

SUBGENUS: *PENSTEMON*
Section: *Penstemon*
Subsection: *Penstemon (Graciles)*

CULTIVATION OF EACH SPECIES
Table 26

[subgenus]	PENSTEMON
[section]	<i>Ambigui Baccharifolii Chamaeleon Coerulei Cristati Ericopsis Fasciculus Peltanthera Penstemon</i>
[subsection]	<i>Arenarii</i> (2) <i>Deusti</i> (3) <i>Gairdneriani</i> (2) <i>Harbouriani</i> (1) <i>Humiles</i> (19) <i>Multiflora</i> (1) <i>Penstemon</i> (17) <i>Proceri</i> (16) <i>Tubaeiflora</i> (1)

GENERAL DESCRIPTION OF PENSTEMONS IN SECTION *PENSTEMON* SUBSECTION *PENSTEMON*

Most penstemons in the Subsection *Penstemon* are found in the Mississippi River Basin and eastward and northward into Canada. These species are mid-sized to large with large basal rosettes that persist throughout the year. Many stemmed, flowers are borne in profusion on long stalks and airy panicles. Need more moisture than penstemons in the Midwest and Western US. All are herbaceous and hardy. Generally easy to grow, tolerant of most soils, surprisingly drought tolerant with part-day shade even in the high desert. Many of the northern species tolerate very cold temperatures if there is adequate moisture in the ground. Good candidates for a border garden; long-lived. Will do well in sun or shade. Adapt well to the transplanting process. Many of these species are white, also are pink, rose and lavender. All interbreed easily.¹

Location Mississippi River Basin and eastward and northward into Canada

¹ Extracted from Lindgren, Dale and Wilde, Ellen, 2003, "Growing Penstemons: Species, Cultivars and Hybrids." and Way, David and James, Peter. 1998. "The Gardener's Guide to Growing Penstemons."

Habitat somewhat moist; *alluviorum*, *laevigatus*, and *tenuis* prefer wet meadows or marshland

Foliage herbaceous

Shape leafy, tall, stiff stems can stand up to harsh rains

Leaves average 4" long and 1/3 to 1/4 as wide; most species are toothed and deciduous



Penstemon calycosus

Plant in bloom over a long period

Corolla (flower) long bloom period

color white, pink, rose, lavender; unaffected by the weather.

size small to medium



Penstemon calycosus

shape narrow or somewhat ampliate (swollen, enlarged)



Inflorescence (arrangement of flowers along flowering stalk; all the flowers on the stalk): wand like

height mid-sized to tall; 24-60"

shape many stems, large open panicles (branched inflorescence that blooms from bottom upward)

Penstemon australis William S. Justice @ USDA-NRCS PLANTS Database

Calyx (sepals on underside of flower, collectively; outermost part of the flower) vary greatly in size and shape

Cultivation needs

Ease of cultivation easy with adequate moisture

Moisture receive quite a bit of moisture in native habitats; however surprisingly drought tolerant with part day shade, even in high desert

Sun most of the species will take more shade than those of other sub-genera, but do best in full sun.

Heat tolerance well adapted to heat and high humidity which typifies their native habitat

Cold tolerance many northern species will take very cold temperatures if there is adequate moisture in the ground

Shade yes

Soil tolerant of most soils

Drainage not as important as for most other penstemons

Climate preference mild winters

Longevity long-lived

Interbreeding yes, easily

Display recommendations Many are worthy of being featured in rock gardens, if small, or in perennial borders.

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. In *digitalis* by a “long tongued bee”; in *hirsutus*, *oklahomensis*, and *tenuiflorus* the narrow corolla may remain shut until the weight of the bee opens it.

Cuttings

Species

<i>alluviorum</i>	<i>calycosus</i>	<i>gracilis</i>	<i>oklahomensis</i>	<i>tenuis</i>
<i>arkansanus</i>	<i>canescens</i>	<i>hirsutus</i>	<i>pallidus</i>	
<i>australis</i>	<i>deamii</i>	<i>laevigatus</i>	<i>smallii</i>	
<i>brevisepalis</i>	<i>digitalis</i>	<i>laxiflorus</i>	<i>tenuiflorus</i>	

Table 26. *Penstemon Penstemon Penstemon*

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 1/2" **large**=1-1 3/8" **medium**= 1/2 - 1" **small**= < 1/2"
 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			
<i>alluviorum</i> 2-4' white tinged with pink or purple	May-June	medium flower floriferous; open panicles (bloom stalks) wild garden; traditional border cultivated in: rarely cultivated; grown from seed and bloomed in OH	neutral, rich, moist	moist, rich		open damp woodlands; wet meadows or marshland	OH, KY, MO, MS, AR, IN 	to 5° F
<i>arkansanus</i> 15-20" white or pale violet EASY in Midwest and East EASY	May long-blooming	medium flower dainty, long blooming; reliable; violet guidelines in throat of corolla open areas without competition cultivated in: Midwest and East; grown from seed and bloomed nicely in OH	shale and sandstone soils, but reportedly tolerates most soils			open areas, dry fields and woodlands	AR, sw. MO, e. OK 	

<i>australis</i>	Apr-May profuse 15-30" pink to violet EASY	medium flower profuse bloomer; up to 12 stems; corolla with guidelines; in appearance, somewhat like <i>hirsutus</i> and <i>arkansanus</i> display not known cultivated in: not reported	sandy	needs summer water, particularly in an arid environment away from native habitat		sandy, coastal sand barrens	se VA AL 	to 10°F USDA Zones 7-9
<i>brevisepalus</i>	May-June 16-33" pale lavender	medium flower open panicles (bloom stalks); guidelines leaves on stems are toothed, lance-shaped and narrow this may be synonymous with <i>P. canescens</i> display unknown cultivated in: unknown	limestone	needs summer water, particularly in an arid environment away from native habitat		Appalachian Mountains; woodlands, limestone cliffs	VA, OH, KY, TN no map available	probably zone 6 or 7
<i>calycosus</i>	2-3' white to pink rosy purple	large flower long lived; branched, strong bloom stalk; stiff stems that stay upright in heavy rain excellent border plant cultivated: vigorous plants doing well in OH, reports of cultivation in the East; germinated in CO and seedlings growing well there	light garden soil	needs summer water, particularly in an arid environment away from native habitat	☀️ to light shade ☀️	eastern woodlands	MI, MO, ME, n. AL 	probably zone 4
<i>canescens</i>	Apr-June 24" pink to rose lavender to plum	medium flower erect stems; branched, open bloom stalks (panicles); sharply defined guidelines in pale throat of corolla entire plant is finely hairy (canescent means white or hoary) display unknown cultivated in: vigorous plants doing well in OH	well drained, slightly enriched	needs summer water, particularly in an arid environment away from native habitat	☀️ if hot and dry ☀️ if moist	mountain woodlands; rocky slopes	IN, OH, PA, w. VA n AL 	likely zone 6, possibly zone 5
<i>deamii</i>	May 3-4' white or white tinged purple S1=critically imperiled in Indiana and globally	medium flower prairie plant; withstands root competition; similar to <i>digitalis</i> ; narrow panicles (bloom stalks) does not appear to be a popular garden subject	light garden soil	needs summer water, particularly in an arid environment away from native habitat	☀️		IL, IN 	

<p><i>digitalis</i> 3' x 13.7" white, pale lavender EASY</p>	<p>May-Aug large flower popular, long lived; long bloom season; branched bloom stalks (panicles); glabrous leaves (smooth surface, no hairs); some have maroon guidelines self-seeds basal rosettes up to 20" diameter;\</p> <p>cultivar 'Husker Red' had attained great popularity; has pure white flowers and striking deep wine red leaves and flower stalks (seeds may or may not come true) plant in clumps; accent plant, massed in borders, or as a specimen</p>	<p>well drained, slightly acidic preferred</p>	<p>extra water in arid areas, but does well in dry soil</p>	<p>☀ best for promoting flowering</p>	<p>open woodlands, meadows, fields</p>	<p>n. Miss River basin, naturalized into northeast, Ont. and Queb. </p>	<p>zone 4</p>
<p><i>gracilis</i> 18" pale lavender EASY</p>	<p>June medium flower cultivated in: OK in arid regions; grown widely few stems; very dense, compact, narrow (thyrses) bloom ; not showy corolla has an extended white-bearded palate and prominent guidelines stems leaves are lance-shaped and slightly toothed stalks (inflorescence); usually 2-4 stems; not showy lives in drier conditions than most in this subsection not long-lived wild grass meadows; competes well and stands out</p>	<p>sandy, gravelly</p>	<p>occasional summer water</p>	<p>☀ or ☀</p>	<p>6000' sandy, gravelly soils</p>	<p>BC, Ont to nw. IA, n. NM </p>	<p>probably zone 4</p>

<p><i>hirsutus</i></p> <p>up to 24" lavender to violet or pink</p> <p>EASY</p>	<p>May-June</p> <p>large flower popular, long lived, reliable; form nice clumps;</p> <p>many wiry, erect stems; open panicles (bloom stalks); slender flowers, white lips closed;</p> <p>plants are glandular and hairy so glisten in the sunlight; delicate habit</p> <p>leaves primarily basal, slender to moderately broad in the basal mat, green often finely toothed; turn maroon in the winter;</p> <p>a single plant a few years old can form a good clump</p> <p>long-lived; self-sows, reliable; division of clumps is easy</p> <p>attracts butterflies</p> <p>different forms (not subspecies): 'Pygmaeus' dwarf 4" purple 'Minimus' dwarf, erect stems; lavender 'Albus' white, like Pygmaeus 'Gladwyne Strain' deeper colors 'Dainty Violet' purple 'Roseus' pink 'Tiny Tim' 2" form of 'Pygmaeus'</p> <p>rock garden; groups make nice display</p> <p>cultivated in: almost anywhere in U.S. Great Britain, Europe</p>	<p>any well drained soil;</p> <p>" we have found that excessive soil richness may result in a short life for a Penstemon." Sunlight Gardens TN</p>	<p>moderate water in dry weather</p>	<p>☀ or ☀</p>	<p>Quebec, MI south to VA, KY</p>		<p>probably zone 3</p>
<p><i>laevigatus</i></p> <p>28"</p> <p>pale lavender or white</p> <p>EASY</p>	<p>medium flower tall, stiff, open thyrse (bloom stalk); not seen as gardenworthy by Way and James</p> <p>woodland wild gardens cultivated in: MI, IA, s. MO, PA</p>	<p>sandy loam</p>	<p>quite drought tolerant, but considering preference for wetness, ample water would seem advisable</p>	<p>☀</p>	<p>wet meadows or marshland</p>	<p>s. PA, NJ to FL, MS</p> 	<p>probably zones 5 or 6</p>

<p><i>laxiflorus</i> 12-28" white, light pink</p>	<p>April</p>	<p>medium flower similar to <i>P. arkansanus</i>; flowers are offset from the main stem on short branches forming open panicles (bloom stalks); several stems</p> <p>main stem leaves are lance-shaped and finely toothed; flowers have extended lower lip, sometimes almost closed at the mouth; red-violet guidelines</p> <p>woodland wild gardens cultivated in: reported only in south east; no details available</p>	<p>sandy, acid soils</p>			<p>woodland verges</p>	<p>GA, FL west to TX</p> 	<p>probably zone 7 and warmer</p>
<p><i>oklahomensis</i> 16-22" white EASY</p>		<p>large flower often blooms first year; attractive slender white flowers; corolla has closed mouth; lower lip is yellow bearded; flower buds pale yellow; open inflorescence (bloom stalk) of 3-6 verticillasters (two cymes/stems bearing flowers, cymes arise from a node on the bloom stalk)</p>	<p>red clay (friable type) and sandy loam</p>	<p>occasional water</p>	 	<p>Osage Plains; red clay and sandy loam</p>	<p>c. OK</p> 	<p>probably zone 6-7</p>
<p>Rare <i>pallidus</i> to 22" lavender to white</p>		<p>leaves are lance-shaped, lower ones toothed</p> <p>display unknown cultivated in: unknown</p> <p>medium flower guidelines, short, open, triangular panicle (bloom stalk display)</p> <p>basal mat and bloom stem with toothed, lance-shaped leaves</p> <p>display unknown cultivated in: will grow well in OR; liked by gardeners</p>	<p>very sandy soil</p>	<p>occasional water</p>		<p>native range: MS & OH river valleys; now extended to northeast</p>		<p>probably at least zone 5, maybe 4</p>

<p><i>smallii</i> 2- 3' orchid, red-violet</p>	<p>large flower showy; short lived; bushy plants; long bloom season many-flowered; open panicles (bloom stalk display) on bushy plants stalks stand up well distinctive light green leaves with pink edging and veining self sow generously with sufficient moisture, but not a pest; likely to bloom in first year with lilies or daylilies cultivated in: across the country and Canada</p>	<p>prefers acid soil and good drainage</p>	<p>regular water</p>	<p>☀️ or ☀️</p>	<p>rocky mountain slopes and river bluffs</p>	<p>e. TN, w. NC, nw. SC </p>	<p>probably to zone 4</p>
<p>(<i>tenuiflorus</i>) white, white tinged with pink or lavender 1-2'</p>	<p>large flower</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>unknown</p>	<p>AL, MS, KY, TN </p>	<p>unknown</p>
<p><i>tenuis</i> 16-36" pink to orchid, red-purple</p>	<p>May medium flower delicate open branched, airy bloom stalk display (inflorescence); wiry stems; graceful habit finely toothed basal leaves that are quite papery with a hint of pink veining; stem leaves have a twisty, triangular shape; color of flowers almost luminous large clumps cultivated in: vigorous seedlings doing well in OH with bloom in first year; praised by gardeners from c. TX to northeast, England, Europe where moisture is plentiful</p>	<p>rich woodland soil</p>	<p>needs moisture</p>	<p>☀️</p>	<p>wet woodland soils, heavy loam</p>	<p>AR, e. TX, LA, OK </p>	<p>perhaps zone 5, likely zone 6</p>



Penstemon smallii



Penstemon digitalis

Courtesy of: Thomas G. Barnes @ USDA-NRCS PLANTS Database

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>

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