

***GILIA TENUIFLORA* SUBSP. *DOCMILLERI* (POLEMONIACEAE),
A NEW SUBSPECIES FROM THE SANTA LUCIA RANGE
OF CENTRAL-WESTERN CALIFORNIA**

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ABSTRACT

Gilia tenuiflora Benth. subsp. *docmilleri* D.J. Keil, **subsp. nov.** (Polemoniaceae), is described from sites in the upper elevation portions of the Santa Lucia Range in Monterey and San Luis Obispo counties, California. It is a member of *Gilia* sect. *Arachnion* and has strap-shaped basal leaves with 4–7 pairs of short, usually toothed lobes, a corolla with an elongated tube, a short, narrowly tapered throat, short stamens that are only slightly exerted, and an included to shortly exerted style with stigmas included to slightly exceeding the stamens. It most closely resembles *G. tenuiflora* subsp. *arenaria* of coastal Monterey County, and in its elongated corolla tube-throat it also resembles subsp. *hoffmannii* of Santa Rosa Island (Santa Barbara Co.).

After a May 1998 field trip along the spine of the Santa Lucia Range in northwestern San Luis Obispo County, California, I attempted to assign names to gatherings and noted frustrations with a *Gilia* specimen: “Corolla $\pm 5 \times$ calyx. Goes nowhere in Hoover's key [Hoover 1970].” It also went nowhere in the *Jepson Manual* key (Day 1993). I noted its resemblance to a specimen collected in 1985 from the same area that had been determined by Polemoniaceae expert Alva Day as *Gilia tenuiflora*. However, as I prepared a treatment of *Gilia* for the second edition of the *Vascular Plants of San Luis Obispo County* (Keil & Hoover in press), I recognized that these and a few other specimens in the Hoover Herbarium (OBI) did not fit well with the others determined as *G. tenuiflora*. Attempts to identify them in the new *Jepson Manual* key (Porter 2012) met with the same frustrations. During a visit to the Santa Barbara Botanical Garden herbarium (SBBG) I located several additional specimens collected by the late Clare Hardham that appeared to be the same plant. Field work in spring 2019 by David Keil and D. R. Miller documented populations from serpentine outcrops in the upper San Simeon Creek drainage of the Santa Lucia Range in San Luis Obispo County.

During spring 2019 Ryan O'Dell independently discovered what he suspected might be an undescribed *Gilia* growing at several localities in the Santa Lucia Range of Monterey County and contacted Dr. Mark Porter, who confirmed that the collections represented a hitherto undescribed taxon. Subsequent communications resulted in the recognition that the plants from San Luis Obispo County and those collected by O'Dell in Monterey County represent the same entity.

Several of the specimens in SBBG had been determined by the late Polemoniaceae expert, Alva Day, as *G. tenuiflora* Benth. subsp. *tenuifolia*, but in several respects they are discordant with the features of that taxon. In overall characteristics our specimens do appear to be closest to *G. tenuiflora*,

but the combination of their features place them outside the range of variation of any of the described subspecies of *G. tenuiflora*. I here describe these plants as *Gilia tenuiflora* subsp. *docmilleri*, Santa Lucia Gilia.

***Gilia tenuiflora* Benth subsp. *docmilleri* D.J. Keil, subsp. nov. TYPE: USA. California.** San Luis Obispo Co.: Santa Lucia Mts., Hearst Ranch, San Simeon Creek Road [continuing NW along Rocky Butte Truck Trail], 17 road mi from Highway 1, locally abundant in W-facing serpentine chaparral near road, 35.727082°, -121.126604°, 750 m, 27 May 1998, *D. Keil 27512* with R. Riggins and Miller (holotype: OBI165947; isotypes RSA, UC). Figure 1.

Plants 3–32 cm tall. Stems 1–5 from base, erect or ascending, sometimes with ascending branches from proximal and/or distal nodes, pubescence of proximalmost internodes cobwebby, more-distal internodes glandular-puberulent, glands golden to ± black. Leaves mostly in basal rosette or some crowded on stem near base, margins dentate or pinnately lobed, lobes of basal leaves entire or dentate, faces cobwebby or glabrate; proximal cauline leaves, if present, with narrower, sometimes entire lobes; medial and distal leaves reduced, bract-like, proximally few-lobed, serrate, or entire, when lobed, the terminal lobe most prominent, base narrowed or the presence of proximal lobes giving the appearance of an expanded base, faces cobwebby and/or glandular-puberulent. Inflorescences open, branches ascending, clusters corymbiform or, with elongation of inflorescence internodes, becoming ± racemiform in fruit; pedicels erect or ascending, unequal, 1–25 mm, filiform, glandular-puberulent. Calyx (2)3–5 mm long in flower, (3)4–6.5 mm long in fruit, lobes green or purple, lanceolate, acuminate, glandular-puberulent or calyces of proximal flowers thinly cobwebby and sometimes also glandular-puberulent, sinuses and connecting membranes translucent-white, ± as wide as lobes in flower, wider than lobes in fruit. Corolla (5)9–21 mm long, tubular-funnelform, tube-throat (2)3–5 × calyx; tube 6–13 mm long, long-exserted from calyx, dark purple, glabrous or glandular-puberulent (variable within populations); throat 1–4 mm long, narrowly tapered, proximally purple, distally white or pale yellow or purple with single or paired white or pale yellow spots, 1.5–3 mm wide (pressed); lobes (2)3–5.5 mm long, 2.0–3.0 mm wide, oblong-elliptic to obovate, pink-purple to dark purple, sometimes ± white at base. Stamens shorter than corolla lobes; filaments inserted at sinuses, unequal, the shorter ± 0.5 mm, the longer 1.5–3.5 mm; anthers 0.7–1.2 mm, slightly to evidently exserted from throat; pollen white or blue. Style included in corolla tube to somewhat exserted, stigmas included to exserted beyond anthers. Capsule (3)4–6 mm long, ± equaling or exceeding fruiting calyx, dehiscent in distal half. Seeds ± 1.5 mm long, oblong-angular, smooth, light brown.

Additional specimens examined. California. Monterey Co.: Trail to Ventana Double Cone, gravelly south slopes, 915–1220 m, 15 May 1962, *C.B. Hardham 10-130* (SBBG18099); South Coast Ridge Road, near Basket Spring, 35.909882°, -121.364895°, very gravelly sand on bedrock greywacke sandstone, Franciscan Formation, 980 m, 21 Apr 2019, *O'Dell s.n.* (OBI186682); South Coast Ridge Road, on Burma Road, 35.911600°, -121.338779°, very gravelly sand on bedrock greywacke sandstone, Franciscan Formation, 907 m, 21 Apr 2019, *O'Dell s.n.* (OBI186684); South Coast Ridge Road, on Burma Road, 35.911848°, -121.353533°, very gravelly sand on bedrock greywacke sandstone, Franciscan Formation, 876 m, 21 Apr 2019, *O'Dell s.n.* (OBI186683). **San Luis Obispo Co.:** Cypress Mt., [35.601638°, -120.954352°], serpentine outcrops, 700 m, 3 Apr 1960, *Hardham 5291* (SBBG18109); Cypress Mt., [35.601638°, -120.954352°], serpentine outcrops, 700 m, 10 May 1960, *Hardham 5706* (SBBG107665); Pine Mt., abundant on rocky ledges, 975 m, 17 Apr 1961, *Hardham 6824* (SBBG109454); 4 mi W of Ocean View Mine, openings in chaparral on serpentine, 760 m, 17 May 1961, *Hardham 7085* (SBBG109309, SBBG 109766, approaching subsp. *tenuiflora*); road to top of Cypress Mountain from Warren's cabin, serpentine chaparral and Sargent cypress forest on mountain slopes, common on grassy serpentine slope, ca. 35.605939°, -120.942146°, 9 May 1982, *Keil et al. 16056* (OBI165946, UCR32107); along San Simeon

Creek Road [continuing northwest along Rocky Butte Truck Trail], 19.1 miles from California Route 1, N of Rocky Butte lookout, 35.737338°, -121.129947°, serpentine ridge with chaparral dominated by *Arctostaphylos obispoensis* and *Quercus durata*, locally common on stony slopes, 27 Apr 1985, *Keil et al. 18660* (OBI165945); Santa Lucia Mts., San Simeon Creek drainage, Warren Ranch, just S of fence line with Egeberg Ranch, near road from Blue Rock to Vulture Rock, 35.650367°, -121.019806°, 829 m, coarse serpentine gravel, full sun exposure, 17 Apr 2019, *Keil 35569* with Miller (OBI186680, RSA, SBBG, UC); Santa Lucia Mts., San Simeon Creek drainage, Blue Rock, Egeberg Ranch, 35.654312°, -121.026689°, 780 m, serpentine boulder top, no soil, full sun exposure, 686 m, 17 Apr 2019, *Keil 35576* with Miller (OBI186681); Santa Rita Ranch Preserve, near main entrance from Old Creek Road, 35.52781 -120.85522, 390 m, 6 Apr 2021, *Keil 37485* (OBI183162); Tobacco Ridge Road, in very thin rocky soil above Hearst Stock Pond, Tobacco Creek drainage, dacite with serpentine nearby, 35.707421°, -121.096495°, 805 m, 4 Apr 2013, *Miller 413/1043* (OBI165949); Ridge Road [Rocky Butte Truck Trail] just beyond 'Burma Road' junction [same locality as *Keil 27512*], bare, hard-packed serpentine, associates include *Quercus durata*, *Pinus sabiniana*, *Eriophyllum* sp., 27 May 1998, *Miller 598/698* (OBI165948); [Santa Lucia Mts.], San Simeon Creek drainage, Blue Rock, Egeberg Ranch, serpentine boulder top, no soil, full sun exposure, 686 m, 11 Apr 2019, *Miller 419.2017* (OBI1867675); [Santa Lucia Mts.], San Simeon Creek drainage, 1/3 mile S of Egeberg/Warren fence line, top of Blue Rock Road, thin serpentine cobble, full sun, SW exposure, 838 m, 24 Apr 2019, *Miller & Appel 419.2019* (OBI186674); Santa Lucia Mts., San Simeon Creek drainage, approximately 1 km distance across ridge top, collected from 9 sites from Warren/Egeberg fence line to Vulture Rock, 831–878 m, 26 Apr 2019, *Miller 419.2020* (OBI186676, OBI186677, OBI186678, OBI186679).

Etymology. *Gilia tenuiflora* subsp. *docmilleri* is named in honor of friend, colleague, and field companion “Doc” Miller. For over 35 years Doc, a keen-eyed amateur botanist, has explored the backcountry of northwestern San Luis Obispo County and documented his observations with many specimens deposited in the Robert F. Hoover Herbarium (OBI) at California Polytechnic State University. Doc has assembled and periodically updated a checklist of the flora of the Pine Mountain region of the Santa Lucia Range. His voucher specimens have been an important resource for the preparation of the San Luis Obispo County flora.

Suggested common name. I recommend Santa Lucia *Gilia* as the common name for *Gilia tenuiflora* subsp. *docmilleri*.

Geographic distribution and habitat. *Gilia tenuiflora* subsp. *docmilleri* is apparently endemic to the Santa Lucia Range, a part of California's outer South Coast Range. The new subspecies is known from west-central Monterey Co. to northwestern San Luis Obispo Co. In San Luis Obispo Co. several sites, including the type location, are located along or near the crest of the range from the vicinity of Pine Mountain to hills in the upper San Simeon Creek drainage. About 20 km to the southeast it has also been collected on the upper slopes of Cypress Mountain, and 12 km further to the southeast on the Santa Rita Ranch Preserve. In each of these areas *G. tenuiflora* subsp. *docmilleri* occurs on rocky soils derived from serpentine parent material. At one site it grows on dacite with serpentine nearby. It was growing on greywacke sandstone at the sites where it was found in southwestern Monterey County. Chaparral or associated arid woodlands are the predominant vegetation. The northernmost Monterey County locale, along the trail to Ventana Double Cone, is about 50 km northwest of the sites in southern Monterey County, where it was collected by O'Dell. Soils are described on the collection label as gravelly, but the parent material and the vegetation are not

indicated. It seems likely that additional populations occur in intermediate areas near the crest of the range, but the topography is rugged and many areas are in large part inaccessible and have not been well collected. Much of the Monterey County between O'Dell's collection sites and the Ventana Double Cone area burned over in the Dolan Fire (Aug–Oct 2020); surveys in the burned areas may reveal additional populations of subsp. *docmilleri*.

Morphological variation. In stature *Gilia tenuiflora* subsp. *docmilleri* varies from diminutive individuals a few cm tall to relatively stout plants more than 30 cm tall. From descriptions on collection labels it is evident that there is some variation in corolla color among populations of subsp. *docmilleri*. Descriptions range from “flowers purple” (*Hardham 5291, 5706; Keil 16056*) or “flowers pink-purple” (*Keil 18660*), with no indication of color variations among different regions of the corolla, to those that provide additional information: “flowers purplish with yellow spots in throat” (*Hardham 6824*), “lobes pink, throat white, yellowish at base, tube dark” (*Hardham 7085*), “flowers dark purple with 5 pairs of spots in throat—yellow below, purple above” (*Hardham 10-130*), and “corolla lobes bright purple, throat white above, becoming pale yellowish below, tube dark purple” (*Keil 27512*). My 2019 observations of flower color (*Keil 35576*) are the most detailed: “corolla lobes abaxially and adaxially bright pink-purple, white at base; tube-throat externally dark reddish purple, internally dark purple with 5 subterminal pairs of yellow spots alternating with bases of filaments.” Unfortunately I have been unable to revisit earlier collection sites to determine the extent to which the descriptions represent actual differences in corolla color or variation in detail and interpretation by the note takers. The dark purple corolla tube is evident in most of the specimens examined, but the color of the throat and lobes has variably faded or been otherwise altered in the dry specimens.

Corolla length varies somewhat from individual to individual within a population, and even from flower to flower on an individual. The shortest corolla measured (5 mm) was on a diminutive individual from Cypress Mountain (*Hardham 5706*), but another flower on the same individual was 8 mm long, and another individual on the same sheet had a corolla 13 mm long. The longest corolla measured from Cypress Mountain was 15 mm long. Corollas from the Pine Mountain area range from 12 to 21 mm. Corolla lengths from the Monterey County collections range from 12 to 17 mm. All have a long-exserted corolla tube and a short, narrowly tapered throat, but the length of the tubular portion relative to the calyx length varies from 2:1 to 5:1. Grant and Grant (1956) commented on variation in corolla size in the cobwebby giliias:

"The phenotypic plasticity of the Cobwebby Giliias is very great with the result that dissimilar forms often arise in a colony without any detectable basis. For example, small-flowered forms frequently occur in populations of normally large-flowered individuals as a response apparently to dryness and other unfavorable conditions in the microhabitat. Progeny of the small-flowered individuals and their large-flowered neighbors grown in the experimental garden are uniformly large-flowered. The aberration is thus purely phenotypic."

Relationships. *Gilia tenuiflora* subsp. *docmilleri* is a member of *Gilia* sect. *Arachnion* A.D. Grant & V.E. Grant, the cobwebby Giliias (Grant & Grant 1956). Basal leaves and proximal portions of its stem commonly bear a short, often ephemeral indumentum of fine, tangled, “cobwebby” trichomes. Sect. *Arachnion* is a taxonomically challenging group of ephemerals native to the southwestern USA and northwestern Mexico (plus a species disjunct in South America). Grant and Grant (1956) described their approach to species recognition:

"The taxonomic decisions embodied in the present treatment were carried out within the framework of the biological species concept. A population system exhibiting distinctive morphological characters associated with a natural distribution area was as a rule treated as a subspecies. Subspecies replacing one another in adjacent areas were grouped into a polytypic species. A species was considered to be bounded externally by a gap in the variation pattern, such a gap being taken to reflect the presence of reproductive isolating mechanisms."

Gilia tenuiflora is one such polytypic species, recognized by Grant and Grant (1956) as comprising four subspecies of western California. Floristic treatments (Munz & Keck 1959; Day 1993; Porter 2012) have closely followed the Grant and Grant taxonomy. Grant and Grant did not list a set of diagnostic features of *G. tenuiflora*, but these may be assembled from their key to species with constraints imposed by the species description: stems cobwebby-pubescent at base; leaf dissection regular, the lobes linear; cauline leaves deeply lobed, without clasping bases, the lobes longer than the width of the rachis, the terminal lobe not conspicuously broader than the lateral lobes; calyx cobwebby-pubescent or glandular, but not usually densely so, sinus membrane not carinate; corolla tube and throat purple; flowers large, 11.5–20.0 mm. long, with purple color in lower throat; stigma lobes maturing beyond stamen level or not. However, descriptions of the species and subspecies reveal variation outside the limits of these features: stems glabrous or cobwebby-pubescent or glandular at base; basal leaves strap-shaped and serrate or with narrow rachis and 4–6 pairs of short lobes, or bipinnately lobed with very narrow rachis and narrow, delicately dissected lobes, or with 4–8 pairs of broadly linear lobes; calyx lightly cobwebby-pubescent or lightly to densely glandular pubescent. It is evident from these variations why some specimens of *G. tenuiflora* cannot be determined using the published keys!

Alva Day determined several specimens that I am recognizing as subsp. *docmilleri* as *Gilia tenuiflora* subsp. *tenuiflora*. Subsp. *docmilleri* differs from most members of the complex in having an elongated corolla tube and a short, tapered corolla throat. Most larger-flowered members of the complex have well-exserted stamens and stigmas whereas the stamens of subsp. *docmilleri* are only shortly exserted, and the style varies from included in the corolla tube with the stigmas barely reaching the mouth of the throat to somewhat exceeding the level of the stamens. It most closely resembles *G. tenuiflora* subsp. *arenaria* (Benth.) A.D. Grant & V.E. Grant of the Monterey Bay coast in having 1-pinnately lobed basal leaves with short, entire or toothed lobes, a narrowly tapered corolla throat, and a short style with stigmas not exceeding the anthers, but differs in having less densely glandular herbage, erect or ascending vs. decumbent branches, a generally longer corolla tube-throat ((2)3–5 × calyx vs. 2–3 × calyx), and an upland rocky habitat vs. coastal dunes. Subsp. *docmilleri* differs in several respects from subsp. *tenuiflora*, to which Day assigned the Santa Lucia Range plants by her annotations; plants of subsp. *tenuiflora* have corolla tubes only moderately exserted from the calyx, expanded corolla throats, and well exserted stigmas. Subspecies *amplifaucalis* A.D. Grant & V.E. Grant, which occurs to the south and east of subsp. *docmilleri*, has corolla tubes not or only shortly exserted from the calyx, a much expanded corolla throat, and wide corolla lobes. *Gilia tenuiflora* subsp. *hoffmannii* (Eastw.) A.D. Grant & V.E. Grant, an endemic of Santa Rosa Island (Santa Barbara County) resembles subsp. *docmilleri* in having an elongated corolla tube, but it has an expanded corolla throat and short, linear lobes on its basal leaves. Features of the five subspecies of *G. tenuiflora* are compared in Table 1, and the subspecies may be differentiated by the following key.

Key to subspecies of *Gilia tenuiflora*

1. Stigmas exerted beyond longest stamens.
 2. Corolla lobes 4–6 mm wide; throat 3.7–5 mm wide at top subsp. **amplifaucalis**
 2. Corolla lobes 2.1–4.2 mm wide; throat 2.2–3.8 mm wide at top..... subsp. **tenuiflora**
1. Stigmas included to only exceeding stamens.
 3. Corolla throat 3.7–5 mm wide at mouth subsp. **hoffmannii**
 3. Corolla throat 1.5–3.4 mm wide at mouth.
 4. Corolla tube moderately exerted from calyx; herbage densely glandular-pubescent distal to basal leaves with glandular hairs several cells long subsp. **arenaria**
 4. Corolla tube long exerted from calyx; herbage distally glandular-puberulent subsp. **docmilleri**

Rarity Status. I recommend that *G. tenuiflora* subsp. *docmilleri* be considered for inclusion in the California Native Plant Society's Inventory of Rare and Endangered Plants of California, either in California Rare Plant Rank 1B.2 or 1B.3. *Gilia tenuiflora* subsp. *docmilleri* has a disjunct distribution apparently limited to a few locations in the upper reaches of the Santa Lucia Range. Population sizes have not been determined. The remote sites where it occurs do not appear to be under any kind of current threat. The San Luis Obispo County sites are in private ownership with limited or no access; although they are located on cattle ranches, the upland sites where *G. tenuiflora* subsp. *docmilleri* grows are lightly if at all grazed. The northern Monterey County locality is in the Ventana Wilderness in the Los Padres National Forest. The southern Monterey County sites are within the boundaries of Fort Hunter Liggett Military Reservation.

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Table 1. Comparison of *Gilia tenuiflora* subspecies recognized by Grant and Grant (1956) with *G. tenuiflora* subsp. *docmilleri*. Features of subspp. *amplifaucalis*, *arenaria*, *hoffmannii*, and *tenuiflora* in large part extracted from descriptions published by Grant and Grant (1956).

	subsp. <i>amplifaucalis</i>	subsp. <i>arenaria</i>	subsp. <i>hoffmannii</i>	subsp. <i>tenuiflora</i>	subsp. <i>docmilleri</i>
Proximal stem surface	glabrous	cobwebby or densely glandular pubescent	glabrous near base, and cobwebby-pubescent in the leaf axils	glabrous in proximal half	proximalmost internodes cobwebby
Distal stem surface	lightly glandular pubescent in the inflorescence	densely glandular pubescent, the glandular hairs several cells long	rather densely glandular pubescent above the basal leaves, the hairs several cells long	glandular pubescent, the hairs often several cells long	more-distal internodes puberulent with short glandular hairs
Rachis of basal leaves	0.5–1.5 mm wide	0.5–2.5 mm wide	0.4–0.8 mm wide	either 1–2 mm wide or 0.5–1.0 mm wide	0.7–2 mm wide
Blade of basal leaves	with 4–8 pairs of short, linear lobes, 1–3 mm long, sometimes with a few secondary lobes or teeth	strap-shaped and serrate or short-lobed	with 4–8 pairs of broadly linear lobes 1.2–4.0 mm long, blunt with a point	either strap-shaped, with 4–6 pairs of short lobes, or bipinnately divided into narrow, delicately dissected lobes	strap-shaped, with 4–7 pairs of short lobes, these entire or with a few sharp teeth
Cauline leaves	with fewer and shorter lobes than the basal leaves, these lobes arising closer to the base	similar to basal or as wide as or wider	with 4–8 pairs of broadly linear lobes, distal bracts entire	narrow like the basal and lobes very short	with fewer and shorter lobes than the basal leaves, these lobes arising closer to the base

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	subsp. <i>amplifaucalis</i>	subsp. <i>arenaria</i>	subsp. <i>hoffmannii</i>	subsp. <i>tenuiflora</i>	subsp. <i>docmilleri</i>
Pedicels	unequal, the shortest about 1–2 mm long and the longer 3–12 mm long	unequal, the shorter ones 0.5–2.0 mm long and the longer 4.5–11.5 mm long	slightly unequal, 0.5–3.2 mm long	very unequal, the shortest 2–4 mm long, the longest 10–16 mm long	unequal, 1–25 mm
Calyx length in flower	4.0–5.8 mm	3.4–4.2 mm	4.6–5.7 mm	3.3–4.3 mm	(2) 3–4.5 mm
Calyx surface	lightly cobwebby	lightly to densely glandular	moderately to densely glandular or in first formed flower cobwebby	lightly cobwebby	glandular-puberulent or calyces of proximal flowers thinly cobwebby
Herbaceous portions of calyx	narrower than or as wide as membranous portions	as wide as or wider than membranous portions	wider than membranous portions	narrower than membranous portions	narrower than or as wide as membranous portions
Corolla length	13.4–17.5 mm	11.7–13.9 mm	18–20 mm	11.5–15.8 mm	(5) 9–21 mm
Corolla tube-throat length	6.7–11.0 mm	8.3–9.6 mm	13.0–14.5 mm	8–12 mm	7.5–15 mm
Corolla tube-throat description	slender to moderately stout tube, 0.5–1.1 mm wide, flaring into a full throat	slender tube, 0.5–0.8 mm wide, flaring into narrow throat	long and moderately stout tube, 0.6–1.0 mm wide, flaring into a short throat and moderately broad orifice	slender tube 0.5–0.8 mm wide, flaring into a moderately narrow throat and orifice	slender to moderately stout tube, 0.5–1.1 mm wide, flaring into a short, narrow throat
Corolla throat width	3.8–5.0 mm	2.2–3.4 mm	3.7–5.0 mm	3.0–3.8 mm	1.5–3 mm
Corolla lobes	broad (4.0–6.3 mm long, 4.0–5.5 mm wide)	narrow (3.0–4.6 mm long, 2.1–3.7 mm wide).	broadly oval (4.5–6.5 mm long, 4.8–5.8 mm wide)	narrow (4–5 mm. long, 2.5–4.2 mm wide)	oblong to oval (2–5.5 mm long, 2.0–3.0 mm wide)

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	subsp. <i>amplifaucalis</i>	subsp. <i>arenaria</i>	subsp. <i>hoffmannii</i>	subsp. <i>tenuiflora</i>	subsp. <i>docmilleri</i>
Stamens	longest stamens well exerted with filaments 3.8–4.0 mm long	very short, maturing just at orifice, or the longest slightly exerted, with filaments 0.9–1.6 mm long	well exerted, the longest filaments 2.6–3.6 mm long	well exerted with filaments 1.5–2.5 mm long	shortly exerted, the longest 1.5–2 mm long
Pollen color	blue	blue	white	blue	white or blue
Style	well exerted, a little shorter than to longer than corolla	shorter than corolla	shorter than corolla	well exerted but not exceeding the corolla in length	shorter than corolla to moderately exerted
Stigmas	stigma lobes 2.3–2.5 mm long, reflexing beyond level of longest stamens	stigma lobes reflexing just within or slightly exerted from the orifice and beneath or at level of stamens	stigma lobes 2.3–2.7 mm long and reflexing just above orifice and beneath longest stamens	stigma lobes 1.3–2.0 mm long, reflexing beyond the level of the longest stamens	stigmas included to exerted distal to anthers
Capsule	ovoid, 4.5–5.3 mm long.	oblong-ovoid, 5.0–6.2 mm long	oblong-ovoid, longer than 6.5 mm	ovoid, 3.5–5.0 mm long	3–6 mm, ovoid to oblong-ovoid
Geographic distribution	Coast Ranges from southern Monterey Co. to west-central San Luis Obispo Co.	sand dunes at Monterey Bay	Santa Rosa Island	Coast Ranges from Santa Cruz Mts. to Santa Barbara-San Luis Obispo county line	Santa Lucia Range from Cypress Mountain in San Luis Obispo Co. to Ventana Double Cone in Monterey Co.



Figure 1. *Gilia tenuiflora* subsp. *docmilleri* — holotype (Keil et al. 27512, OBI 165947).



Figure 2. *Gilia tenuiflora* var. *docmilleri*. Santa Lucia Mts., San Simeon Creek drainage, Blue Rock, Egeberg Ranch (David Keil).



Figure 3. *Gilia tenuiflora* var. *docmilleri*. Santa Lucia Mts., San Simeon Creek drainage, 1/3 mile south of Egeberg/Warren fence line, top of Blue Rock Road (David Keil).



Figure 4. Serpentine barren habitat of *Gilia tenuiflora* var. *docmilleri*, Santa Lucia Mts., San Simeon Creek drainage, Blue Rock, Egeberg Ranch (David Keil).