

Spilomyia crandalli (Crandall's Hornet Fly)



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Taxonomy

- **Class:** INSECTA
- **Order:** DIPTERA
- **Family:** SYRPHIDAE
- **Genus:** Spilomyia
- **Scientific Name:** *Spilomyia crandalli* Curran, 1951
- **Common Name:** Crandall's Hornet Fly
- **Synonyms:**
- **Taxonomic Name Source:** Miranda, G.F.G., A.D. Young, M.M. Locke, S.A. Marshall, J.H. Skevington, and F.C. Thompson. 2013. Key to the genera of nearctic Syrphidae. Canadian Journal of Arthropod Identification No. 23 (August, 2013). Available online: http://cjai.biologicalsurvey.ca/mylmst_23/mylmst_23.html

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 fly is mostly black with yellow spots on the lateral thorax and scutellum, and yellow stripes on the abdomen (Curran 1951).

Habitat and Ecology

Little is known about the habitats and ecology of this species. It has been recorded in Sky Island mountain ranges of the southwest, which are typically comprised of oak/pine forests.

The ecology of *Spilomyia* larvae in North America is unknown (Orengo-Green et al. 2023), but it is inferred from

European species that the maggots live in decaying wood (Curran 1951). Adult flies are pollinators of several plants, including Avocado (*Persea americana*) (Waldbauer and Ghent 1984, Casteñeda-Vilodzola *et al.* 1999). Adults fly in September (Curran 1951). Some *Spilomyia* species use flowers as courtship and mating sites (Waldbauer and Ghent 1984).

Though *S. crandalli* is harmless, the species mimics Vespidae wasps (such as paperwasps), in both appearance and in behavior. The fly stands on its four back legs and moves the forelegs as if they are long, wasp antennae (Waldbauer 1970). When in distress, the flies buzz loudly and press down the abdomen as if to sting (Curran 1951). This convincing mimicry, shared by several species of *Spilomyia*, may be an effective strategy to deter predators (Waldbauer 1970).

Geographic Range:

Spilomyia crandalli is known from five mountain ranges in southern Arizona and southwestern New Mexico, in the southwestern United States. In Arizona, it has been recorded from Mount Lemmon, in the Santa Catalina Mountains, as well as the Santa Rita, Huachuca, and Chiricahua Mountains (Curran 1951, GBIF.org 2024). In New Mexico the species has only been recorded in the Gila Wilderness, though it has not been recorded in the state at all since 1994 (GBIF.org 2024).

Conservation Considerations:

There is no targeted conservation for this species. Research is needed to better understand the distribution, population size and trend, habitats and ecology, and threats.

Threats:

Threats to this poorly studied species are not known. It occurs in Sky Islands of the Southwest, which are generally threatened by water scarcity and drought, human pressures on ecosystems, invasive and non-native species, fire, increased temperatures with increased frequency of warmer and drier winters, summer precipitation variability and mega droughts (Misztal 2013). However, it is unclear how these threats might directly impact this species or its habitat.

Population:

The population size and trend are not known for this poorly studied species.

References:

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More Information

