



The search for *Perdita meconis*,
the Mojave Poppy Bee

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Photo: Colin McKenzie



Background

***Perdita meconis*, the Mojave poppy bee**

- After a formal petition for status assessment and a positive 90-day finding from the US Fish and Wildlife Service, it is currently under review for Listing under the Endangered Species Act.
- Species Status Assessment is expected in 2025.

Graphic made by Colleen Meidt

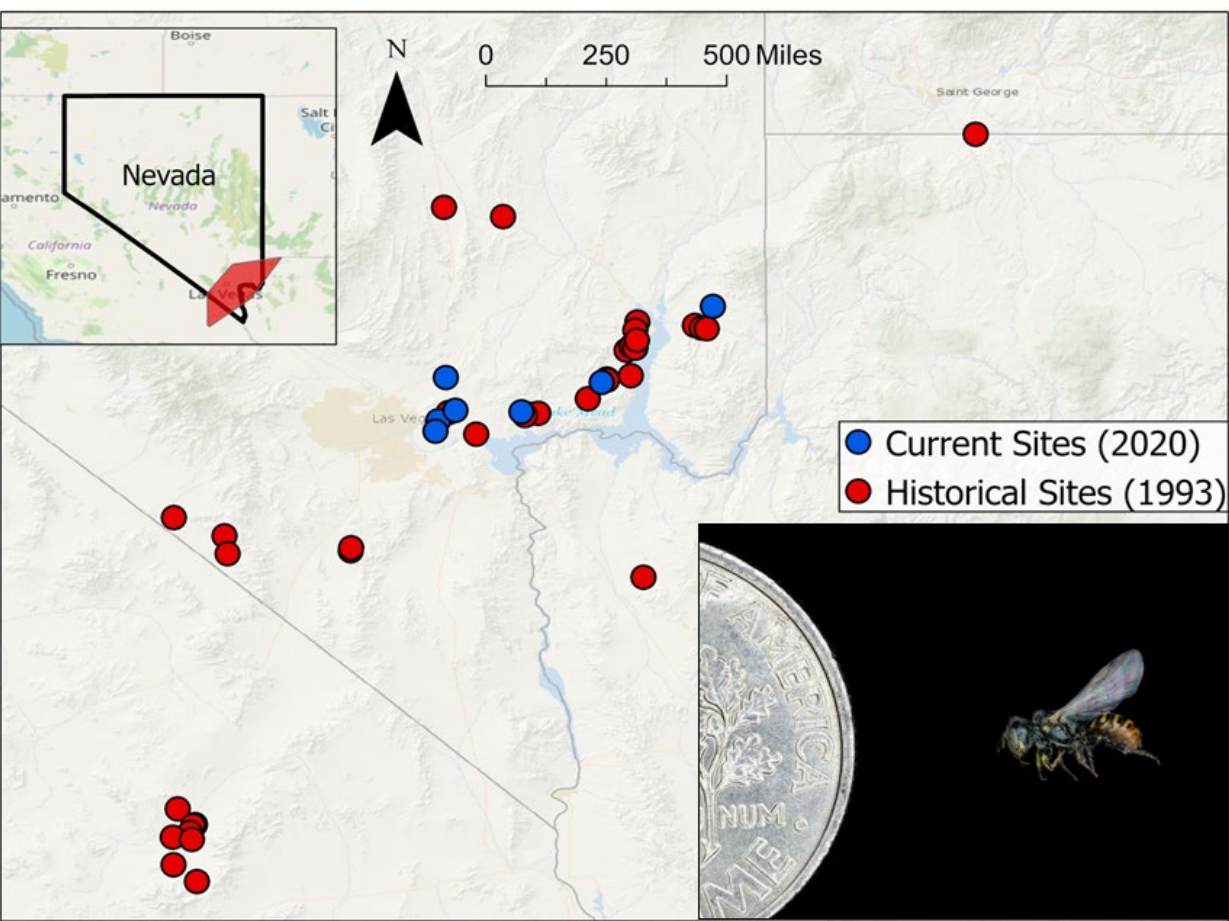


Figure 1: *Perdita meconis* current and historical known locations and photo of bee next to a dime. PC: Chelsey Ritner

Background

Perdita meconis, the Mojave poppy bee

- Historic distribution in California, Nevada, Arizona, and Utah
- Recent records restricted to Clark Co.
- Specialist bee

Host Plants in S. Nevada



Las Vegas bear poppy
A. californica



Great bearclaw poppy

A. merriami

?



Prickly poppy

Argemone

Survey methods

Located host plants (*A. californica* and *Argemone*) in bloom using a combination of historic plant records, historic pollinator records, local reports, and satellite imagery

Populations confirmed by survey teams

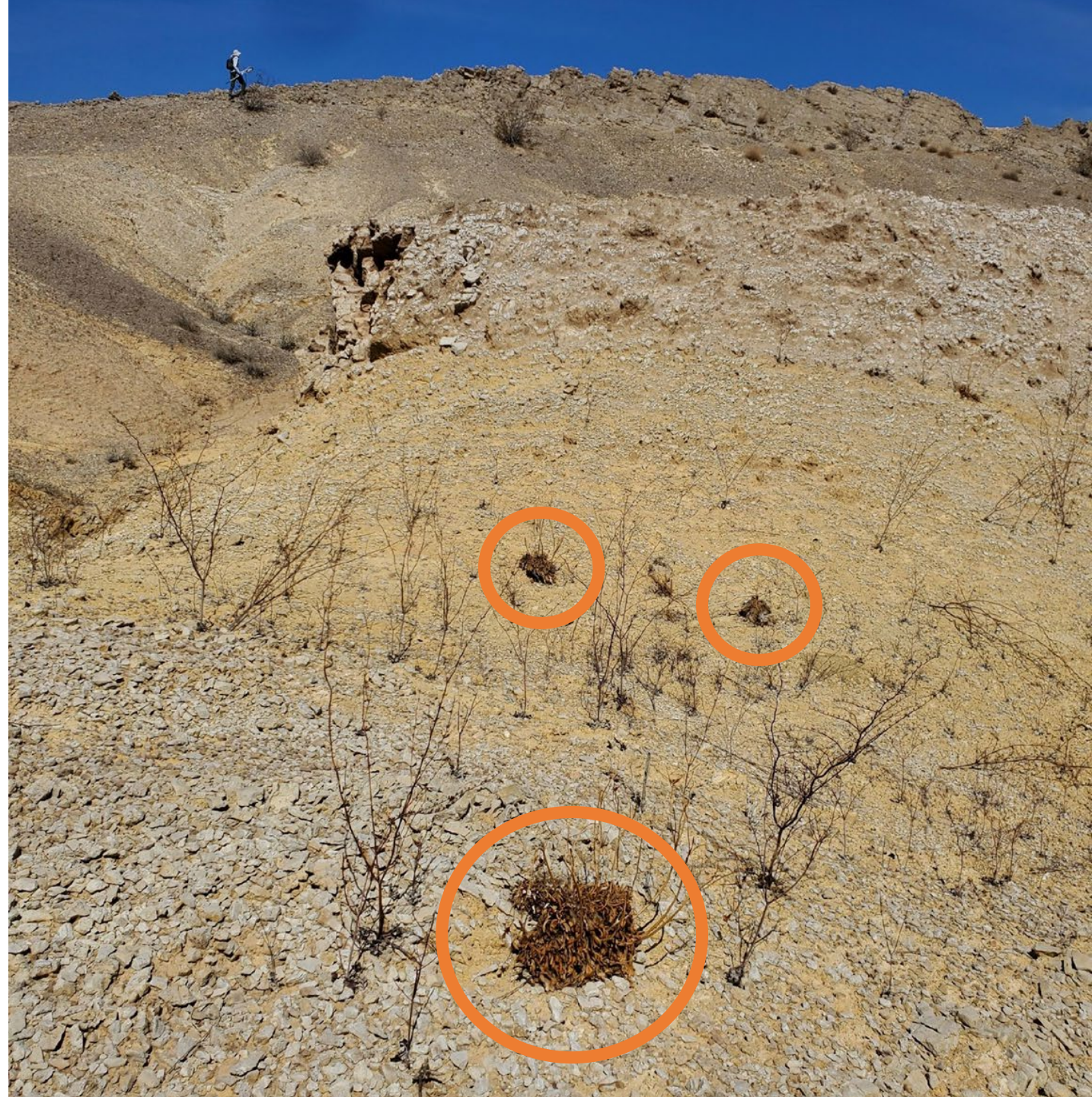


Poppy populations

Most Las Vegas bear
poppy populations visited
outside Gold Butte were
not in good shape

Many 'poppy graveyards'

Not many plants in bloom



Poppy populations

Four populations in Gold Butte looked good (>50 blooming Las Vegas bear poppies)



Visit overview

- 31 sites surveyed in Clark Co. over 23 days
- 10 sites had no blooming plants and were not visited again
- At the rest (21 sites) we conducted haphazard net collections of bees. Only visited once or twice.
- 4 sites had enough blooming plants (>25) to conduct formal surveys: timed observations and net collections. Visited 4-5 times.
- 3 sites with enough blooming Las Vegas bear poppies (>30 large plants) to conduct Reproductive Output measurements. Visited 4-5 times.



Timed observations and collections

Observations:

- 10 plants in bloom
- 5 minute observations per plant
- All bee visits recorded (*Perdita* ♀ ♂), honey bees, other pollinators)

Collections:

- Up to 50 plants visited
- Male *Perdita* (up to 20 per site) and other bees collected for identification
- Any bees captured by crab spiders also collected



Photo: Colin McKenzie

Reproductive Output

30 plants identified for study per site (3 sites)

Plant demographics monitored over 1 month (mid-April to mid-May)

Up to 50% of mature fruits collected per plant



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Percent of seeds that are fertilized, fertilized & aborted, and unfertilized recorded

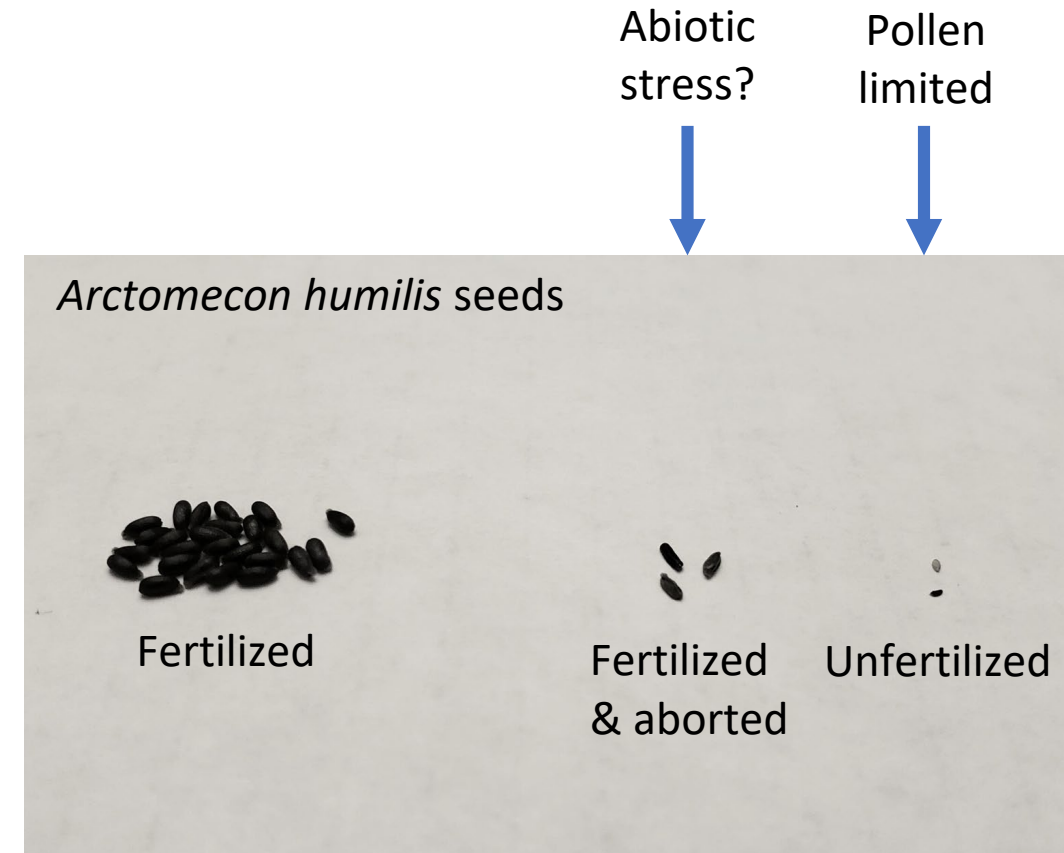


Photo: Alyson DeNettis

Results

ONE male *Perdita meconis* found!

- Collected in Gold Butte on Apr. 14
- Still double-checking females

Other bee visitors to the Las Vegas bear poppy (preliminary)

- *Perdita robustula*
- *Hylaeus*
- Honey bees
- *Anthophora*
- *Andrena*
- *Lasioglossum* (Dialictus)
- *Ashmeadiella*



Photo: Jesse Margolies

Outcomes (to come...)

Site data (GPS locations, # of poppies, etc.)

List of bee poppy visitors identified to species

Correlational analyses to assess the impact of bee visitation data on Las Vegas bear poppy reproductive output



Related Research

Surveyed *Arctomecon
merriami* in Ash Meadows

Additional funding
support (FWS) for
2023/2024 to expand
surveys across entire
historic range (California,
Arizona, Utah)



Thank you!!

2022 Poppy Bee Team:

Olivia Steinmetz

Colin McKenzie

Jesse Margolies

Crab spiders

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Harold Ikerd

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Photo: Colin McKenzie

