

## Photinus flavicollis (Yellow-tailed Firefly)



Tom Kennedy, 2024



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### Taxonomy

- **Class:** Insecta
- **Order:** Coleoptera
- **Family:** Lampyridae
- **Genus:** Photinus
- **Scientific Name:** *Photinus flavicollis* (LeConte, 1868)
- **Common Name:** Yellow-tailed Firefly
- **Synonyms:** *Photinus flavicollis* LeConte, 1868
- **Taxonomic Name Source:** Fender, K.M. 1970. *Ellychnia* of Western North America (Coleoptera: Lampyridae). Northwest Science 44(1): 31-43.

### Agency Status

- **NMDGF:**
- **Federal Status:**
- **BLM Sensitive:**
- **USFS:**
- **IUCN Red List:** [Data Deficient](#)
- **Nature Serve Global:** [GU](#)
- **NHNM State:** SNR
- **NM Endemic:** NO

### Description

*Photinus flavicollis* is unique among other diurnal members of the genus *Photinus* (= *Ellychnia*), as it has a relatively well-developed lantern. In addition, it has a uniformly orangish pronotum, which makes it easy to identify. The lanterns of the males and females have not been compared, courtship has not been observed, and the larvae are unknown. It is possible this species will eventually be moved to a new genus.

### Habitat and Ecology

Very little is known about the habitat and ecology of this species. Both males and females are winged, but mating behavior is unknown. It is unclear if adults use their lanterns in courtship, or if like most *Photinus* (= *Ellychnia*), pheromones are used instead. Specimens have been collected at UV lights (BugGuide 2023), suggesting adults may be attracted to light. The larvae are unknown, but like other firefly species, those of *P. flavicollis* are likely carnivorous, feeding on soft bodied invertebrates such as snails, slugs, and earthworms (Lewis 2016). Very little has been

documented about the habitat associations of this species, although it appears to be associated with lower elevation pine forests of mountainous areas, often in proximity to water (LeConte 1868, Fender 1970, BugGuide 2023). LeConte (1968) describes individuals as “found clinging to plants.”

## **Geographic Range:**

*Photinus (=Ellychnia) flavicollis* is found in New Mexico, Colorado, Oklahoma, and Texas (LeConte 1868, Fender 1970, Lloyd 2003, BugGuide 2023, GBIF.org 2023). There is also one record each, in California and Nevada from 1924 and 1882 respectively, though these are likely erroneous, as no recent records have been taken in either state (GBIF.org 2023).

## **Conservation Considerations:**

No known conservation actions are in place for this species, although some localities occur within protected areas, such as the Guadalupe Mountains Wilderness in Texas (Protected Planet 2020). Additional research on this species' life history, ecology, distribution, and population status would be helpful for assessing its conservation status and threats to its persistence. In particular, surveys at historic sites and other potential habitat within this species' range are critically needed to determine the distribution of this species. Because this species is so distinctive morphologically, photo vouchers may prove adequate for identification. Information on habitat associations and larval diet is also needed. As with all western *Ellychnia*, further taxonomic work is greatly needed to sort out the relationship of this species with other members of the genus; it has been speculated that this species belongs in an entirely different genus altogether (BugGuide 2020).

## **Threats:**

Specific threats to