ENDANGERED SPECIES

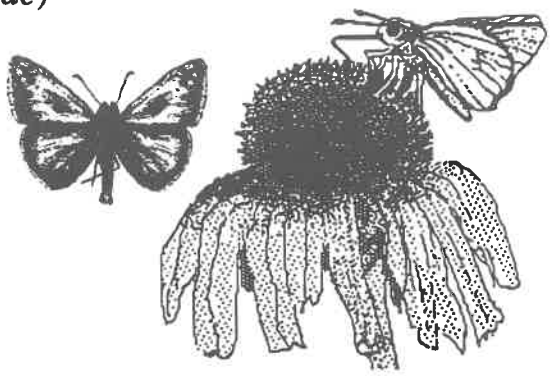
Status: State Rare
Candidate for Federal Listing

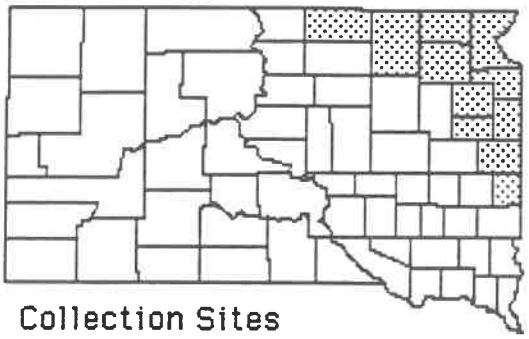
DAKOTA SKIPPER

(Hesperia dacotae)

Description

The Dakota skipper has a wingspan of 1 to 1.25 inches (2.5 to 3.2 cm.). Like all skipper butterflies, Dakota skippers have hooked antennae, short stout bodies and a characteristic, rapid, skipping flight. The male is bright tawny-orange above with a prominent, but narrow *stigma*. Below, males are clear yellow-orange with a pale spotband on the hindwings. Females are quite variable. They range from dark brown to almost entirely tawny-orange with a few lighter spots on the upper forewings and grayish-brown beneath.





Collection Sites

Distribution

The historical range of *Hesperia dacotae* extended from extreme southern Manitoba south and east through the eastern Dakotas, western Minnesota, Iowa, and northern Illinois. The species is extinct in Illinois and may no longer occur in Iowa. In South Dakota, this species is found only in the eleven northeastern counties. The current scattered distribution of this prairie butterfly is a result of agricultural development rather than natural distribution.

Habitat: This rare skipper is restricted to native tallgrass *alkaline prairies*. Look for *dacotae* near hilltops in rolling pastures that surround many of the glacial lakes and wetlands. Most areas inhabited by this skipper have an abundance of purple coneflowers and needle-and-thread grass.

Natural History

Life Cycle: There is a single annual generation in this species. In South Dakota the flight dates range from mid June to early July. Males and females are reported to emerge from their *chrysalis* at the same time, although studies in Minnesota have found that

males emerge 2 to 3 days earlier than females. Females lay eggs on grasses as well as broadleaf plants such as vetches. Eggs hatch in 7 to 20 days. The larvae (caterpillars) climb to the ground, build a silken tube lined with several blades of grass, and feed mostly at night. As the larvae grow, the tubes are elongated into the soil and are underground by fall. The partially grown larvae over-winter in these tubes and resume feeding the following spring. By late spring the larvae *pupate* and adults emerge in June.

Behavior: Adults normally fly less than one third mile during their lifetime. Males are territorial and search for females or perch on tall plants or other objects to await a potential mate. A passing female is pursued until she lands, the male lands behind her, she extends her abdomen, and they mate.

Adult Nectar Sources: Dakota skippers sip nectar at a variety of flowers including composites such as purple coneflower, fleabane, and black-eyed susans.

Larval Host Plants: Larvae feed on a variety of grasses, particularly little bluestem.

Significance

Due to its special habitat requirements and susceptibility to environmental pollution, the Dakota skipper is an excellent environmental health indicator in those sites where it occurs.

Conservation Measures

The tallgrass *alkaline prairie* that is Dakota skipper habitat is often used as hayland or pasture. With prolonged heavy grazing, the plant community may change and become unsuitable for the butterfly. The remnant tracts of undisturbed prairie habitat that are crucial for the protection of the skipper are threatened by a variety of forces, including overgrazing, pesticides, and conversion to cropland. The Dakota skipper is a candidate for listing as a federally threatened species.

Glossary

Alkaline prairie - grasslands with soils that contain high amounts of soluble minerals and salts.
Chrysalis - the form of an insect encased in a cocoon between the larval stage and adult; pupa
Pupate - to transform from caterpillar to chrysalis.
Stigma - a bold, sharply defined patch of scent scales on the forewings of many skippers.

References

Johnson, J. R., and J. T. Nichols. 1982. Plants of S.D. Grasslands, A Photographic Study. SDSU Bulletin 566, Agricultural Experiment Station, South Dakota State University, Brookings, SD.

Opler, P. A. and G. O. Krizek. 1984. Butterflies East of The Great Plains: An Illustrated Natural History. Johns Hopkins University Press, Baltimore.

Pyle, R. M. 1981. The Audubon Society Field Guide To N. Am. Butterflies. A. A. Knopf, New York.

Royer, R. A. 1988. Butterflies of N. D.: an atlas and guide. Minot State Univ. Science Mono. No. 1.

Scott, J. A. 1986. The Butterflies of N. Am.: A Natural Hist. And Field Guide. Stanford U. Press, CA.

Van Bruggen, T. 1983. Wildflowers, Grasses And Other Plants of The Northern Plains and Black Hills. Badlands Natural History Association, Interior, SD.

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Publication of the *Dakota Skipper fact sheet* was funded by the Prairie Pothole Joint Venture of the North American Waterfowl Management Plan.