

# Papilio indra minori (Minor's Swallowtail)

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No Photo Available

## Taxonomy

- **Class:** INSECTA
- **Order:** Lepidoptera
- **Family:** Papilionidae
- **Genus:** Papilio
- **Scientific Name:** Papilio indra minori Cross, 1937
- **Common Name:** Minor's Swallowtail
- **Synonyms:**
- **Taxonomic Name Source:** Pelham, J.P. 2023. A catalogue of the butterflies of the United States and Canada. Revised 15 February 2023. <http://butterfliesofamerica.com/US-Can-Cat.htm>

## Agency Status

- **NMDGF:**
- **Federal Status:**
- **BLM Sensitive:**
- **USFS:**
- **IUCN Red List:** [Not Evaluated](#)
- **Nature Serve Global:** [T1](#)
- **NHNM State:**
- **NM Endemic:** NO

## Description

### Habitat and Ecology

The butterfly's habitat includes rocky terrain, dry mountainous areas, dry conifer woodlands, hilltops, and canyons within the Colorado Plateau (Eff 1962; Shapiro 1977; Ferris and Brown 1981; Scott 1986; Opler and Wright 1999; Glassberg 2001; Pyle 2002; Warren 2005, Montana Natural Heritage 2026). The butterfly uses several larval hosts in the Apiaceae. Most are strongly scented desert shrubs including *Cymopterus purpurea*, *Aletes acaulis*, *Harbouria trachypleura*, *Lomatium junceum*, *Cymopterus terebinthinus petraeus*, *Lomatium eastwoodiae*, and *Lomatium parryi* (Cary and Toliver 2023 Stout 2026). Females lay eggs on the undersides of host plant leaves (Emmel and Emmel 1964; Scott 1986; James and Nunnallee 2011). Eggs hatch in about 6-7 days, develop to L5 instar and pupae in about 18-30 days, with nearly half of the development time spent as L5 instar. This butterfly spends about 11 months to two years or more as pupae (Newcomer 1964; Scott 1979, 1986; Guppy and Shepard 2001; James and Nunnallee 2011, Montana Natural Heritage 2026). Flight records span from May to August, with a vast majority of observations occurring in May. Males patrol the rockiest ridges and high clifftops within the general habitat, then perch on the ground below summits (Cary and Toliver 2023, Montana Natural Heritage 2026). Adults of the parent species are known to feed on the flower nectar: *Apocynum*, *Amelanchier*, *Brodiacea*, *Carduus*, *Cirsium*, *Convolvulus*, *Cryptantha*, *Delphinium*, *Erysimum*, *Grindelia*, *Hackelia*, *Helianthus*, *Jamesia*, *Lesquerella*, *Lomatium*, *Mentha*, *Ribes*, *Scutellaria*, *Senecio*, *Symphotrichum*) and mud (Eff 1962; Emmel and Emmel 1967, 1974; Pyle 2002; James and Nunnallee 2011; Scott 2014, Montana Natural Heritage 2026).

### Geographic Range:

This butterfly occupies the Colorado Plateau in the United States. It is found in Northeast Arizona, western Colorado, northern New Mexico, and Southeast Utah (Scott 1986, Cary and Toliver 2023, NatureServe 2026, Stout 2026). It is known from a variety of locations.

## Conservation Considerations:

There are no known range-wide conservation actions in place for this butterfly. However, this butterfly was assessed as Critically Imperiled in a NatureServe 1998 NatureServe assessment (NatureServe 2026). More research is needed on the range and conservation actions of this butterfly.

## Threats:

Currently, the Western United States is getting hotter and drier as climate change takes its toll and is expected to continue to do so (Cook et al. 2009, Cook et al. 2015, Williams et al. 2022). Many butterflies respond to climate change by moving to higher elevations or latitudes however, this is not an option for this taxa where there are no higher elevation habitats to shift to and as a result just a small amount of warming could push this taxa into thin air driving it to extinction (Forister et al. 2010, Holland 2010, Rödder et al. 2021, Forister et al. 2023). This butterfly's range includes the Southwestern United States which 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) and droughts are projected to become more prolonged, severe, and common in the region under future climate change scenarios (USGCRP 2018). Drought conditions over the last few years have severely limited food and nectar resources (Hughes 2020) and environmental stochasticity, especially variation in host quantity, quality, and phenology (Ehrlich and Murphy 1987). This can further stress these species already living in these hot and dry environments, many butterfly species, even very common ones, have been experiencing widespread declines due to a series of threats that may be affecting this species as well (Forister et al. 2021). Land use and water use change have been shown to affect many other western United States species (Forister et al. 2010). A threat to this species is the potential for catastrophic wildfire. Fire suppression has been a key component of forest management in these regions since the early 1900s, resulting in dense conifer growth and increased fuel loads (Kaufmann et al. 1998). At least nine large fires have burned over 34,000 acres of land in the Sacramento Mountains in the last 50 years (Kaufmann et al. 1998). The impacts of fire on this species may depend on the intensity and size of the fire, as well as seasonal timing (USFWS et al. 2004). For example, if a small amount of meadow habitat was burnt, but adjacent forests were cleared, larval host and nectar plants may benefit from the disturbance caused by the fire, and lepidopterans may be able to disperse more readily between meadows. However, if a fire that was too hot or too widespread were to burn in the area, direct impacts may include mortality of adults, pupae, larvae, or eggs, depending on the time of year, and indirect effects might include loss of host plants and nectar sources. The impacts of land use on fire intensity and spread may also be consequential. For example, grazing may temper a fire, as grazed meadows carry less fuel load, but the presence of some invasive grasses which are more abundant in grazed areas, such as Kentucky blue grass (*Poa pratensis*), may cause fire to burn deeper and hotter, due to the formation of mats (USFWS et al. 2004). Recently, Forister et al. (2021) found declines in abundance of most of 272 widespread western butterfly species. Using Bayesian Poisson regression to model trends in long term butterfly monitoring data across the United States, these declines were estimated to be a continual 1.6% decline in abundance per year. These declines in abundance of butterfly communities were found to be primarily correlated with warming temperatures during the fall season; the authors hypothesize this may be due to increased physiological stress on both plants and butterflies during this time. In a related effort, Forister et al. (2023) used biological, ecological, and climate data to rank the imperilment of western butterfly species for which long-term monitoring data were available and determined that this butterfly's parent species is among the 50 most at risk of extinction in their A category.

## Population:

Forister et al. (2023) determined that this butterfly's parent species is among the 50 most at risk of extinction in their A category. The total population size and trend are not known for this species. Determination of population size and monitoring of population trends is necessary to ensure the population is stable. Especially as several widespread, relatively common butterfly species are in decline across the United States (Edwards et al. 2025).

## References:

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## More Information

