

## **The Cristati Penstemons**

**Gwen Kelaidis**

Kelaidis, Gwen. 1991. *Bulletin of the American Penstemon Society* 50(2):79-88.

Growing many closely related species of penstemons is an interesting gardening pastime. A few years ago I set out to get to know the Cristati penstemons, sometimes also referred to as the Aurator section. There are many short species with fairly large flowers. Most have golden-hairy staminodes. These are mostly from the arid West. It seems like a perfect group for a Denver rock gardener to explore.

All of the following species will grow well under dryland conditions, as all come from areas where rainfall is less than 25" per year. Many come from areas with 10" or less. In wetter climates they must be grown in troughs, in gravelly soils, under glass, or a combination of these conditions.

*Penstemon eriantherus* is probably the best known of this group and I have grown it for about ten years now. It has large flowers with wide open mouths and inflated tubes and very fuzzy, golden staminodes. The foliage is gray-green and on close examination proves to be quite hairy. *Penstemon eriantherus* is lovely in the bloom, a soft lavender with quite a bit of floral substance. It blooms in mid May here. Readily available and easy from seed, it can live several years in the dry garden. I have a miniature selection from central Wyoming that has lived in a trough for six years.

We tried the similar *P. cleburnei*, sometimes considered a subspecies. It differs primarily in having the tube constricted near the mouth, giving it a sort of pinched look. The flowers are smaller, too, and I don't like it as much as a garden plant. We saw *P. e. ssp. redactus* near Challis, Idaho this summer. It is a little bluer shade of lavender, a shorter plant, and forms clumps with more stems.

*Penstemon gormanii* from Alaska, is reported to be closely related. We haven't had the opportunity to grow it yet. Its leaves are not hairy like most of the other representatives of this group.

### *eriantherus*

10-40 cm tall. Plants hairy everywhere. Leaves entire or toothed, basal to 13 cm long, oblanceolate. Flowers lavender to orchid, red purple, or deep blue purple, 20-40 mm long. Strongly dilated. Leaves covered with sparkling hairs, and comparatively huge flowers with prominent, yellow staminode. Dry open places, plains, valleys, steppes, sometimes ascending to moderate elevations in the mountains. North Dakota, Nebraska, n Colorado w to se British Columbia and c Washington, Oregon. June. Surprisingly variable in size, flower color. Easier to grow than steppe origins suggest.

var. *eriantherus*, s Montana, Wyoming to n Colorado. Flowers lilac. 10-30 cm tall.

var. *argillosus*, nc Oregon flowers red purple and staminode sparsely bearded.

var. *whitedii*, c Washington. Corollas light blue to orchid. Leaves often clasping.

var. *redactus*, typically 10-20 cm tall. Intermediate in characters to other varieties. Montana, Idaho, Wallowas of Oregon. Most common in Salmon River drainage.

*cleburnei* [now called *P. eriantherus* Ed].

7-15 cm tall, Leaves retrorsely-puberulent, entire or obscurely toothed, 2.5-5.5 cm long, oblanceolate to lanceolate-elliptic. Flowers/17-22 mm long, upfacing, lavender. Sandy, gravelly, or clay soils, usually in sagebrush communities. 1600-2500 m elev. Sw Wyoming and ne Utah. Late May-June.

Very close to *P. eriantherus*, but more uniform and generally smaller. *gormanii*

About 15 cm tall. Lower leaves spatulate-oblong, entire, glabrous. Flowers to 20 mm. Dry mountain slopes to 1000 m. Closely related to *P. eriantherus*. Alaska, Yukon, to British Columbia.

*Penstemon cobaea* is frequently grown in the border, as it is a large plant, by far the largest in this group. It is one of the more eastern species, and in addition to being the largest plant, it has the largest flowers. They readily accommodate queen bumblebees! Their light honey scent is interesting to most gardeners and attractive to some.

There are some marvelous hybrids of *P. cobaea* and *P. triflorus*, with brighter colored flowers of white to pink to purple. Watch for these in the seed exchange. Dale Lindgren had marvelous displays at North Platte this year.

*cobaea*

30-60 cm tall. Leaves 6-12 cm long, usually pubescent At least the upper leaves toothed. Flowers purplish to white, 40-50 mm long, glandular pubescent outside. Staminode exerted. Nebraska to Oklahoma and Texas. *ssp. cobaea ssp. pwpureus*

*triflorus* 45-65 cm tall, stems and leaves lightly puberulent. Leaves entire to slightly toothed, linear to lanceolate, 5-14 cm long. Flowers 20-30 mm long, lavender. W half of the Edwards Plateau and the Trans-Pecos of Texas. April-May.

*Penstemon albidus* is a western Great Plains species. The white flowers are usually touched with purple. Even when the white color is clear, the dark stamens showing through the flower can result in a darkened effect Nevertheless, this is a great plant for naturalizing in its native habitat

*albidus* 15-40 cm tall. Leaves oblong-lanceolate, 4-8 cm long, entire or with a few low teeth, glabrous. Leaves about 20 mm long. Flowers white or faintly tinged with violet, 15-20 mm long. Dry prairies, w. Minnesota and Iowa to Alberta, Wyoming, Texas, New Mexico. May-June. Needs well drained soils. Can be short lived in the garden. May bloom the first year from seed.

A rather large group of species in the medium height range have turned out to be useful in my xeric garden, where I water little and all plants are in full sun. These plants are mostly 10-25 cm tall. Most have lavender flowers and bloom in May. *Penstemon auriberbis* is from southern Colorado and northern New Mexico. It has narrow leaves and slender stalks of flowers, but is very effective when planted as a group of six or more. *Penstemon jamesii* is taller, to 40 cm, with slightly larger, wider flowers to accompany the increased plant size. *Penstemon miser* bloomed for the first time this spring and I had to be restrained from pulling it on the spot At least the form we have is not worth garden space. But perhaps there are better forms to be had.

*Penstemon breviculus* is another in this group and is readily distinguishable, once you have seen it in flower. The flowers are quite short but very plump and wide. It's cute! We saw it growing in the most impossible looking powdery, dusty, soil near the Four Corners area in the Navajo Desert.. I would certainly give this a chance in the garden, just because it reminds me of fat toddlers and puppy dogs.

*Penstemon ophianthus* is another cousin of general resemblance, not known tome.

*auriberbis*

10-35 cm tall, leaves entire, or the upper denticulate, mostly puberulent, linear to linear lanceolate, often the cauline very numerous, 3-6 cm long. Rows somewhat secund, lavender to purplish-blue, 16-24 mm long. EC Colorado to n New Mexico. Dry, sandy, sandy-loam soils, 1560-2610 m. A compact, narrow leaved relative of *P. jamesii*.

*jamesii*

10-45 cm tall, leaves entire to regularly serrate, glabrous or puberulent. Narrowly oblanceolate to linear to lanceolate, 2-10 cm long. Inflorescence many-flowered, secund. Flowers orchid or blue-lavender, 25-32 mm long. Southeastern Colorado to e. New Mexico and sw Texas. About 1990 m. Easy in sun. Highly variable taxon. Tubby flowers are quite striking.

*miser*

10-25 cm tall, with well-developed basal leaves. Leaves entire to toothed, 2-4.5 cm long, oblanceolate to lanceolate or narrowly elliptic. Thyrses of 3-6 verticillasters, flowers 15-22 mm long, blue-purple, blue-violet to magenta, sometimes pale blue. Diatomite and ash soil, often weathered to clay, in sparse sagebrush and juniper communities. 750-1300 m elev. S. Baker Co and Malheur Co., Oregon. Not cultivated.

*breviculus*

8-20 cm tall. Leaves mostly basal, linear to narrowly lanceolate or oblanceolate, 3.5-7 cm long. Flowers 10-15 mm long, tubular-funnelform. Fat and stubby! Dark blue to purple. Sandy, gravelly or clay soils on open sagebrush hillsides and pinyon-juniper woodlands. 1600-2000 m elev. S. Grand Co. and San Juan Co., Utah, Montezuma Co., Colorado and San Juan Co., NM. May-June. Similar to *P. jamesii* and *P. ophianthus*, but with smaller flowers.

*ophianthus*

13-27 cm tall. Leaves entire to sinuate-dentate, 3-7.5 cm long, linear to lanceolate. Flowers 14-20 mm long, pale lavender to violet or blue-violet. Sandy, gravelly, or sometimes clay soils in sagebrush, pinyon-juniper, ponderosa pine and Gambel oak communities. 1500-2250 m elev. Nw New Mexico, sw Colorado, and s Utah Plateaus, n. Arizona. Late May-June. Little known in cultivation.

*moffatti*

10-30 cm tall. Leaves entire or sometimes sinuate-toothed, 1.5-4 cm long, linear to lanceolate or oblanceolate. Flowers 15-20 mm long, blue to blue-purple or rarely lavender. Gravelly, sandy, or clay soils in the blackbrush, sagebrush and pinyon-juniper communities. 1300-1800 m elev. se Utah and n. in Duchesne Co, and w. Colorado. May-early June. Difficult desert plant ssp.

*moffatti* and *ssp. paysonii*

I suppose my real reason for pursuing this group of plants was the group of very short plants that it offers. The queen bee is *Penstemon grahamii*, a little gem from the oil shale country of western Colorado and adjacent Utah. It is probably an endangered plant, so please don't collect it or even its seed in nature. Why is it that so many adorable plants fall in this category?

I call *P. grahamii* the baby-bird penstemon because it holds its little mouth upwards, like a bird in the nest waiting to be fed a worm. The golden tongue sticks out. The flowers are extremely large for the size of the plant and they are usually a good pink. The foliage is so distinct that this can be identified even as an unbloomed seedling—a very winning characteristic in a penstemon! They are dark green and have raised veins. We grew over 100 three years ago from seed collected 12 years earlier by a conservation botanist who was studying it. Germination was excellent. Last year we had a good crop of seed, and it looks like we will this year also.

Noel Holmgren, who wrote the treatment of penstemons for the fabulous *Intermountain*

*Flora*, has suggested that the whole *Cristati* group are more tolerant to moisture than one might at first expect. He feels that they might have evolved under moister conditions because in years of good rain they bloom and seed profusely, while in drought years they look quite unhappy. We have lost about 30% of the original plants we placed in our garden three years ago. Most were grown under fairly dry conditions. Perhaps we will try some in wetter situations.

Closely related to *P. grahamii* is *P. janishiae*. The latter has slightly smaller flowers, but is still a good plant. Its cousin *P. barnebyi*, in the form we have, is one of the homeliest plants ever to be called a penstemon. It doesn't seem fair that such a beast should be named after such a wonderful gentleman as Rupert Barneby! Perhaps it, too, has better manifestations.

#### *grahamii*

7-18 cm tall. Leaves mostly cauline, 2-4 cm long, entire, glabrous, strongly reticulate-veined and dark green. Flowers 30-37 mm in length, pale to deep lavender-pink, upfacing. Shaley talus and knolls with a few scattered pinyon and juniper trees. 1400-2000 m elev. Ne Utah and adj Colorado. Late May-early June. Highly local on oil shale deposits that sometimes ooze petroleum around the plants. One of the showiest, surprisingly adaptable to gardens. Very narrow range in nature, may be endangered.

#### *janishiae*

8-20 cm tall. Leaves retrorsely puberulent, entire to toothed, 2-5 cm long, oblanceolate to lanceolate. Flowers 18-28 mm long, dull purple, violet or pink. Clay soils derived from volcanic rock in sagebrush, juniper and pinyon-juniper communities, 1300-2250 m elev. California, Nevada, Oregon, Idaho. Formerly classed with *P. miser*, generally with larger flowers on a shorter plant. Resembles *P. grahamii* only much smaller stature.

#### *barnebyi*

6-20 cm tall. Leaves entire to toothed, 2-5.5 cm long, lanceolate to spatulate. Flowers long, blue-violet with white throat, 10-14 mm. Alluvial gravels or silts derived from limestone, in sagebrush and pinyon-juniper communities, 1500-2500 m elev. Endemic to ec Nevada. Late May-June. A southern and eastern segregate of *P. miser*, flowers smaller and more numerous. Far less showy than former congener, *P. janishiae*.

Two of the most alluring species have eluded us. *Penstemon dolius* and its subspecies *duschenensis* are deep blue-flowered, diminutive plants with dusky, hairy leaves. For several years we have attempted to collect seed but have either come too late, or the year was too dry for good seed production.

We have seen *P. pumilus* in eastern Idaho, thanks to the guidance of Jeanne Anderson. The flowers are deep blue with white throats, quite striking, and quite different from *P. dolius*. Jeanne has had *P. pumilus* in the garden for limited periods. No doubt it demands dryland gardening techniques, whether it be sand and gravel in areas of high rainfall or the unwatered garden where rainfall is less than 15" a year.

#### *dolius*

2-12 cm tall. Leaves densely retrorsely cinereous-puberulent, 1-4 cm long, narrowly oblanceolate to spatulate. Flowers 14-20 mm, blue-violet. Dry gravelly, sandy or clay, often alkaline soils of hills and alluvial fans, in shadscale, sagebrush, and pinyon-juniper woodlands. 1500-2000 m elev. E. Nevada and the w. deserts of Utah, c. Utah and the Uinta Basin of Utah.  
8-20 cm tall. Leaves mostly basal, linear to narrowly lanceolate or oblanceolate, 3.5-7 cm long. Flowers 10-15 mm long, tubular-funnelform. Fat and stubby! Dark blue to purple. Sandy, gravelly or clay soils on open sagebrush hillsides and pinyon-juniper woodlands. 1600-2000 m

elev. S. Grand Co. and San Juan Co., Utah, Montezuma Co., Colorado and San Juan Co., NM. May-June. Similar to *P. jamesii* and *P. ophianthus*, but with smaller flowers.

*ophianthus*

13-27 cm tall. Leaves entire to sinuate-dentate, 3-7.5 cm long, linear to lanceolate. Flowers 14-20 mm long, pale lavender to violet or blue-violet. Sandy, gravelly, or sometimes clay soils in sagebrush, pinyon-juniper, ponderosa pine and Gambel oak communities. 1500-2250 m elev. Nw New Mexico, sw Colorado, and s Utah Plateaus, n. Arizona. Late May-June. Little known in cultivation.

*moffatti*

10-30 cm tall. Leaves entire or sometimes sinuate-toothed, 1.5-4 cm long, linear to lanceolate or oblanceolate. Flowers 15-20 mm long, blue to blue-purple or rarely lavender. Gravelly, sandy, or clay soils in the blackbrush, sagebrush and pinyon-juniper communities. 1300-1800 m elev. se Utah and n. in Duchesne Co, and w. Colorado. May-early June. Difficult desert plant ssp. *moffatti* and ssp. *paysonii*

I suppose my real reason for pursuing this group of plants was the group of very short plants that it offers. The queen bee is *Penstemon grahamii*, a little gem from the oil shale country of western Colorado and adjacent Utah. It is probably an endangered plant, so please don't collect it or even its seed in nature. Why is it that so many adorable plants fall in this category?

I call *P. grahamii* the baby-bird penstemon because it holds its little mouth upwards, like a bird in the nest waiting to be fed a worm. The golden tongue sticks out. The flowers are extremely large for the size of the plant and they are usually a good pink. The foliage is so distinct that this can be identified even as an unbloomed seedling—a very winning characteristic in a penstemon! They are dark green and have raised veins. We grew over 100 three years ago from seed collected 12 years earlier by a conservation botanist who was studying it. Germination was excellent. Last year we had a good crop of seed, and it looks like we will this year also.

Noel Holmgren, who wrote the treatment of penstemons for the fabulous *Intermountain Flora*, has suggested that the whole Cristati group are more tolerant to moisture than one might at first expect. He feels that they might have evolved under moister conditions because in years of good rain they bloom and seed profusely, while in drought years they look quite unhappy. We have lost about 30% of the original plants we placed in our garden three years ago. Most were grown under fairly dry conditions. Perhaps we will try some in wetter situations.

Closely related to *P. grahamii* is *P. janishiae*. The latter has slightly smaller flowers, but is still a good plant. Its cousin *P. barnebyi*, in the form we have, is one of the homeliest plants ever to be called a penstemon. It doesn't seem fair that such a beast should be named after such a wonderful gentleman as Rupert Barneby! Perhaps it, too, has better manifestations.

*grahamii*

7-18 cm tall. Leaves mostly cauline, 2-4 cm long, entire, glabrous, strongly reticulate-veined and dark green. Flowers 30-37 mm in length, pale to deep lavender-pink, upfacing. Shaley talus and knolls with a few scattered pinyon and juniper trees. 1400-2000 m elev. Ne Utah and adj Colorado. Late May-early June. Highly local on oil shale deposits that sometimes ooze petroleum around the plants. One of the showiest, surprisingly adaptable to gardens. Very narrow range in nature, may be endangered.

*janishiae*

8-20 cm tall. Leaves retrorsely puberulent, entire to toothed, 2-5 cm long, oblanceolate to lanceolate. Flowers 18-28 mm long, dull purple, violet or pink. Clay soils derived from volcanic rock in sagebrush, juniper and pinyon-juniper communities, 1300-2250 m elev. California, Nevada, Oregon, Idaho. Formerly classed with *P. miser*, generally with larger flowers on a shorter plant. Resembles *P. grahamii* only much smaller stature.

*barnebyi*

6-20 cm tall. Leaves entire to toothed, 2-5.5 cm long, lanceolate to spatulate. Rows long,

blue-violet with white throat, 10-14 mm. Alluvial gravels or silts derived from limestone, in sagebrush and pinyon-juniper communities, 1500-2500 m elev. Endemic to ec Nevada. Late May-June. A southern and eastern segregate of *P. miser*, flowers smaller and more numerous. Far less showy than former congener, *P. janishiae*.

Two of the most alluring species have eluded us. *Penstemon dolius* and its subspecies *duschenensis* are deep blue-flowered, diminutive plants with dusky, hairy leaves. For several years we have attempted to collect seed but have either come too late, or the year was too dry for good seed production.

We have seen *P. pumilus* in eastern Idaho, thanks to the guidance of Jeanne Anderson. The flowers are deep blue with white throats, quite striking, and quite different from *P. dolius*. Jeanne has had *P. pumilus* in the garden for limited periods. No doubt it demands dryland gardening techniques, whether it be sand and gravel in areas of high rainfall or the unwatered garden where rainfall is less than 15" a year.

#### *dolius*

2-12 cm tall. Leaves densely retrorsely cinereous-puberulent, 1-4 cm long, narrowly oblanceolate to spatulate. Flowers 14-20 mm, blue-violet. Dry gravelly, sandy or clay, often alkaline soils of hills and alluvial fans, in shadscale, sagebrush, and pinyon-juniper woodlands. 1500-2000 m elev. E. Nevada and the w. deserts of Utah, c. Utah and the Uinta Basin of Utah.

#### *concinus*

10-18 cm tall, leaves linear to narrowly lanceolate, 3-5 cm long, mostly basal. Corolla 8-11 mm long, violet. Gravelly alluvial soils in pinyon-juniper woodlands. 1600-2000 m elev. W. Utah and adj. Nevada. Late May-June. Not cultivated.

#### *distans*

30-60 cm tall. Lower leaves 5.5-14 cm long, linear to oblanceolate, puberulent. Flowers 16-20 mm, blue to violet. Limestone-gravelly slopes among juniper-pinyon vegetation at about 1500 m elev. endemic to the se. end of the Shivwits Plateau, Mohave Co., Arizona. May-early June.

*guadalupensis* and *guadalupensis* ssp. *ernestii* 25-35 cm, leaves entire or somewhat toothed, stem leaves 3-7 cm long, linear to lanceolate. Flowers white or almost white, 13-20 mm long. Central Texas from the e. Edwards Plateau to the Lampasas Cut Plains. March-May.

Other species in the *Cristati* not discussed in this article include:

*P. punctatus* (Mexico)

*P. parviflorus* (Colorado)

*P. pringlei* (name of questionable status according to Lodewicks)

### *Alphabetical List of Cristati Species*

Bold Print indicates the plants of greatest horticultural interest as indicated by the relationship of height to flower size.

<i>Name</i>	<i>Height</i>	<i>Flower Length</i>
<i>acaulis</i>	1-3 cm	15-20 mm
<i>albidus</i>	15-40 cm	15-20 mm
<i>atwoodii</i>	10-18 cm	8-11 mm
<i>auriberbis</i>	10-35 cm	16-24 mm
<i>barnebyi breviculus</i>	6-20 cm 8-20 cm	10-14 mm 10-15 mm
<i>calcareus</i>	5-25 cm	12-16 mm
<i>cleburnei</i>	7-15 cm	17-22 mm
<i>cobaea</i>	30-60 cm	40-50 mm
<i>distans</i>	30-60 cm	16-20 mm
<i>dolius</i>	2-12 cm	14-20 mm
<i>eriantherus</i>	10-40 cm	20-40 mm

<i>goodrichii gormanii</i>	20-35 cm 15cm 7-18	10-15 mm 20mm. 30-
<i>grahamii</i>	cm 25-35 cm 10-45	37 mm 13-20 mm 25-
<i>guadalupensis</i>	cm 8-20 cm 14-20	32 mm 18-28 mm 8-
<i>jamesii janishiae</i>	cm	12 mm
<i>marcusii</i>		
<i>miser</i>	10-25 cm	10-14 mm
<i>moffatti monoensis</i>	10-30 cm 7-30 cm	15-20 mm 15-20 mm
<i>nan us</i>	3-7 cm	10-15 mm
<i>ophianthus pumilus</i>	13-27 cm 4-12 cm	14-20 mm 15-23 mm
<i>retrorsus</i>	10-20 cm	15-20 mm
<i>triflorus</i>	45-65 cm	25-35 mm