Polites rhesus (Rhesus Skipper)

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Taxonomy

- **Class**: INSECTA
- **Order**: LEPIDOPTERA
- **Family**: HESPERIIDAE
- **Genus**: Polites
- **Scientific Name**: *Polites rhesus* (W. H. Edwards, 1878)
- **Common Name**: Rhesus Skipper
- **Synonyms**: Pamphila rhesus W. H. Edwards, 1878 W. H. Edwards, 1878
- **Taxonomic Name Source**:Pelham, J. P. 2008. A catalogue of the butterflies of the United States and Canada with a complete bibliography of the descriptive and systematic literature. The Journal of Research on the Lepidoptera. Volume 40. 658 pp. Revised 14 February, 2012.

Agency Status

- **NMDGF**:
- **Federal Status**:
- **BLM Sensitive**:
- **USFS**:
- **IUCN Red List**: Not Evaluated
- **Nature Serve Global**: G3
- **NHNM State**: S3
- **NM Endemic**:NO

Description

Distinguish diminutive Rhesus Skipper by its white-scaled veins overlying a chocolate brown, gold-margined, hindwing below, resembling Uncas Skipper. Carus Skipper lacks the brown median patch. Rhesus is dark grey-brown above with postmedian white spots on forewing and hindwing, plus a white fringe. Uncas has longer wings and is orange-brown above, though females tend toward gray.

Description courtesy of Steven J. Cary, Butterflies of New Mexico, 2024

Habitat and Ecology

The Rhesus Skipper is a native to short-grass and mixed-grass prairie. However, it has also been observed in

badlands, grassy mountain foothills, and grassy mesa tops where its sole known host plant Blue Grama Grass (*Bouteloua gracilis*) can be found (Johnson and Nixon 1967, McCabe and Post 1977, Scott and Scott 1978, Ferris and Brown 1981, Scott 1986, Layberry *et al.* 1998, Opler and Wright 1999, Glassberg 2001, Warren and Gott 2021, Cary and Toliver 2024, Lotts and Naberhaus 2024, Montana Natural Heritage Program 2024). Most often they are found in areas where the ground cover primarily consists of short clumps of Blue Grama Grass separated by open gravelly soil (Warren and Gott 2021).

This species is univoltine with its one brood occurring in the spring generally from May to June, however, extreme flight dates stretch as early as April and as late as July (Johnson and Nixon 1967, McCabe and Post 1976, Scott and Scott 1978, Ferris and Brown 1981, Scott 1986, Layberry *et al.* 1998, Glassberg 2001, Warren and Gott 2021, Cary and Toliver 2024, Lotts and Naberhaus 2024, Montana Natural Heritage Program 2024).

During flight adults of both sexes sip on water and feed on flower nectar with known genera including *Allium, Astragalus, Erigeron, Erysimum, Hymenoxys, Musineon, Opuntia, Oxytropis, Penstemon, Phlox, Scutellaria, Senecio, Syringa, Taraxacum,* and *Vicea* (Johnson and Nixon 1967, Scott 2014, Cary and Toliver 2024, Montana Natural Heritage Program 2024). Males can also be observed perching on hilltops awaiting receptive females (Cary and Toliver 2024, Lotts and Naberhaus 2024, Montana Natural Heritage Program 2024). After mating eggs are laid singly on the leaves of their host plants (Scott 1986, Lotts and Naberhaus 2024, Montana Natural Heritage Program 2024). Larvae live in silken tube nests, have five instars and overwinter as a mature fifth instar larvae (Scott 1986, Montana Natural Heritage Program 2024).

Geographic Range:

Recorded observations for this species stretch from southern Alberta and Saskatchewan, Canada, south through grasslands and mountain foothills of Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and New Mexico, and then east to Arizona. There is also a population in Mexico, known from Durango (Field 1940, McCabe and Post 1977, Ferris and Brown 1981, Scott 1986, Stanford and Opler 1993, Layberry *et al.* 1998, Opler and Wright 1999, Glassberg 2001, Warren and Gott 2021, GBIF.org 2024, Lotts and Naberhaus 2024, Montana Natural Heritage Program 2024). The Rhesus Skipper is known from 1,311 to 2,743m in Colorado, up to 3,048 m in Mexico (Brown 1957, Scott and Scott 1978, Ferris and Brown 1981, Burns 1994, Montana Natural Heritage Program 2024). In New Mexico, it is usually found between 1,676 and 2,500 m (Cary and Toliver 2024). The species is also likely much more widespread than is currently known in Mexico; however, little surveying has been done.

Conservation Considerations:

This species underwent a NatureServe conservation assessment in 2023 and was found to be globally at risk of extinction (NatureServe 2024). The species also went through several regional assessments and was found to be critically imperiled in Alberta, imperiled in Saskatchewan, Nebraska, Colorado, and Vulnerable in Kansas, and Oklahoma (NatureServe 2024). As native shortgrass prairies across the west are gradually being replaced by agriculture monitoring is needed for this species; this is especially important as few observations have been made of this species recently in the north of its range (Lotts and Naberhaus 2024). As a result, protecting high quality shortgrass prairie habitats within the species range may be essential to this species continued survival (NatureServe 2024).

Threats:

The Rhesus Skipper is threatened by climate change, warming temperatures, precipitation decreases, habitat loss and

degradation, as well as pesticides (Alberta Conservation Information Management Centre 2022, Forister *et al.* 2023). This is especially prevalent in the northern portion of the species range in the western Great Plains an area that is subject to prolonged drought, wildfire, high levels of herbivory, large amounts of habitat loss due to agriculture, and lots of pesticide use (Bock *et al.* 1991, Warren and Gott 2021).

This species is also a shortgrass prairie grasslands specialist, in the United States. In the southwestern United States grasslands are now considered a critically endangered ecosystem having declined by more than 98% (Noss *et al.* 1995). However, this species may be even more threatened by insecticide use than the habitat loss it has undergone from agriculture and urbanization as recent studies have shown many declines in butterflies globally and in this species habitat are driven primarily by insecticide use which is prevalent in this species range (Van Deynze *et al.* 2024). These grasslands are also more vulnerable than ever now as invasive species decrease diversity making these grasslands less drought tolerant at the same time that this region is seeing longer and more severe droughts leading to increased loss in native grasses (Ludwig *et al.* 2017).

Oil and gas is a major industry within the Rhesus Skipper's range. Studies have shown oil wells have negative effects in grassland ecosystems (Nasen *et al.* 2011). Nasen *et al.* 2011, compared the conditions of relatively ungrazed grasslands surrounding leased oil well sites and sites with no oil well. The study found a significant difference in the soil pH, presence and pervasiveness of nonnative plant species, and the percent of bare ground present (Nasen *et al.* 2011). These conditions could lead to a change in host plant quantity and quality.

In addition this species is also univoltine and univoltine species are thought to have decreased dispersal abilities, which limits the area they can utilize, in turn making them less resilient to stressors (Eskildsen *et al.* 2015, Forister *et al.* 2023). The Rhesus Skipper is also host specialized having only one known host plant which significantly increases the extinction risk of butterfly species (Kotiaho *et al.* 2005, Palash *et al.* 2022, Forister *et al.* 2023).

Population:

The population size and trend are not known for this species. Most sources report the species as being very rare and it has hardly ever been seen in Canada and Mexico (Warren and Gott 2021, Cary and Toliver 2024). However, this butterfly may not be as rare as conventionally thought due to its fast flight, cryptic coloration, and short brood which happens early in the spring (Warren and Gott 2021, Cary and Toliver 2024). It also co-occurs in many habitats with the similar looking Uncas Skipper (*Hesperia uncas*) for which it is frequently confused (Warren and Gott 2021). Colonies are also highly localized and ephemeral however, there are reports of rare population explosions during extremely wet years however, as far as we can tell this has not been reported for a long time (Brown *et al.* 1957, Stanford 1981, Warren and Gott 2021, Cary and Toliver 2024). The species is also recorded as declining in Colorado (Grunau *et al.* 2017). However, determination of population size and monitoring of population trends is necessary to ensure the population is stable. Especially as several widespread, relatively common species of butterfly are in decline now across the western United States (Forister *et al.* 2021).

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More Information