

Rare Plant Status Review: *Navarretia gowenii*
Nicholas Jensen (CNPS) and Roxanne Bittman (CNDDDB)
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Background

Navarretia gowenii is an annual, herbaceous species in the Polemoniaceae. *N. gowenii* was recently described by Leigh A. Johnson in *Novon* 17(4): 454-461(2007). Although not included in the current *Jepson Manual* (1993), the species will be included in the upcoming edition. *N. gowenii* is distinguished from similar *Navarretia* species based on its erect growth habit and floral characteristics. *N. gowenii* blooms from May through June.

N. gowenii is currently known from four occurrences. Three of these occurrences are located within a relatively small geographic area in Contra Costa County within Lime Ridge Open Space. The fourth occurrence, disjunct from the Contra Costa County occurrences by approximately 110 kilometers, is located in Quinto Canyon in Stanislaus County. The numbers of individual plants at the Contra Costa County populations have fluctuated on an annual basis in response to "moisture availability with estimates of from several hundred individuals per population in wet years to fewer than 50 individuals in dry years" (Johnson 2007). No information about the demographics of the Stanislaus County occurrence of *N. gowenii* is currently available.

N. gowenii grows on a variety of soil types (we need more information on the soils) from 180 to 305 meters in elevation. Plants at the Contra Costa County occurrences grow at the edge of *Adenostoma fasciculatum*-*Salvia mellifera* chaparral on calcium carbonate rich soil with some clay soil present (H. Bartosh, pers. comm. 2008). The Stanislaus County population occurs on serpentine soils. Attempts should be made to locate additional populations of *N. gowenii* in areas with suitable habitat within the known range of the species.

The occurrences of *N. gowenii* in Contra Costa County occur within Lime Ridge Open Space, owned and managed by the city of Walnut Creek. Although Johnson (2007) states that the Stanislaus County occurrence is located on private land, Dean Taylor (pers. comm. 2008) indicates that this occurrence may actually be located on land administered by the Bureau of Land Management. Lime Ridge Open Space is located in close proximity to the cities of Walnut Creek and Concord. Consequently, the area receives a significant amount of recreational use. As a result, *N. gowenii* is probably threatened by recreational activities. One occurrence at Lime Ridge Open Space is located close to a radio tower and is potentially threatened by maintenance and vegetation management activities. An additional occurrence of *N. gowenii* at Lime Ridge is located close to a PG&E tower, and associated maintenance activity is a potential future threat (H. Bartosh, pers. comm. 2008).

Based on the information currently available, CNPS and CNDDDB recommend that *Navarretia gowenii* be added to CNPS List 1B.

Recommended Actions

CNPS: Add to CNPS List 1B.1

CNDDDB: Add to CNDDDB as G1 / S1.1

Sent to CW, H. Bartosh, D. Gowen, L. Johnson on 4/2/08

Please review the draft CNPS Inventory record below, respond Yes or No on the proposal to add this species to the Inventory and CNDDDB, and provide any edits/comments. If responding No, please provide supporting information.

Draft CNPS Inventory Record

Navarretia gowenii L.A. Johnson

Lime Ridge navarretia

Polemoniaceae

List 1B.1

Contra Costa, Stanislaus

465A [3172281/Walnut Creek], 404B [3712122/Crevison Peak]

Chaparral; elevation 180-305 meters.

Annual herb, blooms May-June

Known from only four occurrences. Possibly threatened by recreational activities. Potentially threatened by radio tower maintenance and associated vegetation management. Not in *The Jepson Manual* (1993). See *Novon* 17(4) 454-461(2007) for original description.