

# RED BUTTE GARDEN

UTAH'S BOTANICAL GARDEN

## Garden Plant Collections

# Penstemon



*Penstemon*, commonly known as beardtongue, is one of the largest genus of flowering plants endemic to North America. Containing roughly 250 species, they are found naturally in every state except Hawaii, with the most species being found in the Western United States. Utah is home to the highest number of native *Penstemon*, with 100 species, including approximately 20 species that are rare or threatened. Their habitat ranges from alpine to hot desert conditions.

*Penstemon* species are known for their inflorescences (clusters of flowers arranged on the stem) of attractive, tubular flowers that come in a variety of bright colors, from the less common white and yellow to the more common blue, purple, pink, and red. Since their flowers develop from the base of the inflorescence upwards to the tip, their bloom lasts a long time. Beardtongues are able to sustain a high number of pollinators due to the large volume of nectar they contain. The diversity of flower shapes, colors, and arrangements reflect individual species specializations to attract specific pollinators, including bees, butterflies, and hummingbirds.

Beardtongues are typically herbaceous perennials. They range from short, mat-forming plants, to plants with tall slender inflorescences. There are even some species that are shrubs. The foliage can be striking in its own right and is even evergreen in some species.

If you're an explorer of Utah's great outdoors, chances are you've come across these beauties. There are three features to identify a *Penstemon*: leaves

growing opposite each other (rarely whorled or with the upper leaves alternate), tubular flowers, and 5 stamens (four fertile paired and one sterile stamen). If the plant matches these criteria, you are in the presence of a *Penstemon*!

Beardtongues are members of the same family as foxgloves and snapdragons. In Latin, the name *Penstemon* comes from "pen," meaning almost, and "stamon," meaning thread, referring to the sterile stamen without an anther, hence, "almost a stamen." This sterile stamen, or staminode, usually protrudes out of the flower. Its fringed lower side is the source of the plant's common name, beardtongue.

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## DESIGNING WITH PENSTEMON

Beardtongues thrive in untouched, coarse, rapidly draining soils. They do well on little water and can go long periods of time with no water. They are adaptable to a variety of growing conditions as long as they don't have "wet feet," or soil that is constantly wet. Overwatering will result in short-lived plants. Beardtongues flourish in hot temperatures and full sun. Light shade is tolerated; however, too much shade will cause the inflorescences to flop.

Beardtongues are excellent for adding contrast to the garden with their vibrant flowers. Since they grow well in scree and rock rubble, they perform beautifully in rock gardens or other low-water landscapes. In the wild, some *Penstemon* species are the first plants to become established after natural

disturbances, making them a great choice for erosion control on slopes.

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## CARE AND MAINTENANCE

With very little input, beardtongues will provide a high output of flower color, year after year, as long as the site is well-drained and they are given plenty of sun and elbow room. The best care for a beardtongue is to simply leave it alone - plant it and forget it, until it rewards you with flowers!

Most can be easily grown from seed planted in late fall or early winter and will usually bloom in their second year. Give them space to grow that is free of weeds as they do not compete well with other plants. Select a site that is well draining and don't add organic mulches such as bark or compost, as these hold moisture around the crown of the plants. After blooming, cut the spent flowering stalks to the ground, leaving the basal foliage, but leave the flowering stalks intact if you want your beardtongues to re-seed. Beardtongues produce a lot of seed, so if you find your plants declining, do not fear, new plants are likely to appear next year!

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## DID YOU KNOW

Red Butte Garden's Conservation Department has conducted research on the conservation of Graham's Penstemon (*P. grahamii*) and White River Penstemon (*P. scariosus* var. *albifluvis*). Over the course of many years, they conducted surveys and monitoring, as well as transplanting Graham's Penstemon out of harm's way near Vernal, Utah.

Native American tribes used beardtongue as a medicinal remedy in the treatment of humans and animals. The roots were used to alleviate toothache, and poultices of the leaves treated cuts and burns. Pioneers learned and adopted these medicinal uses from the Native Americans.

The genus *Penstemon* was first described in 1748 by Dr. John Mitchell. No species name was coined, but a precise description of *P. laevigatus* is obvious (a close relative of the better-known *P. digitalis*, Foxglove Beardtongue). Over the years, there has been confusion over the spelling of the genus. Mitchell first spelled it "penstemon," then Linnaeus spelled it "pentstemon," assuming Mitchell was referring to five stamens ("pent" means five in Latin). Since there are not actually five stamens, "penstemon" became the accepted spelling.

In 2009, two men were charged with felony theft in an attempt to steal 600 pounds of Palmer's Penstemon (*P. palmeri*) seedpods from Utah's Zion National Park. Authorities estimated the street value of the seedpods to be \$25,000.00. The stolen seed was confiscated and used for reseeding projects in Zion.

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## WHERE TO SEE THIS COLLECTION

Like Utah, here at the Garden we have a diverse selection of *Penstemon* species including native species, rare taxa, hybrids, and cultivars. Our collection can be seen throughout the Garden, with the majority planted in the Water Conservation Garden and the planting beds of the parking lot and entrance drive.

