

SUBGENUS: *HABROANTHUS*

Section: *Elmigera*

CULTIVATION OF THE SECTION and EACH SPECIES

Table 2

[subgenus]	<i>HABROANTHUS</i> (51)
[section]	<i>Glabri</i> (44) <i>Elmigera</i> (7)



Penstemon eatonii

GENERAL DESCRIPTION OF PENSTEMONS IN THIS SECTION

Species in this section make superb garden subjects! And fortunately for the gardener, the magnificent species in this section have a long bloom season -- up to five weeks.

These tall, majestic penstemons bear large, tubular flowers in vivid shades of red. The flowers are magnificently designed for pollination by hummingbirds.

The glossy, attractive foliage is arranged in showy, crowded, large-leafed mats that glisten in the sunlight.

Location southwest U.S. and northern Mexico

Habitat typically, but not always, dry areas

Foliage Plants are herbaceous (green colored, not woody) but have a woody base

Shape crowded, large-leafed mats

Leaves green and entire (not toothed), vary in shape



Penstemon eatonii

Plant in bloom long bloom season; most bloom late in the season except *eatonii*

Corolla (flower)

Color red

Size large

Shape narrow tubes, shark's head shape; lower lobe very long



Penstemon eatonii

Inflorescence (arrangement of flowers along flowering stalk; all the flowers on the stalk): upright spikes, often secund (the flowering stalk, called the inflorescence, has flowers arranged on just one side of it) or subsecund (almost secund), often wand-like

Height tall

Shape

Calyx (sepals on underside of flower, collectively; outermost part of the flower) usually ovate; often short

Cultivation needs

Ease of cultivation easy

Moisture drought tolerant, but appreciates some moisture; too much moisture may cause plants to droop and even collapse

Sun: full.

Heat tolerance yes

Cold tolerance yes

Shade will tolerate light, half-day shade

Soil moderately alkaline or neutral

Drainage sharp

Climate preference arid

Longevity can live 5-10 years under cultivation; deadheading increases longevity



Display recommendations dryland garden

Penstemon eatonii

For more photos go to: <http://plants.usda.gov/gallery.html>

Pollinated by Hummingbirds are particularly attracted to flowers in this section; however most penstemons are also visited by several bee species including honeybees and bumblebees. While hummingbirds prefer red penstemons, they commonly are seen at most penstemon species.

Cuttings no

Species

<i>barbatus</i>	<i>henricksonii</i>	<i>wislizenii</i>
<i>cardinalis</i>	<i>imberbis</i>	
<i>eatonii</i>	<i>labrosus</i>	

Table 2. *Habroanthus Elmigera*

<p><u>Key</u></p> <p>Cell entitled “Species”  popular parenthesis = not reported in cultivation plant height when in bloom EASY =easy to grow color(s) of flower</p> <p>Cell entitled “Cultivation Suggestions”</p> <p>First row size of flower very large= >1 ½ “ large=1-1 3/8” medium= ½ - 1” small= < ½ “</p> <p>Second row: general description</p> <p>Third row: garden display suggestions rock garden or raised bed, trough, dryland garden, border</p> <p>Fourth row: where species has been successfully cultivated out of its native habitat</p> <p>Cell entitled Sun: full sun =  partial shade </p>

Species	Bloom Season in Native Habitat	Cultivation Suggestions	Cultivation Needs			Elevation and Habitat	Distribution	Reported cold hardiness in cultivation
			Soil	Moisture	Sun			
<p><i>barbatus</i></p> <p>15'-5'</p> <p>bright red</p> <p>EASY</p>	June-Oct	<p>large flower dramatic; extremely popular</p> <p>bloom stalk of 7-10 verticillasters which arise from the stem and have two cymes or little stems bearing flowers</p> <p>one to few stems, erect or ascending (oblique); thick crown; rather long, narrow leaves widely spaced on stem</p> <p>short-lived dryland garden, border cultivated in: CO, ME, NC, OH, OR, VA, Canada, Great Britain, Scandinavia</p>	<p>variety of soils;</p> <p>needs excellent drainage, particularly if in an area with heavy rainfall;</p> <p>tolerates fairly rich soil</p>	<p>drought tolerant; tolerates moisture</p>	<p>Sun</p> <p>☀</p> <p>☀</p>	<p>4450-8700' possibly higher; dry hillsides and flats in sagebrush, pinyon and juniper, Gambel oak and ponderosa pine communities; canyons in sw. UT</p>	<p>s. CO, s. UT, w. NM, n. and e. AZ, Trans-Pecos TX, n. Mexico</p> 	-20°F in Denver
<p><i>cardinalis</i></p> <p>19.5-39 x 11" wide"</p> <p>deep red</p> <p>EASY</p>	May	<p>large flower spectacular racemes (an unbranched inflorescence/bloom stalk with each flower on an individual pedicel/little stem which is attached to the main axis); blooms on one side of its strong stem (secund) and from the bottom up</p> <p>foliage generally is large and beautifully frames the plant's lower flowers</p> <p>hardy</p> <p>dryland garden cultivated in: widely grown, with specific reports from NV, CA, CO, ME, VA</p>	<p>variety; well drained</p>	<p>drought tolerant</p>	<p>Sun</p> <p>☀</p> <p>OF</p> <p>☀</p>	<p>4500-7700' canyons</p>	<p>s. NM, w.TX</p> 	Zone 5, Denver has tolerated -20°F (placed by a wall)

<p><i>eatonii</i></p> <p>21-24" x 9.4" wide</p> <p>scarlet</p> <p>EASY</p>	May-June	<p>large flower</p> <p>showy; and performs well</p> <p>flowers, in pairs, are arranged up one side of the bloom stalk (secund); attracts hummingbirds</p> <p>root depth 6"</p> <p>few to several erect stems with particularly beautiful, shiny green leaves; forms a ground-hugging rosette</p> <p>reseeds freely may be short-lived</p> <p><u>varieties</u> <i>exsertus</i> <i>eatonii</i>, <i>undosus</i> 55" x 24" wide 6000' a robust form</p> <p>dryland garden, border</p> <p>cultivated in: northwest, Rocky Mt region, northwest, MI, east coast up to MA; highway plantings ID, NM</p>	lean, well-drained	medium drought tolerance;	 	2750-9100'	<p>NV, AZ, UT, s. CA, NM, CO</p> 	Zone 4
	<p>(<i>henricksonii</i>) not reported</p> <p>(<i>imberbis</i>) not reported</p>	<p>NA</p> <p>NA</p>	<p>adapted to coarse, medium and fine textured soils;</p> <p>pH 7-8</p> <p>limited indirect summer watering as needed</p> <p>some report it will tolerate almost full shade and daily watering, and it will even flower in full shade (perhaps an adaptation to steep canyon bottom life)</p> <p>will tolerate speckled half day shade similar to sun received in canyons</p>	<p>dry slopes, flats in sagebrush, pinyon and juniper, mahogany and ponderosa pine communities; canyons in sw. UT</p> <p>in native habitat receives 10-20" rainfall</p>	<p>-20°F in Denver</p> <p>-33° USDA</p>			
			NA	NA	NA	shaded oak/pine forests	Coahuila, Mexico	NA
			NA	NA	NA		c. Mexico: Guanajuato, Jalisco, San Luis Potosi, Zacatecas	NA

<p><i>labrosus</i></p> <p>12-24"</p> <p>scarlet</p>	<p>July-Aug</p>	<p>large flower two 3' spikes of 2" bright red flowers that are unusual, with long narrow lower lobes looking rather spider-like</p> <p>forms a clump from creeping root stock after several years; foliage lays on the ground, flowers grow upright</p> <p>Las Pilitas nursery in CA says "Easy, garden tolerant, cold tolerant and shade tolerant"</p> <p>lives 5-10 years</p>	<p>gravelly with some humus</p>	<p>occasional irrigation; 12-15"/year in native habitat</p>	<p>  light shade, especially in hot climates</p>	<p>5000-10,000</p> <p>open pinyon/juniper and mixed conifer forest; under Ponderosa and Jeffrey Pine or in rocky, gravelly slopes, "in some of the worst climate areas in the U.S.... so should do well in the Rockies or New England" (Las Pilitas Nursery)</p>	<p>s. CA to northern Baja (San Pedro Martir Mts.)</p>	<p>0° F in VA</p>
<p><i>wislizenii</i></p> <p>1-3'</p> <p>scarlet</p>	<p>Aug-Nov in MX</p>	<p>large flower subracemose (similar in appearance to a raceme; spike-like) inflorescence (bloom stalk)</p> <p>leaves narrow, spatulate, sparse, and mostly basal</p>	<p>unknown</p>	<p>drought tolerant</p>	<p>unknown</p>	<p>4,900-8,250' in pine-oak forest, cliffs and roadsides</p>	<p>nw. Mexico Sierra Madre Occidental, s. to Sinaloa</p>	<p>unknown</p>



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for more photos go to:

1. Tab "Library" on this website
2. <http://plants.usda.gov/gallery.html>