

Perdita cara (Beloved Fairy Bee)

No Photo Available

Taxonomy

- **Class:** INSECTA
- **Order:** HYMENOPTERA
- **Family:** ANDRENIDAE
- **Genus:** Perdita
- **Scientific Name:** *Perdita cara* Timberlake, 1958
- **Common Name:** Beloved Fairy Bee
- **Synonyms:**
- **Taxonomic Name Source:** Integrated Taxonomic Information System (ITIS). 2008. World Bee Checklist Project (version 03-Oct-2008). Integrated Taxonomic Information System: Biological Names. Online. Available: <http://www.itis.gov>.

Agency Status

- **NMDGF:**
- **Federal Status:**
- **BLM Sensitive:**
- **USFS:**
- **IUCN Red List:** [Not Evaluated](#)
- **Nature Serve Global:** [GNR](#)
- **NHNM State:** S1
- **NM Endemic:** NO

Description

This is an unusually small species of *Perdita* (3.25-4 mm). The head and thorax are dark blue-green and the abdomen is yellowish-white. It can be confused only with *Perdita callicerata*, from which it differs due to its weakly dilated mandibles and an entire labrum (Timberlake 1958).

Habitat and Ecology

Very little is known about the habitats and ecology of *Perdita cara*. In the Sevilleta National Refuge, the habitat is Chihuahuan Desert grassland (Kazenel *et al.* 2020). The Texas records were also taken within the Chihuahuan Desert. Species of *Perdita* are almost all oligolectic (Michener 2007). As such, their emergence is usually timed to coincide with the floral bloom period of their host plants (Wilson and Carril 2016). In Texas, this species was collected in early May, on Mesquite (*Prosopis* spp.), a tree in the pea family (Fabaceae) (Timberlake 1968), but host plant specificity is unknown.

Though the nesting habits of this species are unknown, *Perdita* generally nest in the soil, in branching that each ending in a single cell, which is more or less horizontal (Michener 2007). A few species nest gregariously, with females nesting in close proximity to one another (Wilson and Carril 2016). Other species are communal nesters, with more than one female sharing a nest entrance (Michener 2007), yet others are more solitary. Instead of covering nest cells in a water proof coating, like other species in the family Andrenidae do, *Perdita* cover only the spherical ball of pollen provisioned for larvae in a coating (Wilson and Carril 2016). Many species are specific about the soil type they choose to nest in (Wilson and Carril 2016). Adult emergence seems to be dependent on humidity levels which indicate significant rain events above ground, at least for desert species (Wilson and Carril 2016).

Geographic Range:

This species is found in the southwestern United States, where it has been collected at very few sites. It is known only from several localities within the Sevilleta National Wildlife Refuge, in New Mexico, and one locality in West Texas (Timberlake 1958, Chesshire *et al.* 2023). It is unclear if it has been recorded in Texas since 1954.

Conservation Considerations:

There are no conservation actions in place for this species. It is known to occur in at least on protected area, the Sevilleta National Wildlife Refuge, though it is not removed from the main threat of severe drought in this refuge. Research is needed to verify the species remains extant. In addition, a better understanding of the distribution, population size and trend, habitats and ecology, and threats is needed for this species.

Threats:

The threats to this species are not well understood, though drought is likely the main threat. The Southwestern U.S. saw its driest 22-year period from 2000 to 2021, since at least 800 CE (the time period used in previous climatic reconstructions) (Williams *et al.* 2022). Droughts are projected to become more prolonged, severe, and common in the region under future climate change scenarios (USGCRP 2018). Drought may negatively impact bee species by reducing floral resource availability (Phillips *et al.* 2017). In addition, declines observed in *Perdita* species at one site the Chihuahuan Desert have been attributed to small body size of these bees, and associated sensitivity to heat and desiccation (Kazenel *et al.* 2024).

Population:

The population size and trend are not known for this species. Since the 1950s it has only been recorded from the Sevilleta National Wildlife Refuge, so it could be quite rare (Timberlake 1958).

References:

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- Timberlake P.H.. 1958. A revisional study of the bees of the genus *Perdita* F. Smith, with special reference to the fauna of the Pacific Coast (Hymenoptera, Apoidea) Part III. *University of California Publications in Entomology* 14: (303-410).
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More Information

