

ENDANGERED SPECIES

Status: State Rare
Candidate for Federal Listing

REGAL FRITILLARY

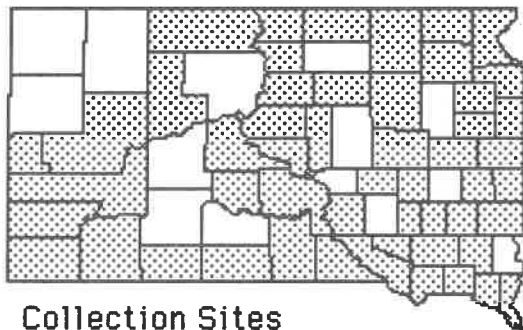
(*Speyeria idalia*)

Description

This species' wingspan ranges from 2.9 to 3.8 inches. The regal fritillary is easily recognized by its large size compared with other butterflies, reddish-orange forewings and black hindwings with two rows of spots. Both rows of spots are white in females while the outer row is rust-orange in males.

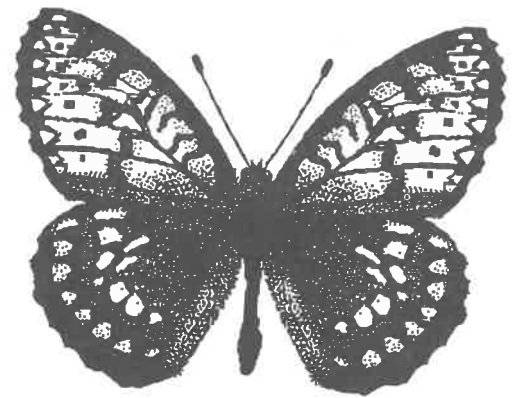
Distribution

The historical range of *Speyeria idalia* extended from the Maritime Provinces of Canada south through the New England states to North Carolina and west across the northern half of the U. S. to eastern Colorado and Montana. The species no longer occurs in the Maritimes or much



Collection Sites

of New England and is rapidly declining in most of its remaining range except the prairie states. In South Dakota, the regal fritillary is found in remnant prairie sites throughout the state.



Habitat: The regal fritillary generally inhabits wet meadows and tallgrass prairie, but the species also frequents dry undisturbed prairie areas in western South Dakota.

Natural History

Life Cycle: The regal fritillary population size seems to fluctuate. In some years individuals will be abundant and will scatter more widely while in other years, they are scarce. There is a single annual generation in this species. In South Dakota the first males appear in mid-June and fly until August, while the females flight period is early July to mid-September. The light brown eggs are laid near violets. After hatching, the unfed caterpillars over winter beneath leaves on the ground. In spring, as temperatures rise, the *larvae* begin feeding on the leaves of violets. They are *nocturnal* feeders, staying hidden during the day. Mature *larvae* are velvety black with dull yellow to reddish orange stripes and six rows of tapering, fleshy spines. When full grown, the

caterpillars shed their skin and form a light brown *chrysalis* with black spots. About two weeks later, the *chrysalis* splits open and the adult emerges.

Behavior: Males patrol throughout the day in search of emerging females. Females become more active and wander more extensively in late summer, when they search for areas to lay their eggs.

Adult Nectar Sources: Adults sip *nectar* at milkweeds and thistles. Whorled milkweed was noted to be the favored *nectar* source near Oahe Dam in 1983. Blazing stars also are flowers that attract regal fritillaries.

Larval Host Plants: *Larvae* feed on violets, including prairie violet. Nuttall's violet is presumed to be the host plant in western South Dakota.

Significance

Butterflies pollinate flowers and fill important roles in the food chain as food for spiders and birds. Owing to their sensitivity to environmental changes, butterflies are used as indicator species. Many people enjoy watching and photographing butterflies.

Conservation Measures

Regal fritillary populations have declined in the Midwest mainly due to the conversion of tallgrass prairies into cropland. Pesticides have also contributed to the species' decline. Large tracts of native prairie with abundant wildflowers are needed to protect this beautiful butterfly. One such area is the Samuel Ordway Prairie near Leola, S.D., managed by The Nature Conservancy. The regal fritillary is a candidate for listing as a federally threatened species. Currently, South Dakota does not have any invertebrate species listed as threatened or endangered.

Glossary

Chrysalis - inactive stage of butterflies in which the larva transforms into the adult form; pupa.

Larvae - the immature, wingless, and often worm-like form in which certain insects hatch from the egg, and in which they remain, with increase in size and other minor changes, until they enter the chrysalis stage. Butterfly and moth larvae are also known as caterpillars. Singular: larva.

Maritime Provinces - Canadian provinces; New Brunswick, Nova Scotia, and Prince Edward Island.

Nectar - a sweet liquid secreted by certain glands of a plant.

Nocturnal - moving about at night.

References

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