

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

Invertebrate Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Calephelis rawsoni arizonensis*
COMMON NAME: Arizona Metalmark, Rawson's Metalmark
SYNONYMS: *Calephelis arizonensis*
FAMILY: Riodinidae

AUTHOR, PLACE OF PUBLICATION: McAlpine. 1971. Journal Research Lepid., 10: 55-58.

TYPE LOCALITY: Brown Canyon, Baboquivari Mountains, Pima Co., Arizona.

TYPE SPECIMEN: Holotype in the United States National Museum.

TAXONOMIC UNIQUENESS: There are eight species of the genus *Calephelis* in the United States. Two of these are found in Arizona. There is one old record for a third member of this genus, *Calephelis dreisbachi*, but no further records have come to light since the 1961 record. Current thought by some workers suggests that *Calephelis arizonensis* is a subspecies of *Calephelis rawsoni* (Rawson's Metalmark) a Texas species. If so the trinomial would be *Calephelis rawsoni arizonensis* and the common name would be Rawson's Metalmark. (Brock and Prchal 2001). The Arizona Natural Heritage Program (referred to as the HDMS) is following *C. rawsoni arizonensis*.

DESCRIPTION: Wingspan (19-28 mm). The sexes are similar in color, the male forewings are more pointed.

Upperside: Reddish-brown with a median band of small, blue metallic spots and another blue metallic band along the edge. The fringes are checkered black and white.

Underside: Light orange with small black specks and blue metallic spots along the median and the edge.

AIDS TO IDENTIFICATION: Only two small, brown butterflies have bands of blue metallic markings on both upper and underside, *Calephelis rawsoni arizonensis* and *Calephelis nemesis* (Fatal Metalmark). *Calephelis nemesis* is similar but without the red overlay and has a dark brown band of scales inside of the median metallic band of blue scales. (Brock and Prchal 2001).

ILLUSTRATIONS: Color drawing of upperside male (Opler and Wright, 1999: Plate 22)
B&W photo of upper and underside male (Bailowitz and Brock, 1991: page 202)
Color photo of upperside male and female (Scott, 1986: Plate 31)
Color photo of underside male *rawsoni* (Scott, 1986: Plate 31)
Color photo of upperside male (Pyle, 1981: photo #550)
Color photos (Brock and Prchal 2001)

TOTAL RANGE: Arizona, and from the Animas Mountains in southwestern New Mexico. It then occurs southward to Sonora, Mexico. The southern limits of its range are poorly defined to date.

RANGE WITHIN ARIZONA: Presently known from as far north in Arizona as Gila County then southward through Graham, Cochise, Pima and Santa Cruz counties in most of the mountains therein.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Both sexes are usually encountered in areas where its food plant grows. These areas are riparian in nature. In most habitats there is permanent or semi-permanent water nearby. Males perch on rocks usually in creek bottoms to await females. This activity usually begins late in the morning and extends into the heat of the day. Both sexes can be found at flowers, sometimes on those of the food plant. The flight is very weak and adults are mostly found near the ground but they remain inconspicuous because of their diminutive size. Perching is done most frequently with the wings open. (Brock and Prchal 2001).

REPRODUCTION: Mostly undescribed. The eggs are small, round and flattened with numerous ribs. The mature caterpillar is whitish-pink with two thin subdorsal black lines. It is covered with thin long whitish hair. The tips of the long hairs on its back are curved backward. The pupa is light green with a pinkish abdomen and black spots along the wing edges. (Brock and Prchal 2001).

FOOD HABITS: *Bidens* sp., a plant of riparian affinity.

FLIGHT PERIOD: This species is most common from early spring to late fall but it is reported for all months in southeastern Arizona. It is probably more than double brooded and in some areas the broods may not be well defined.

HABITAT: This species is mostly encountered up off of the desert floor in the lower stretches of the mountains. Within these mountains it is found in riparian canyons in oak woodland or even more arid regions. Canyons with standing water for a good portion of the year appear to contain populations of this species as long as the host is present. (Brock and Prchal 2001).

ELEVATION: 2,350 - 5,500 ft. (717 - 1678 m)

PLANT COMMUNITY:

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: USFS - Coronado National Forest; Catalina State Park; TNC
Patagonia-Sonoita Creek; Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

- Bailowitz, R.A., and J.P. Brock. 1991. Butterflies of Southeastern Arizona. Sonoran Arthropod Studies, Inc., Tucson, AZ. p. 202.
- Brock, J., and S. Prchal. 2001. Sensitive Insect Species of the Coronado National Forest. A Training Project by the Sonoran Arthropod Studies Institute, Tucson, AZ.
- McAlpine. 1971. A revision of the butterfly genus *Calephelis* (Riodinidae). Journal Res. Lepidoptera 10: 1-125.
- Miller and Brown. 1981. A Catalogue/Checklist of the Butterflies of America north of Mexico. The Lepidopterist's Society.
- Opler and Wright. 1999. Western Butterflies. Houghton Mifflin Company.
- Pyle. 1981. The Audubon Society Field Guide to North American Butterflies. Knopf.
- Scott. 1986. Butterflies of North America. Stanford Press.
- Tilden, J.W., and A.C. Smith. 1986. Peterson Field Guides: Western Butterflies. Houghton Mifflin Company, Boston. p. 153-154.
- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

This butterfly is not rare and should not be on the sensitive species list (FS List) at this time in the state of Arizona. It adapts to damaged riparian areas as does its food plant. It must be a hardy little bug since its breeding zone is periodically flooded, yet the species lives on. (Brock and Prchal 2001).

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