

## A.34 AHART’S PARONYCHIA (*PARONYCHIA AHARTII*)

### A.34.1 Legal and Other Status

Ahart’s paronychia (*Paronychia ahartii*), also known as Ahart’s nailwort, currently has no status under the federal or the California Endangered Species Act (DFG 2011).

The California Native Plant Society (CNPS) includes Ahart’s paronychia on California Rare Plant Rank 1B.1 (formerly List 1B.1): Plants Rare, Threatened, or Endangered in California and Elsewhere (CNPS 2010). CNPS identifies it with a state ranking of S2.1, meaning there are six to 20 occurrences or 1,000 to 3,000 individuals or it is known to occupy between 2,000 and 10,000 acres (CNPS 2008).

### A.34.2 Species Distribution and Status

#### A.34.2.1 Range and Status

Ahart’s paronychia is endemic to California, where it is known from Tehama, Shasta, and Butte counties in the north-central portion of the state. The Honcut Creek population in Butte represents the species’ southernmost population. Ahart’s paronychia ranges in elevation from 98 to 1,653 feet (30 to 510 meters) (CNPS 2008).



According to the California Native Diversity Database (CNDDDB), Ahart’s paronychia is known from a total of 57 occurrences statewide, of which all are presumed extant (CNDDDB 2008). Of the 53 occurrences located outside of Butte County, the majority of occurrences (44) are located in Tehama County. While the species is known from many records, its range is limited.

The species was first collected in 1938. The original description was published in 1985 in the journal *Madroño* by Barbara Ertter (CNPS 2008). Ahart’s paronychia most closely

resembles a species of the northern African and Arabian deserts called *Paronychia arabica* (Flora of North America 2008).

### **A.34.2.2 Distribution and Status in the Plan Area**

A total of five occurrences of Ahart's paronychia are known in Butte County, four of which are reported in the California Natural Diversity Database (CNDDDB) and are located in the Loma Rica, Honcut, Oroville, Shippee, and Richardson Spring quadrangles (CNDDDB 2008) (Figure A.34-1, *Ahart's Paronychia Modeled Habitat and Recorded Occurrences*). All are in the Plan Area and located in the eastern part of the valley floor, evenly dispersed on a north to south axis of the county (see Figure A.34-1). The occurrences range in elevation from 150 to 240 feet (46 to 73 meters) (CNPS 2008).

Populations of Ahart's paronychia in Butte County vary widely in size. The largest, located south of the Thermalito Forebay, is reported to have numbered 1,000 plants at the date of last census in 2003 (occurrence no. 59). Other populations report smaller numbers (fewer than 1,000 plants at one location north of Chico and south of Sycamore Creek, and 75 plants at a location near Wilbur Road west of Thermalito) at the time of last census in 2004 (occurrence no. 8 and no. 60, respectively). The southernmost population, located near Honcut Creek (occurrence no. 1), was reported to number 50 plants in 1974, declining to one plant in 1985, then to no plants seen in 1987 (CNDDDB 2008).

### **A.34.3 Habitat Requirements and Special Considerations**

Ahart's paronychia inhabits rocky soils, vernal pool edges, and volcanic uplands within valley grassland (Hickman 1993, Calflora 2008). Habitat is found on the nearly barren clay of vernal swales and higher ground around vernal pools (CNDDDB 2008), and vernal moist and vernal pool areas in thin soils (Stuart Consulting 2002). In the Redding area, habitat is described as rocky, clay-rich terraced soils, with the species growing on the stoniest microsites within these areas, where the density of annual plants is low (BLM 2008). Suitable soils are also described as bare red soils with small rocks and gravel, and on swales with red gravelly corning soils overlying gravelly clays, in areas of sparse vegetation on Tuscan cobbled loam (CNDDDB 2008).

The species is often associated with annual grasses and forbs. Common plant associates include common catchfly (*Silene gallica*), white-headed navarretia (*Navarretia leucocephala*), smooth cat-ear (*Hypochaeris glabra*), Narrow-leafed owl's clover (*Castilleja attenuata*), California plantain (*Plantago erecta*), and silver hairgrass (*Aira caryophyllea*) (CNDDDB 2008).

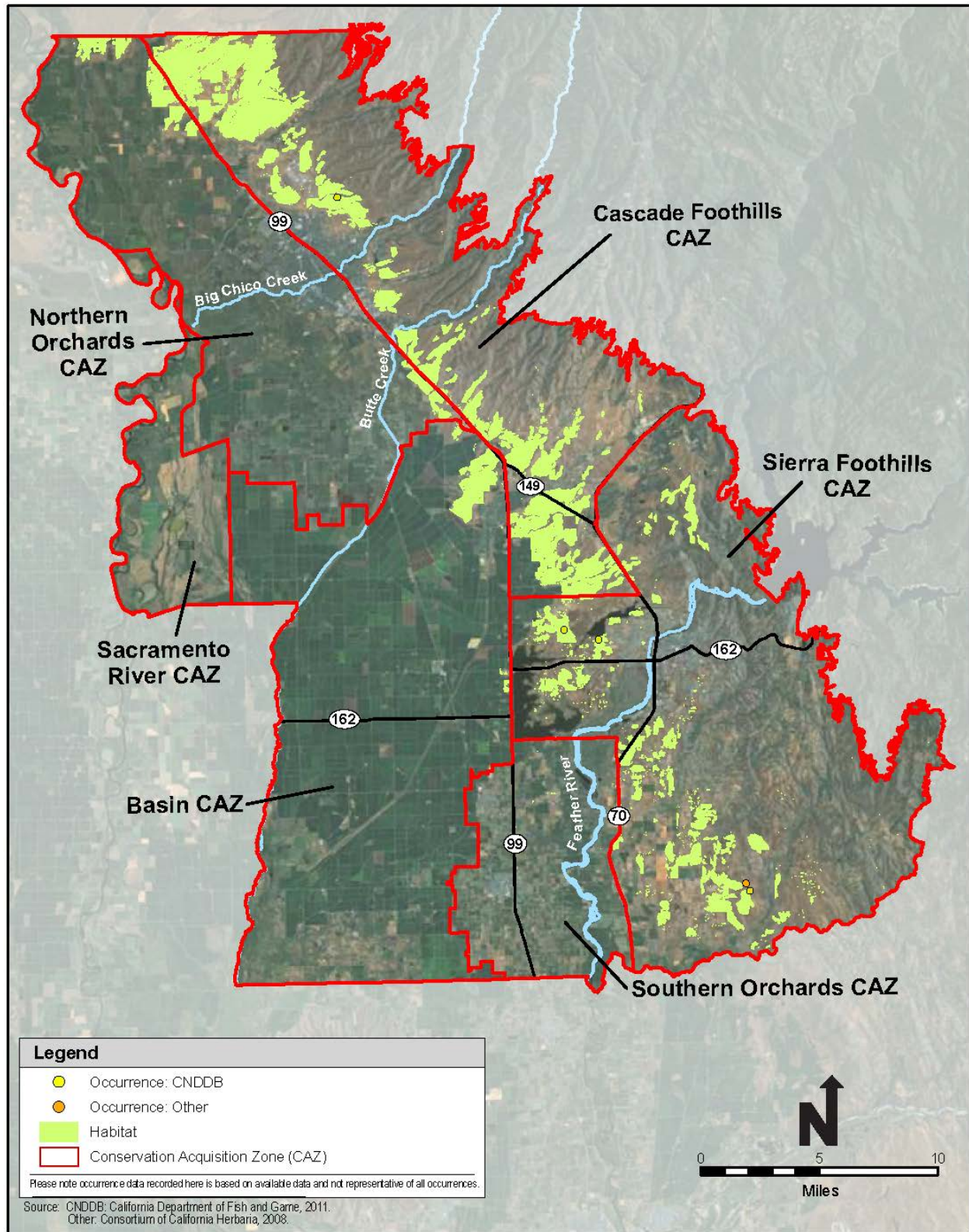


Figure A.34-1. Ahart’s Paronychia Modeled Habitat and Recorded Occurrences

### **A.34.4 Life History**

Ahart's paronychia is a small, inconspicuous annual herb belonging to the Caryophyllaceae (pink) family. It measures from 3/16 to 1/2 inch (5 to 12 millimeters) in height (BLM 2008). It flowers from March through June (CNPS 2008). Little is known about its reproductive biology, but it is assumed to be insect-pollinated. Fruiting and seed dispersal in the plant have not been studied.

### **A.34.5 Threats**

Threats to Ahart's paronychia include fragmentation and development of habitat for residential, commercial, and agricultural purposes (CNPS 2008). Grazing is also listed as a possible threat, as is off-road vehicle damage.

### **A.34.6 Relevant Conservation Efforts**

No specific conservation efforts for this species are known of at this time.

### **A.34.7 Species Habitat Suitability Model**

#### **A.34.7.1 Habitat**

Ahart's paronychia habitat includes areas in the following BRCP mapped land cover types:

- Vernal pools;
- Altered vernal pools; and
- Grassland with vernal swale complex.

Vernal pools that may support Ahart's paronychia habitat may also occur as inclusions in mapped grassland, blue oak savanna, ranchettes–open, and disturbed ground land cover types. These inclusions were not mapped because they did not meet the mapping criteria for vernal pool, altered vernal pool, and grassland with vernal swale complex land cover types.

#### **A.34.7.2 Assumptions**

Ahart's paronychia is restricted to swales and shallow areas within low elevation Northern Basalt Flow, Northern Claypan, Northern Hardpan, and Northern Volcanic Mudflow vernal pool types (Sawyer and Keeler-Wolf 1995, USFWS 2005). The species specializes on higher, less mesic edges of vernal pools but has also been documented in deeper parts of vernal pools (USFWS 2005). Microhabitats from which the plants have been reported are the edges of vernal pools, bottoms of intermittent drainages, and on pocket gopher (*Thomomys* species) and ground squirrel (*Spermophilus* species) mounds (USFWS 2005).

Given these habitat preferences, suitable habitat for the Ahart's paronychia is defined as the vernal pool, altered vernal pool, and grassland with vernal swale complex land cover types within the Plan Area.

### A.34.8 Recovery Plan Goals

A recovery plan and recovery goals have not been prepared for this species.

### A.34.9 References

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