Bombus mixtus (Fuzzy-horned Bumble Bee)

No Photo Available

Taxonomy

- **Class**: INSECTA
- **Order**: Hymenoptera
- **Family**: Apidae
- **Genus**: Bombus
- **Scientific Name**: Bombus mixtus (Cresson, 1878)
- **Common Name**: Fuzzy-horned Bumble Bee
- **Synonyms**:
- **Taxonomic Name Source**:(Cresson, 1878)

Agency Status

- **NMDGF**:
- **Federal Status**:
- **BLM Sensitive**:
- **USFS**:
- **IUCN Red List**: Least Concern
- **Nature Serve Global**: G5
- **NHNM State**: S2
- **NM Endemic**:NO

Description

Bombus mixtus is a small bodied species that is fairly common across the mountain-west of the United States. B. mixtus has long uneven hair while the oculo-malar area, often referred to as the ‘cheek’ is as long as broad. Hairs of the face, head, and thorax are often intermixed yellow and black, sometimes giving off a greyish hue. B. mixtus has variability in abdominal coloration and striping, essentially on a ‘dark’ to ‘light’ spectrum. The ‘light’ morph with a yellow to red gradient from anterior to posterior, and the ‘dark’ breaks up a predominantly yellow abdomen with a thick bold black stripe (Williams et al., 2014). In New Mexico, a middle variety is most often seen with a bold black stripe breaking up yellow anterior hairs and red posterior hairs (iNaturalist 2026).

Habitat and Ecology

Bombus mixtus has almost year-round records but the bulk of seasonal activity begins in March and tapers off in September, while peaking in May and June (iNaturalist 2026). Locally observations span a much smaller phenological window, with all records occurring in July and August (“GBIF” 2025). B. mixtus inhabits open grasslands, chaparral and shrublands, and mountain meadows, its preferred habitat in New Mexico. As a medium-tongued bee, it forages on diverse flowering plants including Ceanothus, Epilobium, Monardella, Penstemon, Phacelia, Rhododendron, and Senecio among others (Williams et al., 2014), all genera with species occurring in New Mexico (“USDA Plants Database State Search” 2026). Nesting sites vary and may occur on the ground surface or above and below ground. Males patrol flight paths in search of mates (Williams et al. 2014). B. mixtus in the southwest is mostly recorded in higher elevation habitat types each contributing distinct resources. Rocky Mountain Subalpine–High Montane Meadows provide 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, the Intermountain Juniper Woodland supports foraging in open piñon–juniper savannas, with native wildflowers and shrubs including Artemisia, Ericameria, Astragalus, Eriogonum, and Penstemon. Together, these habitats form an interconnected landscape that sustains Bombus mixtus across spatial and temporal gradients (“NMDGF SWAP” 2025).

Geographic Range:

Bombus mixtus occurs across the Mountain West from California's southern Sierra Nevada north to British Columbia, throughout the Rocky Mountains to Colorado and northern New Mexico, and in tundra and taiga regions of Alaska and western Canada (Williams et al. 2014). B. mixtus has an abundant range across parts of the USA, but is sparsely recorded in New Mexico, having been located only in the mountains of the Santa Fe and Carson National Forests . ("GBIF" 2025; iNaturalist 2026).

Conservation Considerations:

In New Mexico, 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).

Threats:

One study found clear genetic differentiation among populations of B. mixtus across western North American mountain ranges. Western populations showed significant genetic structure relative to inland populations, indicating limited gene flow across parts of the species' range (Sakulich et al. 2025). These results suggest that landscape features and habitat connectivity influence population structure in B. mixtus, and that reductions in suitable or connected habitats, such as those expected with climate-driven shifts in montane environments, could increase genetic isolation among populations. Maintaining habitat connectivity may therefore be important for preserving genetic diversity and long-term population stability in this species. Individuals of B. mixtus foraging in and around blueberry farms were exposed to agricultural pesticides, even where organic practices were used (Bishop et al. 2018). Residues of a highly toxic insecticide, Diazinon, were detected directly in bumble bee bodies, indicating on-farm exposure, while pollen carried by bees contained both diazinon and the neonicotinoid imidacloprid. The presence of imidacloprid in pollen from bees collected at organic farms suggests that pesticide exposure can occur through drift or landscape-level contamination from neighboring conventional farms. These findings indicate that B. mixtus can encounter multiple pesticide residues while foraging in agroecosystems, highlighting potential chemical exposure risks even in seemingly low-input agricultural settings (Bishop et al. 2018). Although no single threat has been identified as uniquely affecting Bombus mixtus, 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 in New Mexico, B. mixtus 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).

Population:

Locally, B. mixtus has 5 historic records with its first state occurrence recorded relatively recently in 1971. Since then a recordless gap persisted from 1980-2017 with 10 modern state occurrences being reported on iNaturalist from 2017-2025 ("GBIF" 2025; iNaturalist 2026).

References:

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