for invertebrate Conservation.

# Problema byssus (W. H. Edwards), 1880 Byssus Skipper (Hesperiidae: Hesperiinae)

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## **SUMMARY**

The Byssus Skipper has a wide range from southern Wisconsin to Florida. However, it is not continuously distributed and is very rare or at best locally abundant in some years in some places. Habitat in the Midwest is generally tall grass prairie, although in Missouri the Byssus Skipper seems to prefer wet areas within prairies, and in the northern part of its range it is mainly dry prairie or oak savannah. Along the Atlantic coast, the skipper is found on the edges of coastal marshes. The major threat is loss—or disturbance—of its habitat from prairie conversion or fire.

## **CONSERVATION STATUS**

**Xerces Red List Status: Vulnerable** 

Other Rankings:

Canada – Species at Risk Act: N/A
Canada – provincial status: N/A
Mexico: N/A
USA – Endangered Species Act: None

USA – state status: IA: Threatened

NatureServe: G3G4
IUCN Red List: N/A

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## **SPECIES PROFILE**

## **DESCRIPTION**

The Byssus Skipper is a medium sized butterfly in the family Hesperiidae (skippers). Its wingspan is 1 7/16 to 1 13/16 inches (3.7 - 4.6 cm).

The uppersides of the wings are bright yellow-orange with broad black borders and a black bar at the cell. (The borders are so broad that at first glance the wings may appear black with a central yellow-orange patch.) The undersides of the wings are yellow-orange

RED LIST OF POLLINATOR INSECTS Species profile: *Problema byssus*, Byssus Skipper on the forewing and dull yellow on the hindwing (rust or orange on females). There is a black patch on the lower outer edge of the forewing (generally covered when at rest) and a band of pale spots on the hindwing.

## **TAXONOMIC STATUS**

*Problema byssus* (W. H. Edwards), 1880. There are two generally recognized subspecies, *P. b. kumskaka* (Scudder), 1887, found in the Midwest, and *P. b. byssus* (W. H. Edwards), 1880, found in the southeast. Other common names include Bunchgrass Skipper and Golden Skipper.

#### LIFE HISTORY

Habitat for the Byssus Skipper varies across the range. In the Midwest it is generally tall grass prairie, although in Missouri is seems to prefer wet areas within prairies, and to the north it is mainly dry prairie or oak savannah. Along the Atlantic coast, the skipper is found on the edges of coastal marshes.

There is one brood in the Midwest between June and July (spp. *kumskaka*) and two broods in the southeast between May and September, occasionally October (spp. *byssus*). Females lay eggs singly on hostplant leaves. The larval hostplants are eastern gamagrass (*Tripsacum dactyloides*) and big bluestem (*Andropogon gerardii*). Caterpillars live in shelters of leaves tied together with silk while feeding on the leaves. They overwinter as fourth instars and then resume feeding and growing in the spring. They pupate in silk cocoons in leaf litter.

Adults feed on nectar from a range of flowers.

### **DISTRIBUTION**

This butterfly has a wide range from southern Wisconsin to Florida. However, it is not continuously distributed and is in three disjunct regions: Wisconsin south to Arkansas and east to Indiana; Alabama and neighboring areas of Mississippi and Georgia; the Atlantic coastal plain from North Carolina to Florida.

#### **THREATS**

The major threat is loss—or disturbance—of prairie habitat. In the Midwest, upwards of 99 percent of prairies have been converted since European settlers arrived. The fragments that remain are under continuing pressure from agricultural conversion, development, and neglect. Even those areas protected and managed for wildlife are not necessarily secure for the Byssus Skipper and other butterflies due to inappropriate management, especially prescribed burns.

In the Atlantic coast marshes, spraying to control mosquitoes is a likely threat.

## **CONSERVATION STATUS**

Although apparently widespread, the Byssus Skipper is very rare or at best locally abundant in some years in some places. Isolation due to landscape fragmentation has

resulted in many small populations that are at risk of gradual decline and extirpation. It is not found in highly disturbed locations and usually needs intact prairie.

The Byssus Skipper is listed as Threatened in Iowa. Heritage Programs in a number of states track this species, rating it as "extremely rare" (Wisconsin) to "rare and uncommon"; none consider it secure or even common. It is probably most secure in Iowa and Missouri.

## **CONSERVATION NEEDS**

Protection and careful management of prairie/savannah and marshland habitats should be a priority wherever populations occur. Management aims should include ensuring adequate hostplant and adult nectar plant abundance and to avoid disturbance from spraying or fire.

#### RESEARCH NEEDS

Surveys to identify populations of this butterfly should be done on any suitable habitat. Monitoring of known populations to assess status and trends should be done. Studies into the impacts of fire would be valuable, especially on the frequency and timing of burns.

## **RESOURCES**

## **CONTACTS**

#### REFERENCES

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Scott, J. A. 1986. *The Butterflies of North America*. Stanford University Press, Stanford, CA.

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#### WEBSITES

U.S. Geological Survey, Northern Prairie Wildlife Research Center; Butterflies of North America: Byssus Skipper.

http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/usa/556.htm (Accessed 5/12/05)

NatureServe Explorer.

http://www.natureserve.org/explorer/

(Accessed 5/12/05)

**DISTRIBUTION MAP** 

(From: U.S. Geological Survey, Northern Prairie Wildlife Research Center. <a href="http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/usa/556.htm">http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/usa/556.htm</a>; accessed 5/11/05.)

