Bombus flavidus (Fernald Cuckoo Bumble Bee)

No Photo Available

Taxonomy

- **Class**: INSECTA
- **Order**: Hymenoptera
- **Family**: Apidae
- **Genus**: Bombus
- **Scientific Name**: Bombus flavidus (Eversmann, 1852)
- **Common Name**: Fernald Cuckoo Bumble Bee
- **Synonyms**:
- **Taxonomic Name Source**:(Eversmann, 1852)

Agency Status

- **NMDGF**:
- **Federal Status**:
- **BLM Sensitive**:
- **USFS**:
- **IUCN Red List**: Data Deficient
- **Nature Serve Global**: G5
- **NHNM State**: S1
- **NM Endemic**:NO

Description

Bombus flavidus is a parasitic bumblebee, known for its cuckoo-like behavior, and lacking a corbicula for pollen collection. Rather than establishing its own colonies, it invades the nests of other bumblebee species (primarily in the subgenus Pyrobombus). Having no workers of its own, B. flavidus instead relying on other species, notably B. rufocinctus, B. occidentalis, and B. appositus, for worker bees to rear its young (Goulson 2010). It is widespread and most similar to B. insularis and B. suckleyi, but distinctly has a curled under abdominal tip that forms a small spine (Williams et al., 2014). B. flavidus is a smaller bodied bumblebee species with predominantly black and yellow hairs that can present with some regional variety. They consistently have black facial hair, the thorax is often predominantly yellow with a black spot, but has also been seen with yellow shoulders and an almost entirely black thorax. T2 of the abdomen is always black and T4 is always yellow/white (Williams et al., 2014). Males can be identified by orange hairs on the tip of their abdomens. The few observations of B. flavidus in New Mexico share majority black abdomens and distinguished black haired portions of the thorax (iNaturalist 2025).

Habitat and Ecology

Locally observations have only been reported in the months of July and August (iNaturalist 2025). B. flavidus forages on a wide range of flowering plants, including Cirsium, Heliomeris, Melilotus, and Senecio (Williams et al., 2014). B. flavidus records in New Mexico have been located in the Rocky Mountain Subalpine–High Montane Meadows habitat which provides mid- to late-season forage in high-elevation, open landscapes, where native flowering plants such as Bistorta, Erigeron, Geum, Castilleja, and Carex bloom in moist basins and snowmelt-fed swales. These meadows offer reliable nectar and pollen when lower-elevation habitats are drier. At slightly lower elevations, B. flavidus could find refuge in the Intermountain Juniper Woodland which supports foraging in open piñon–juniper savannas, with native wildflowers and shrubs including Artemisia, Ericameria, Astragalus, Eriogonum, and Penstemon. Shallow, rocky soils and protected microsites provide nesting opportunities, while periodic fire historically maintained open, flower-rich understories (“NMDGF SWAP” 2025).

Geographic Range:

Sightings have been concentrated in northern New Mexico near Santa Fe and Taos (iNaturalist 2025). The mountains of northern New Mexico are shaped by the Southern Rocky Mountains ecoregion covering about 10,200 square miles and includes the Sangre de Cristo, Jemez, and San Juan Mountains. Elevations are higher, ranging from roughly 6,500 to over 13,160 feet, with rugged peaks and intermontane valleys. This region experiences a mid-latitude continental climate, shifting to subarctic at high elevations, with cool summers, very cold winters, and greater average precipitation of about 24 inches annually, delivered primarily as winter snow and summer thunderstorms. B. flavidus' New Mexican occurrences are reported in the Sangre de Cristo mountain range (iNaturalist 2025; iDigBio Specimen Portal 2025; "NMDGF SWAP" 2025).

Conservation Considerations:

In New Mexico and across the United States, no species-specific research or conservation needs have been identified, but general practices are recommended due to the vulnerability of many bumblebees and the value of healthy wild bee populations. Key actions include conserving and restoring high-quality habitat that provides forage, nesting, and overwintering sites; limiting pesticide use near these areas, especially during bloom; promoting pollinator-friendly farming practices such as planting native legumes and other beneficial species along field margins; reducing disease transmission from managed bees; and avoiding the introduction of honey bees into high-quality native bee habitat. Broader research priorities for North American bumble bees are outlined in the literature (Cameron et al. 2011; Williams and Osborne 2009). Furthermore, survey work should be implemented to better understand the extent of their range across the state of New Mexico.

Threats:

Because cuckoo bumble bees depend on healthy populations of host species, declines in host abundance or diversity could indirectly threaten this species. The combination and intensity of broad-scale pressures make these threats particularly concerning in New Mexico, where bumblebee populations occur near the southern and lower-elevation limits of their ranges and rely on patchy, climate-sensitive habitats. Here, B. flavidus may be susceptible to broader pressures including habitat loss, fire, competition with non-native bees, and climate change (Fürst et al. 2014; Cameron et al. 2011; Hatfield et al. 2014b).

Population:

B. flavidus has been sparsely reported in New Mexico, with three modern observations on iNaturalist and one historic record reported from the Essig Museum of Entomology (iNaturalist 2025; iDigBio Specimen Portal 2025). The historic record dates back to 1971, while modern record dates span 2016-2020 ("GBIF" 2025).

References:

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