offers potential for making attractive contrasts by placing confertus among or aside those with bright colors; in shade of pines to contrast white and green</p> <p>cultivated in: n US, GB, continental. Europe</p>	<p>ordinary soil; sand beds</p>	<p>moderate watering; even moisture</p>	<p>nearly full shade</p>	<p>4000-10,000'</p> <p>forests, woodland openings; fairly good soil or rocky sites from forests to low meadows</p>	<p>s. Alb, BC; WA, OR, ID, MT</p> 	<p>to USDA Zone 3</p>

<p><i>euglaucus</i></p> <p>up to 15-24" x 39" wide</p> <p>dark blue to lavender</p>	<p>July-Aug</p>	<p>small flower</p> <p>9-12 slender stems</p> <p>flowers in stems of several compact, interrupted whorls (≥ 3 flowers arising from a common node on the bloom stem) or, according to a second authority, 2-4 few-flowered verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk) that are well separated</p> <p>elliptical (narrow and slightly curved) leaves are entire (smooth edges) and form a dense blue-green mat; foliage is glabrous (smooth, no hairs) and glaucous (covered with a fine, waxy powder that gives a gray-green appearance)</p> <p>long-lived; attracts butterflies;</p> <p>plant in groups; large rock garden</p> <p>cultivated in : England, Denver Botanical Gardens, Midwest, West Coast; plant in large groups</p>	<p>moderately rich soil; good drainage; on rocky slopes of gravel on West Coast; on scoria (volcanic rock) under partial conifer shade</p>	<p>moderate water</p> <p>snowpack, dry summers</p>		<p>3600-5850'</p> <p>mountains; dry, sandy volcanic ash in forest openings in part shade or sparsely wooded slopes; open dry gravelly slopes among mountain hemlock</p>	<p>Cascades OR & WA</p> 	<p>zone 6</p>
<p><i>flavescens</i></p> <p>6-16"</p> <p>pale to bright yellow flowers</p> <p>EASY</p>	<p>summer</p>	<p>medium flower</p> <p>good form, not showy; few to many flowering stems, usually decumbent (curved base, but erect tip); inflorescence (flower stalk display) a dense thyrse (densely compact) at the crown and often 1-3 fairly dense verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk) on the remainder of the stalk</p> <p>good foliage, mat or tuft; leaves entire (smooth edges), smooth surface, deep green and leathery; basal leaves lance-shaped to elliptic (narrow but curved); stem leaves mostly oblong to ovate</p> <p>rock garden</p> <p>cultivated in: Canada, GB, northern states of US</p>	<p>may prefers acid soil</p>	<p>winter snow, dry summers</p>	 <p>or more</p>	<p>4000-8000'</p> <p>scattered woods or openings; subalpine to alpine</p>	<p>Bitterroot Mts. MT & ID</p> 	<p>subzero tolerance</p>

<p><i>(glaucinus)</i></p> <p>1'</p> <p>blue</p> <p>once considered endangered</p>	June-July	medium flower		NA	NA	NA	lodgepole or ponderosa pine forests	sc OR 	NA
<p><i>globosus</i></p> <p>24"</p> <p>bright blue</p>	June-Aug	medium flower	<p>cultivated in: not reported in cultivation</p> <p>attractive, well liked; showy; recommended</p> <p>several to many stems grow into a clump; lovely globe-shaped thyrse (densely compact inflorescence) at the crest of each stem;</p> <p>basal leaves in dense, well-developed rosettes, lance shaped to elliptic; leaves are smooth edged (entire) and glabrous (no hairs, smooth); fairly large leaves on bloom stalk all the way to the blossom, are lance-shaped to oblong</p> <p>open garden, display groupings; border</p> <p>cultivated in: coasts of U.S. Europe, Canada, w. OR does well in winter-covered troughs</p>	gravel, pumice, quarry sand	<p>moderate watering;</p> <p>snowpack; ,in native habitat tolerates extremely dry summers until late summer thunder storms</p>	<p>☀</p> <p>to</p> <p>☀</p>	6000-8000'	<p>mountain meadows; rocky hillsides; dry or moist sites</p> <p>ne. OR, ID, w. MT </p>	tolerant of sub zero temperatures
<p><i>heterodoxus</i></p> <p>3-8"</p> <p>purple</p>	June-July	small flower	<p>desirable if given adequate moisture;</p> <p>very small, narrow, purple flowers; 2-4 dense verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk)</p> <p>grow in neat mats; evergreen</p> <p><u>varieties</u></p> <p><i>cephalophorus</i> up to 15" tall and have 6-7 verticillasters</p> <p><i>shastensis</i> up to 2' tall, has many clusters</p> <p>rock garden</p> <p>cultivated in: widely cultivated</p>	pH 5.0-8.0	<p>adequate summer water;</p> <p>protect from winter rains; snowpack creates dormancy</p>	☀	6500-12,800'	<p>damp, high mountain meadows; endures a harsh environment</p> <p>Sierra Nevada CA & NV </p>	USDA Zones 4-10 (Las Pilitas)

Use compost to replace need for duff.

Quarry sand: sand that is ground from actual rock, not dredged from creek or river beds. It contains little or no soil, so it is similar to using pumice or other inorganic materials.

<p><i>laxus</i></p> <p>1-2'</p> <p>dark blue, blue-purple</p> <p>EASY</p>	<p>late May</p>	<p>small flower</p> <p>few flowered, congested clusters; one to a few slender stems; 3-5 verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk); crown of bloom stalk dense with flowers, flowers lower on the stalk are well separated on rather long little stems held close to the stalk; cymes are 6-10 flowered</p> <p>a dense tuft of hairs completely fills the throat of the corolla making it an unusual species; leaves all found on the stems and are narrowly lance-shaped or linear</p> <p>mats of grey-green leaves</p> <p>display unknown</p> <p>cultivated in: sold by a nursery in New Mexico</p>	<p>mountain screens</p>	<p>moderate watering</p> <p>winter snowpack, dry summers</p>	<p></p>	<p>5800'</p> <p>dry meadows and open wooded slopes from foothills to mountains</p>	<p>sw. ID</p> 	<p>probably cold hardy</p>
<p><i>peckii</i></p> <p>2'</p> <p>white, pink, blue or lavender</p> <p>EASY</p> <p>quite rare in native habitat</p>	<p>July</p>	<p>small flower</p> <p>attractive, delicate-looking;</p> <p>bloom stems long and slender; lower stem often is purple; very small flowers in tight thyrses, densely packed; floral display (inflorescence) is narrow to moderately spreading; 3-10 well separated verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk), cymes are 2-6 flowered on fairly long little stems (peduncles)</p> <p>most of the leaves which are narrow and green, are on the stalks</p> <p>long lived</p> <p>self-sows readily; re-blooms if cut back; may bloom first year from seed</p> <p>rock garden</p>	<p>forest duff, thrives on ½ pumice ½ soil</p>	<p>winter snowpack; dry summers</p>	<p></p> <p>in afternoon</p>	<p>dry, open pine woods in sandy soil; dry volcanic soil usually with ponderosa pine</p>	<p>e. Cascade Mts. OR</p> 	<p>hardy to 0°</p>

<p><i>(pratensis)</i></p> <p>20" pale blue to white</p> <p>range reduced by agriculture</p>	<p>June-July</p>	<p>small flower</p> <p>not reported to be in cultivation</p>	<p>rich meadow soil</p>	<p>winter snowpack, dry summers</p>		<p>4900-9000' moist meadows</p>	<p>sw. ID, se. OR, NV</p> 	<p>hardy to 0°</p>
<p><i>procerus</i></p> <p>2-7" x 5-9" wide</p> <p>blue is usual; also violet, purple, white, cream and pink</p>	<p>May-Aug (depends on elev.)</p>	<p>small flower</p> <p>stalwarts in the garden;</p> <p>stems grow in a densely packed cluster (tuft); stems upright</p> <p>leafy stems at the base well developed or lacking depending on variety; smooth edges; leaves on stalk are lance-shaped and become fewer toward the top</p> <p>inflorescence (bloom stalk display) one to several verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk) with terminal cluster densely compact</p> <p><u>6 named varieties:</u> <i>v. brachyanthus</i> 18" x 15" wide, small deep blue flowers on numerous stems; <i>v. tolmei</i>(2-6"), most popular for rock garden <i>formosus</i> (2-7" x 25" side) popular for rock garden; has thick dark green leaves that are packed into short rosettes which create mats over a foot across or more; dense heads of deep blue-violet flowers; all varieties are long lived, spread slowly to form nice clumps; have clusters of flowers; rebloom</p> <p>rock garden</p> <p>cultivated in s. Canada, west coast, Midwest, New England, NC, GB, Europe; often offered by seed companies, also by nurseries in New Mexico and Colorado</p>	<p>tolerant of most; soils; need good drainage; try quarry sand</p> <p>pH 5.0 to 7.0</p>	<p>regular watering;</p> <p>winter snowpack;</p> <p>dry summers with supplemental watering</p>		<p><i>P. procerus v procerus</i> 6450-11,800' <i>P. procerus tolmei</i> 5000-7000' <i>P. procerus formosus</i> volcanic screes (8200-11,800') <i>P. procerus v. brachyanthus</i> (4560-7870') <i>P. procerus v. aberrans</i> <i>P. procerus v modestus</i></p> <p>dry meadows to open or timbered slopes, foothills to alpine</p>	<p><i>v. procerus</i>: s. AK, Yukon, Sask. to c. CO <i>v. tolmei</i> Olym & Case Mt WA, BC; <i>v. formosus</i> Wallowa Mt OR & NV, Yosemite CA; <i>v. brachyanthus</i> n. CA, WA; <i>v. aberrans</i> se. UT; <i>v modestus</i> Elko Co UT</p> 	<p>winter hardy</p> <p><i>formosus</i> zone 4</p> <p><i>brachyanthus</i> zone 5</p>

Use compost to replace need for duff.

<p><i>rydbergii</i></p> <p>4-28" blue to purple</p>	<p>May-Aug</p>	<p>medium flower inflorescence (flower display) of 1-7 crowded, well spaced verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk)</p> <p>basal rosette is prominent, rounded in appearance, smooth edges and surfaces; few leaves on the stems, narrow and oblong or lance-shaped</p> <p>long lived when grown in moist climates;</p> <p><u>varieties:</u> <i>rydbergii</i> <i>oreocharis</i> <i>aggregatus</i></p> <p>rock garden, container, trough cultivated in : widely cultivated; frequently offered by nurseries and seed companies</p>	<p>pH 6.0-7.0 dry quarry sand</p>	<p>prefers moist climate or location; winter snowpack, summer thunder storms and runoff</p>		<p>4600-11,450' mountain meadows, along streams, moist open slopes</p>	<p>CA to e. of Cascades & Blue Mts. OR & WA; MT, WY, CO, NM: <i>rydbergii</i> throughout range; <i>oreocharis</i>: west side of range; <i>aggregatus</i> center of range</p> 	<p>cold tolerant</p>
<p><i>spatulatus</i></p> <p>10" pale blue to violet</p> <p>rare</p>	<p>July-Aug</p>	<p>small flower well liked; long, branching stems lie on the ground or on the ground and then arc upward (prostrate, decumbent); may root at nodes;</p> <p>inflorescence (flower display) is narrow, 1-4 well spaced verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk); cymes have numerous flowers making a grand display; dark guidelines</p> <p>leaves are mainly basal and oval or spatula-shaped, smooth edges; bloom stalk leaves (cauline) are smaller and narrow</p> <p>low mats, can spread widely; evergreen</p> <p>rock garden; winter-covered trough cultivated in: CO, wOR in winter-covered trough; Scotland and England</p>	<p>gravel, pumice with small amount of humus</p>	<p>winter snowpack and dry summers; water weekly in summer</p>		<p>9000' scree; open rocky slopes or with scattered trees; subalpine to alpine</p>	<p>Wallowa Mts.</p> 	<p>very cold hardy -20°F Denver 2007</p>

<p><i>washington-ensis</i></p> <p>4-8" x 4.7" wide</p> <p>deep blue-purple</p> <p>threatened</p>	<p>July-Aug</p> <p>small flower well liked; deep blue tubular flowers in several interrupted whorls (a ring of ≥ 3 flowers arising from a common node on the bloom stem)</p> <p>several stems densely packed (tuft); basal rosette is prominent, edges and surfaces smooth; dark green, lance-shaped or slightly more rounded; few smaller stem leaves (cauline) that are oblong or lance-shaped</p> <p>rock garden cultivated in: northern climates; offered by some seed companies and nurseries</p>	<p>try quarry sand</p>	<p>moderate watering in summer; care not to over water in NW</p> <p>winter snowpack,</p> <p>dry summers in native environment;</p>	<p></p> <p>in afternoon</p>	<p>6100-6800'</p> <p>snow runoff onto moist flats and roadside ditches, wooded slopes</p>	<p>nc. WA</p> <p></p>	<p>zone 5</p>
<p><i>watsonii</i></p> <p>13-24 x 11" wide</p> <p>violet to blue</p> <p>EASY</p>	<p>June-Aug</p> <p>small flower several stems in a clump, upright</p> <p>loose panicle (floral display); small tubular flowers packed into dense whorls (a ring of \geq flowers arising from a common node on the bloom stem) spaced along each of the many stems;</p> <p>leaves only found on stems (cauline); narrow lanceolate leaves with smooth edges</p> <p>raised bed, in groups cultivated in: WA, NE. CO</p>	<p>dry, rocky, gravel</p>	<p>mod drought tolerant; winter snowpack, summer thunder showers</p>	<p></p>	<p>5400-10,430'</p> <p>gravelly or rocky hillsides with sagebrush or scrub, sometimes including timber pine; dry, rocky soils</p>	<p>nw. AZ, NV, UT, CO, ID, WY</p> <p></p>	<p>zone 4 to -20°F in Denver 2007</p>

Quarry sand: sand that is ground from actual rock, not dredged from creek or river beds. It contains little or no soil, so it is similar to using pumice or other inorganic materials.

For more photos go to:

1. this website, Library tab
2. <http://plants.usda.gov/gallery.html>
3. <http://botu07.bio.uu.nl/spgm-1.4.4/gal/Penstemon/index.php?name=Penstemon%20-%2034k>

🎵 Help us build the Cultivation tables; share your experience on our Penstemon Blog.