

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

Invertebrate Abstract

Element Code: IILEPQ6030

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Hesperopsis graciela*
COMMON NAME: MacNeill Sooty Wing Skipper, Grace Sooty wing
SYNONYMS: *Pholisora graciela*
FAMILY: Hesperidae

AUTHOR, PLACE OF PUBLICATION: *Pholisora graciela* Dyar, J. New York Ent.Soc. 13(3): 111-141, 1905. *Hesperopsis graciela* MacNeill, Ent. News, Vol 81, 7-1970.

TYPE LOCALITY: Holotype: male, vicinity of Parker Dam, Bennett Wash, San Bernardino Co., California, IV 22 51. C.D. MacNeill.

TYPE SPECIMEN: HT: CAS.

TAXONOMIC UNIQUENESS: Tilden and Smith, 1986, assign five species to the genus *Pholisora* or the sooty-wings. These five species all occur in the western United States. However, MacNeill, 1981, in his abstract states that "this new species is the third member of the closely related group designated by Dyar (190:118) as the genus *Hesperopsis*. This unit, recognized by Dyar, comprises at least a subgenus *Hesperopsis* Dyar and includes *Pholisora (H.) graciela*." According to NatureServe, "*Hesperopsis graciela*" is usually treated as a full species but Scott (1986) considers it a subspecies of *H. alpheus*. However, this has not been accepted by other experts."

DESCRIPTION: Egg is heavily sculptured and ivory-white in color. Larva dull green covered with small whitish nodules, which bear short hairs; head brownish-black, "clothed with yellowish pile." The pupa is a light straw, with a "bloom" of powdery white. It is 0.9-11.5 mm (0.75 to 1.0 in) in length with very long, thickly scaled palpi, fringes plainly checkered. The upper side is blackish with pale underside, over scaling conspicuous. The hind wing has small, complete spots. Forewing length is 9.0-11.5 mm (0.4-0.5 in) long. Very weak, slow flight, fluttering and bouncy. Adults tend to remain hidden in shrubbery avoiding open spaces when flying between bushes.

AIDS TO IDENTIFICATION: Similar to *Alpheus* Sootwing but smaller, and palpi longer and more thickly scaled.

ILLUSTRATIONS: Line drawings (Emmel 1973)

B&W photograph showing wing markings (Tilden and Smith 1986)

B&W photograph showing wing markings (MacNeill 1970)

Color photo (Powell *in*<http://www.npwrc.usgs.gov/resource/distr/lepid/byflyusa/usa/637.htm>)Color photo (*In* <Http://www.vireos.com/macneillssootywing.html>)Color photo (*In* <http://www.nearctica.com/butter/plate26/Hgracie.htm>)**TOTAL RANGE:** Nevada, Utah and Arizona.**RANGE WITHIN ARIZONA:** In Arizona, from the Lower Colorado River, Havasu Lake National Wildlife Refuge and Cibola National Wildlife Refuge. Also along the Virgin, Salt and Gila Rivers and further east.**SPECIES BIOLOGY AND POPULATION TRENDS****BIOLOGY:** Associated with *Atriplex lentiformis* along the drainage system of the lower Colorado River. One brood in April-May and another in July-October. This later brood is often much darker with no subapical spots on the upper surface. The only white spot on the second brood may be the slightly curved band from cell end to pale anal fold on high wings. However, band may be suggested on upper side in pale brown.**REPRODUCTION:** Usually 2-3 generations per year depending on rainfall. Reproduction may be continuous when summer rainfall is high or if *A. lentiformis* is irrigated or subject to accentuated water supplies. Consequently population dynamics coincide with climatic regime, increasing in wet years and decreasing in dry years. One brood in April-May and another in July-October. Timing of immature stages is uncertain but over-wintering is probably as full fed larva.**FOOD HABITS:** Adults sip nectar occasionally, they are not commonly observed at flowers. They use salt cedar, Chinese parsley and alfalfa primarily.**HABITAT:** Larvae restricted to quailbush, *A. lentiformis*, which is obligate food plant for this species. Quailbush forms dense thickets as a subriparian associate in the lower Colorado River drainage in Arizona, California, Nevada and Mexico.**ELEVATION:** Unknown**PLANT COMMUNITY:** Unknown**POPULATION TRENDS:** Declining due to loss of larval food plant *Atriplex lentiformis*. This plant is in decline because of agriculture and development along the Colorado.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1994]
[C2 USDI, FWS 1991]

STATE STATUS: None

OTHER STATUS: Forest Service Sensitive (USDA, FS Region
3 1999)
[Bureau of Land Management Sensitive
(USDI, BLM AZ 2000, 2005)]

MANAGEMENT FACTORS: Unknown

PROTECTIVE MEASURES TAKEN: Unknown

SUGGESTED PROJECTS: Further surveys should be done to confirm or deny the belief that *Hesperopsis graciellae* is able to find newly and revegetated areas of *A. lentiformis* as discussed by Johnson (1992).

LAND MANAGEMENT/OWNERSHIP: Various state and federal agencies, Indian reservations and private lands throughout the lower Colorado River along the Arizona-California border and into southern Nevada. This includes FWS - Cibola and Havasu National Wildlife Refuges.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

- George T. Austin - Nevada State Museum, Las Vegas, Nevada.
- Robert Johnson - Biologist under contract to US Fish and Wildlife Service, Arizona Ecological Services, Phoenix.

ADDITIONAL INFORMATION:

Because of this species' habit of traveling without leaving the shrub canopy, it is difficult to collect although reported by Howe (1975) to be "extremely abundant in its habitat."

Johnson (1992) believes that the status of *Hesperopsis graciellae* should be lowered to Category 3C, however, Austin disagrees; see the cover letter to his corrections of Johnson's status report in EMF.

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