

= *Pentachaeta bellidiflora* =

Pentachaeta bellidiflora (white @-@ rayed pentachaeta or Whiteray pygmydaisy) is a Californian wildflower in the genus *Pentachaeta* of the (*Asteraceae*) family . It is included in both the state and federal lists of endangered species .

It is endemic to the San Francisco Bay Area of California , United States , and occurs only at altitudes less than 620 metres (2 @,@ 034 ft) . *P. bellidiflora* is found chiefly on rocky , grassy areas . The conservation status of this species was , as of 1999 , characterized by a declining population , with a severely diminished and fragmented range . The specific bellidiflora refers to the similarity of the flowers with those of common daisies (*Bellis*) .

= = Description = =

Pentachaeta bellidiflora is a small annual wildflower growing from a slender taproot , which , although it appears smooth , is actually covered by fine hairs . The sparsely hairy stems may number between 6 ? 17 cm (2 ? 7 in) in length and are typically simple , or branching in the lower half of plant . They are erect , generally flexible , and of green to reddish color . White @-@ rayed *Pentachaeta* leaves are normally narrowly linear , ciliate (fringed with hair) and green , measuring less than 4 @.@ 5 cm (1 @.@ 8 in) long and one millimeter wide . Upper and lower leaf surfaces are smooth .

The terminal inflorescences number four or five solitary , roughly circular heads per plant . Peduncles are wispy , with bell @-@ shaped involucre measuring 3 to 7 millimeters , and they range from glabrous to short @-@ haired . Like all of its genus , *P. bellidiflora* has green phyllaries in two to three generally equal series , lanceolate to obovate , with margins widely scarious (dry and membranous) , and a naked receptacle . The yellow corollas are five @-@ lobed , and each of the 16 to 38 disk shaped florets (per head) has linear , acute style tips . They may be slightly red @-@ tinged underneath . Fruits are 1 @.@ 5 to 3 @.@ 0 millimeters in diameter and are generally compressed in an oblong to fusiform shape ; they are typically covered with small hairs . The plant presents fragile pappuses with five or fewer slender bristles , slightly expanded at the base . Flowering season ranges from late March until late June . From a chromosomal standpoint , the species is diploid , (contains one set of chromosomes from each parent) , and has $2n = 18$.

= = Distribution and habitat = =

White @-@ rayed pentachaeta is found in serpentine grassland as well as valley and foothill grassland . It is currently known only to survive in serpentine bunchgrass communities and native prairies in two small areas of San Mateo County , including populations in Edgewood County Park and on San Francisco Water District lands at serpentine outcrops on the eastern slopes of Crystal Springs Reservoir , in the vicinity of State Route 92 . It was formerly known to occur from Marin to Santa Cruz counties . One study declares only one population remains . Prior range is defined by the following USGS maps : Soquel (387B) * 3612188 , Santa Cruz (387E) 3612281 , Castle Rock Ridge (408A) * 3712221 , Big Basin (408B) * 3712222 , Davenport (408C) * 3712212 , Felton (408D) * 3712211 , Woodside (429A) 3712243 , San Francisco South (448B) * 3712264 , Montara Mountain (448C) * 3712254 , San Mateo (448D) * 3712253 , San Quentin (466B) * 3712284 , San Rafael (467A) * 3712285 , Point Bonita (467D) * .

= = Conservation = =

As of the declaration of Federal endangerment status , the finding of the United States Environmental Protection Agency was that the total species population was sufficiently small and fragmented that it was subject to stochastic extinction . Recent habitat destruction by urban development , off road vehicle use and actions of highway maintenance crews have been responsible for the severe reduction in range and viability of this species .

Population sizes vary from year to year depending on local rainfall and competition from invasive plants . In 1997 , *P. bellidiflora* was the subject of a recovery workshop conducted by the California Department of Fish and Game , where the need for permanently protecting and managing the existing populations , and reintroduction strategies for populations into suitable protected habitat were analyzed . Management and recovery actions for the species have been addressed in the United States Federal Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area , finalized in 1998 .