Element Code: ?

Added to California Rare Plant Rank 1B.2 of the CNPS Inventory on May 10, 2017

Rare Plant Status Review: *Erythranthe filicifolia*
Proposed Addition to California Rare Plant Rank 1B.2, G2 / S2

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Background

Erythranthe filicifolia (Sexton, K.G. Ferris & Schoenig) G.L. Nesom is an annual herb in the Phrymaceae known only from the northwestern Sierra Nevada. It was described by Sexton et al. in 2013 and is therefore not included in *The Jepson Manual* (Thompson 1993) and *The Jepson Manual, Second Edition* (Thompson 2012); the Phrymaceae treatment in the *Flora of North America* is not yet published. *Erythranthe filicifolia* was originally described as *Mimulus filicifolius* and swiftly transferred to the genus *Erythranthe* by Nesom (2013) with preparation of the treatment of *Erythranthe* in the *Flora of North America*. *Erythranthe filicifolia* was described in a study by Sexton et al. (2013) comparing the north Sierra Nevada populations of what was previously identified as *Erythranthe laciniatus* (a California Rare Plant Rank 4.3 species: http://www.rareplants.cnps.org/detail/1093.html) with the central Sierra Nevada populations of *E. laciniatus*. They collected and analyzed morphological data from all known herbarium specimens of *E. laciniata* s.l. that contained enough adequate material to study, and concluded that through strongly differing morphological characters, reproductive barriers, and divergent evolution, the northern populations made up a species that is distinct from *E. laciniatus*. *Erythranthe filicifolia* is distinguished from *E. laciniatus* in having strongly bi-pinnately and finely divided leaves (vs. laciniate to occasionally bi-pinnate leaves with oblanceolate lobes), clasping entire, ovate floral node bracts (vs. bract bases long tapered to petioled and bracts narrowly lanceolate to pinnately lobed), and pedicels that are less than two times the calyx length (vs. often having pedicels two times the calyx length or longer). The epithet *filicifolia* (meaning fern-leaved) refers to its strong and finely compound leaf structure (Sexton et al. 2013). *Erythranthe laciniata*, found primarily in the central to southern Sierra Nevada, is also geographically separated from *E. filicifolia*, which is found primarily in the northern Sierra Nevada approximately 140 air km away.

Erythranthe filicifolia mostly occurs in slow-draining, ephemeral seeps among exfoliating granite slabs within a mixture of chaparral and lower montane coniferous forest, at an approximate elevation of 415-1,710 meters. It primarily grows alongside *Cheilanthes gracillima*, *Heterocodon rariflorum, Penstemon newberryi,* and *Selaginella wallacei*, and is known to bloom from April to June (Sexton et al. 2013).

Erythranthe filicifolia is known from an estimated ten occurrences comprised of 17 collections in the Feather River watershed. Of the ten occurrences, three are considered historical (occurrences not seen in over 20 years are considered historical by the CNDDB). Eight occurrences are located in the Plumas National Forest, while the remaining two occurrences are located on private land. Sexton et al. (2013) did not conduct extensive searches in attempts to locate new populations of E. filicifolia within suitable habitat, and additional suitable habitats within the region should be searched in case other populations exist.

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While there are no documented threats to *Erythranthe filicifolia,* it is primarily found in granitic seeps and is therefore possibly threatened by prolonged drought. Since there are few known populations of *E. filicifolia*, with some being small and occurring close to one another, Sexton et al. (2013) recommend that conservation managers include this species in monitoring programs to limit future risks to existing populations, such as species invasions, land clearing, and livestock introductions.

Based on the available information, CNPS and CNDDB recommend adding *Erythranthe filicifolia* to California Rare Plant Rank 1B.2 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of *E. filicifolia* changes in the future, we will re-evaluate its status at that time.

Recommended Actions
CNPS: Add *Erythranthe filicifolia* to CRPR 1B.2
CNDDB: Add *Erythranthe filicifolia* to G2 / S2

Draft CNPS Inventory Record
Erythranthe filicifolia (Sexton, K.G. Ferris & Schoenig) G.L. Nesom
fern-leaved monkeyflower
Phrymaceae
CRPR 1B.2
Plumas, Butte
American House (574A) 3912161, Cascade (574B) 9312162, Brush Creek (575A) 3912163, Storrie (591A) 3912183, Pulga (591C) 3912174, Soapstone Hill (591D) 3912173
Chaparral, lower montane coniferous forest / usually slow-draining, ephemeral seeps among exfoliating granitic slabs; elevation 415-1,710 meters.
Annual herb. Blooms April to June.
Similar to, and originally identified as, *E. laciniatus*, which is primarily found in the central and southern Sierra Nevada and not known to occur in BUT or PLU cos. See *Madroño* 60(3):236-242 (2013) for original description, and *Phytoneuron* 2013-80:1-3 for revised nomenclature.

Literature Cited
Nesom, G. L. 2013. *Mimulus filicifolius* joins *Erythranthe* (Phrymaceae). Phytoneuron 2013-80: 1-3. (Revised nomenclature.)

Sexton J. P., K. G. Ferris, and S. E. Schoenig. 2013. The fern-leaved monkeyflower (Phrymaceae), a new species from the northern Sierra Nevada of California. Madroño 60(3): 236-242. (Original description.)

Thompson D.M. 1993. *Mimulus.* Pp. 1037 *in* The Jepson Manual: Higher Plants of California. University of California Press, Berkeley.

___. 2012. *Mimulus.* Pp. 988 *in* Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.), The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley, CA.