

Collinsia parviflora - New Crop Summary & Recommendations

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Series: New Floricultural Crops: Formulation of Production Schedules for Wild, Non-domesticated Species

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New Crop Report: *Collinsia parviflora*

Taxonomy:

- **Scientific Name:** *Collinsia parviflora* Lindl.
- **Synonyms:** *Antirrhinum tenellum*
Collinsia grandiflora var. *pusilla*
Collinsia tenella
- **Common Names:** Blue-eyed Mary, Maiden Blue-eyed Mary, Small-flowered *Collinsia*
- **Family:** Scrophulariaceae

Also: Plantaginaceae, Veronicaceae

Geographic Distribution:

- **Continent:** North America
- **Countries:** United States of America, Canada
- **Regions:** Mostly western United States. From California east to Colorado, north to British Columbia and Alaska, and a few eastern states.
- **Latitudes:**
- **Altitude:** 800-3,500 meters
- **Climactic conditions:** Warm days accompanied by cooler nights. Generally moist during spring, slightly drier during summer.

- **Invasive potential:** Little to none

Native Habitat: Generally inhabiting open, grassy slopes and rock outcrops. Prefers at least partial shade. Vernal moist areas that dry out partially during summer, although the plant has little tolerance for excessive heat and drought. Generally found in areas inhabited mostly by grasses and small shrubs.

Taxonomic Description:

- **Plant Habit:** Small annual growing from a taproot. Slender stems reaching 5-50 cm in length. Oftentimes widely branching.
- **Underground Storage Organs:** No
- **Leaves:** Opposite, oblong to linear-lanceolate leaves. Smooth to slightly hairy. About 1-4 cm long. Oftentimes becoming almost whorled just prior to inflorescence. Foliage is predominantly green although purplish and reddish hues can often be seen, especially on the undersides of leaves.
- **Flower:** Borne in an open inflorescence of short-stalked flowers. 1-5 flowers per node. Very small flowers with corollas generally measuring about 4-8 mm in length. Two-lobed flowers with upper lobe being two-lipped, generally white; lower lobe is three-lipped, generally bluish (sometimes mild purple).
- **Season of Bloom:** Spring. Mid April to Mid July.
- **Uses by indigenous people:** Used by Navajo and Kayenta tribes as a veterinary drug used to make horses run fast. Also by the Ute tribe to treat sore flesh.

Propagation Methods:

- Only accounts are of propagation by seed. Seeds are generally reported to have good germination without any treatments. Plant produces 2-4 small seeds (~2mm) per flower.

Crop Ideotype:

- The plant would be best suited as an accent plant for small scale settings because of its overall small size. Flower size would not be such a detraction from the plant if it could be made more compact. This would even out the flower to foliage ratio and make the plant more appealing. A successful cultivar would also display more of the purplish foliage that can often be found on the plant.

Market Niche:

- **Target sales date:** Should be produced for use in the springtime bedding plant market. Could be successful for use in mixed containers. Target sales around Mother's Day.
- The plant could be forced year-round, but there seems to be little potential for use in areas other than the bedding/ mixed container market. Most likely little use as a specialty holiday crop or indoor potted plant.
- The crop would have to compete with *Collinsia heterophylla* (Chinese Houses). This species is more well-known to gardeners and produces more numerous and larger flowers. The crop is also somewhat similar to Lobelia. Lobelia also has more numerous and larger flowers. If the

coloration of the foliage in *C. parviflora* could be improved it could potentially compete with Lobelia.

- Depending on the success of breeding programs, a *C. parviflora* cultivar could be available soon, although seed build-up may take quite some time given the small amount of seeds produced per flower.

Cultural Requirements:

- **Hardiness:** Hardy down to about USDA Zone 4.
- **Heat/Drought:** Low tolerance for heat and drought.
- **Temperature:** Moderately warm days and slightly cooler nights. ~ 66-70°F days. 55 °F nights.
- **Light:** Prefers shady areas so supplemental lighting probably not necessary.
- **Nutrition:** Moderate. About 50-100 ppm N during later stages of production.
- **Soil:** ph 5.6-7. Fine- medium textured. Low tolerance for calcium carbonate and high salinity soils.
- **PGR's:** Should be experimented with to see if they can create a more compact habit.
- **Container size:** Start in 512 plug tray. Transplant to packs (606 at largest).
- **Pests:** No major disease/insect, etc. problems reported. This could change, however, when placed into cultivation.

Preliminary production schedule:

- Stage 1: 7-14 days, 70-72° F, High moisture
- Stage 2: 10-14 days, 68- 70° F days
- Stage 3: 10-14 days, 66-68° F days, Low fertilizer rates
- Stage 4: 7-10 days, 66-68° F days, continue fertilizer rates
- PGR use may be recommended to reduce legginess

Total growing time~ 7 weeks. Target sales date of Mother's Day.

Breeding Objectives:

- Breeding programs should work towards goals of larger and/or more numerous flowers. Also possibly a more compact habit with foliage displaying more of the reddish/purplish hues.

References

E-Flora BC

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UC/JEPS Jepson Treatment Manual for *Collinsia parviflora*

http://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment.pl?7177,7269,7283

UC/JEPS Jepson treatment Manual for *Collinsia heterophylla*

http://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment.pl?7177,7269,7279

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<http://herb.umd.umich.edu/herb/search.pl?searchstring=Collinsia+parviflora>
USDA Natural Resources Conservation Service

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USDA Germplasm Resources Information Network

<http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?316882>