

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Invertebrate Abstract

Element Code: IILEPC1090

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Lycaena ferrisi*
COMMON NAME: Ferris's Copper;
SYNONYMS: *Tharsalea rubidus ferrisi*
Tharsalea ferrisi
Lycaena rubidus ferrisi
Chalceria ferrisi
OTHER COMMON NAMES: Arizona Copper
White Mountains' Ruddy Copper
FAMILY: Lycaenidae

AUTHOR, PLACE OF PUBLICATION: Johnson and Balogh, 1977.

TYPE LOCALITY: Apache Ditch Camp, 13 miles east of McNary, Arizona.

TYPE SPECIMEN: Holotype in MGCL

TAXONOMIC UNIQUENESS: The status of this taxon is unresolved. Pelham (2008, 2023) suggested its status needs further elaboration. *Lycaena ferrisi* has generally been treated since its description by Johnson and Balogh (1977) as a sibling species of *Lycaena rubidus* (Opler and Warren 2002, 2004). This taxon was treated as *L. rubidus ferrisi* by Scott (1986), Pratt et al (1993), Pelham (2008), Pohl et al. (2016), and North American Butterfly Association (2022, 2024). Pelham (2021, 2024) supports Zhang et al. (2020) in recognizing the taxon as *Tharsalea rubidus ferrisi*, based upon genomic evidence that the genus *Lycaena* is polyphyletic.

The Arizona Game and Fish Department Heritage Data Management System recognizes the taxon as *Lycaena ferrisi* as this is the name under which the taxon has been petitioned for listing under the Endangered Species Act, and the name for which it is under review by the U.S. Fish and Wildlife Service (USFWS 2009).

DESCRIPTION: This species resembles the Ruddy Copper (*L. rubidus*). A small butterfly. Males bright orange to streaky orange and dull brown with dark spots above, females orange-brown to brown above with black spots, both sexes whitish grey below with hindwing spots tiny or absent (Brock and Kaufman 2006). Their wings are shorter and more rounded than the Ruddy Copper and the wingspan is 1 1/8–1 1/4 inches (28–31 cm). Pm. spots on forewing and hindwing

form a complete row; the spots are small and black (Tilden and Smith 1986). The body is covered in small hairs.

AIDS TO IDENTIFICATION: This species differs superficially from *L. rubidus* by more orange color above and much larger spots. In addition, the wings are shorter and more rounded than *L. rubidus*. *L. ferrisi* allopatric with all other species of *Lycaena* (Scott 1986).

ILLUSTRATIONS: Black and white drawing (Tilden and Smith, 1986: pl. 36).

TOTAL RANGE: White Mountains of Apache and Greenlee Counties, Arizona.

RANGE WITHIN ARIZONA: See “**TOTAL RANGE.**” Most locations from near McNary, Maverick and Greer (Johnson and Balogh, 1977).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Presumably like other coppers it does not move between habitat patches and widely within patches. It is likely to move along stream corridors especially (NatureServe 2021).

REPRODUCTION: Aestivates then hibernates as an egg. Larva in spring. Pupal stage likely about 10 days, with adult stage mid-June to late August (Johnson and Balogh, 1977). Larvae are tended by ants and rest at the base of the host *Rumex*. Caterpillars can be observed at night eating plants, sitting at base of plants (Jim Brock, personal communication, in 2009 letter to AZGFD HDMS).

FOOD HABITS: *Rumex hymenosepalus* (Arizona dock, also known as wild rhubarb) is the larval host (Johnson and Balogh, 1977). *Rumex crispus* (curly dock) is also a larval host in the White Mountains near Greer (Jim Brock, personal communication, in 2009 letter to AZGFD HDMS). Caterpillars can be observed at night eating plants, sitting at base of plants (Jim Brock, personal communication, in AZGFD 2009 Invertebrate Diversity Review notes). Field evidence suggests that eggs overwinter, and caterpillars will emerge and feed when the environmental conditions are right (USFWS 2022).

HABITAT: Forest wet meadows, drainages, and cienegas with *Rumex hymeospalus* and nectaring flowering plants present.

ELEVATION: Above 7,000 ft (2,133 m) (USFWS 2022).

PLANT COMMUNITY: Wet montane meadows. Associated taxa include *Rumex hymenosepalus*, *Rumex crispus*, and yellow composites (NatureServe 2021, U.S. Forest Service 2018).

POPULATION TRENDS: Unknown. Believed to be locally common in restricted range (NatureServe 2021, Jim Brock, personal communication, in AZGFD 2009 Invertebrate

Diversity Review notes). Short term trends are unknown due to a lack of sufficient field observations from 2010–2019 (NatureServe 2021).

SPECIES PROTECTION AND CONSERVATION

Status definitions: <https://bit.ly/hdms-status-definitions>

Heritage Network Conservation Status Rank definitions: <https://bit.ly/hdms-rank-definitions>

ENDANGERED SPECIES ACT STATUS: UR (USDI FWS 2009)
STATE STATUS: None
HERITAGE NETWORK STATUS: G4?T2Q as *Tharsalea rubidus ferrisi*
S2
OTHER STATUS: Forest Service Sensitive (USDA, FS Region
3 1999, 2007, 2013)

PREVIOUS STATUS:

ENDANGERED SPECIES ACT STATUS: PTN (Forest Guardians 2007)

MANAGEMENT FACTORS: Threats include fire suppression leading to woody encroachment of meadow habitats and other openings (NatureServe 2021, U.S. Forest Service 2018). Intense fires may also pose a threat, potentially eliminating some populations or altering previously suitable habitats (NatureServe 2021). Alterations to ambient temperatures and rain cycles resulting from climate change may negatively impact species' habitat (USFWS 2022).

PROTECTIVE MEASURES TAKEN: Petitioned for listing under the Endangered Species Act (Forest Guardians 2007). USFWS (2009) issued a 90-day finding that listing may be warranted and initiated a status review to determine if listing is warranted. Issuing a 12-month finding and concurrent proposed listing rule if warranted for *L. ferrisi* is included in the USFWS 2023-2027 Domestic Listing Workplan (USFWS 2023) and is planned for 2025.

SUGGESTED PROJECTS: Surveys to determine population distribution, status, and trends are warranted.

LAND MANAGEMENT/OWNERSHIP: Unknown; Much of range comprised of Apache-Sitgreaves National Forest and Fort Apache Indian Reservation.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

Jim Brock – Lepidopterist. Tucson, Arizona

ADDITIONAL INFORMATION:

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