

# SONORA SKIPPER

*Polites sonora*

Original prepared by R.J. Cannings

## Species Information

### Taxonomy

The Sonora Skipper is in the order Lepidoptera and the family Hesperidae. The Sonora Skipper is one of six species in the genus *Polites* known from British Columbia; 16 species are known to occur in North America. Only one subspecies *P. sonora sonora*, occurs in British Columbia (Guppy and Shepard 2001). The taxonomy of this subspecies is currently under review. Layberry et al. (1998) assigned British Columbia specimens to *P. sonora siris*, but Guppy and Shepard (2001) show *P. sonora siris* as being restricted to western Washington State.

### Description

A small orange (male) or orange-brown (female) skipper (wingspan 25–27 mm) with distinctive “crisp” crescent-shaped medial band of pale spots on the underside of the hindwing (Layberry et al. 1998; Guppy and Shepard 2001). The egg is round and light green; third instar larva is 5 mm long and grey green with many fine black scales (Guppy and Shepard 2001).

### Distribution

#### Global

Found in southwestern British Columbia through Washington, Oregon, and California to Mexico; also in the American Rocky Mountains from Idaho and western Montana south to Colorado and northern Arizona (Opler et al. 1995).

### British Columbia

This species is only confirmed from three locations in British Columbia: Crater Mountain, Manning Provincial Park, and Hope Mountain. This species may also occur near Merritt.

#### Forest region and districts

Southern Interior: Cascades, Okanagan Shuswap (Penticton)

Coast: Chilliwack

#### Ecoprovinces and ecosections

COM: EPR

SOI: OKR, STU

#### Biogeoclimatic units

BG: xh1

IDF: dk1, dk2, xh1

MH: mm

PP: xh1

#### Broad ecosystem units

BS, DF, DP, MF, PP

#### Elevation

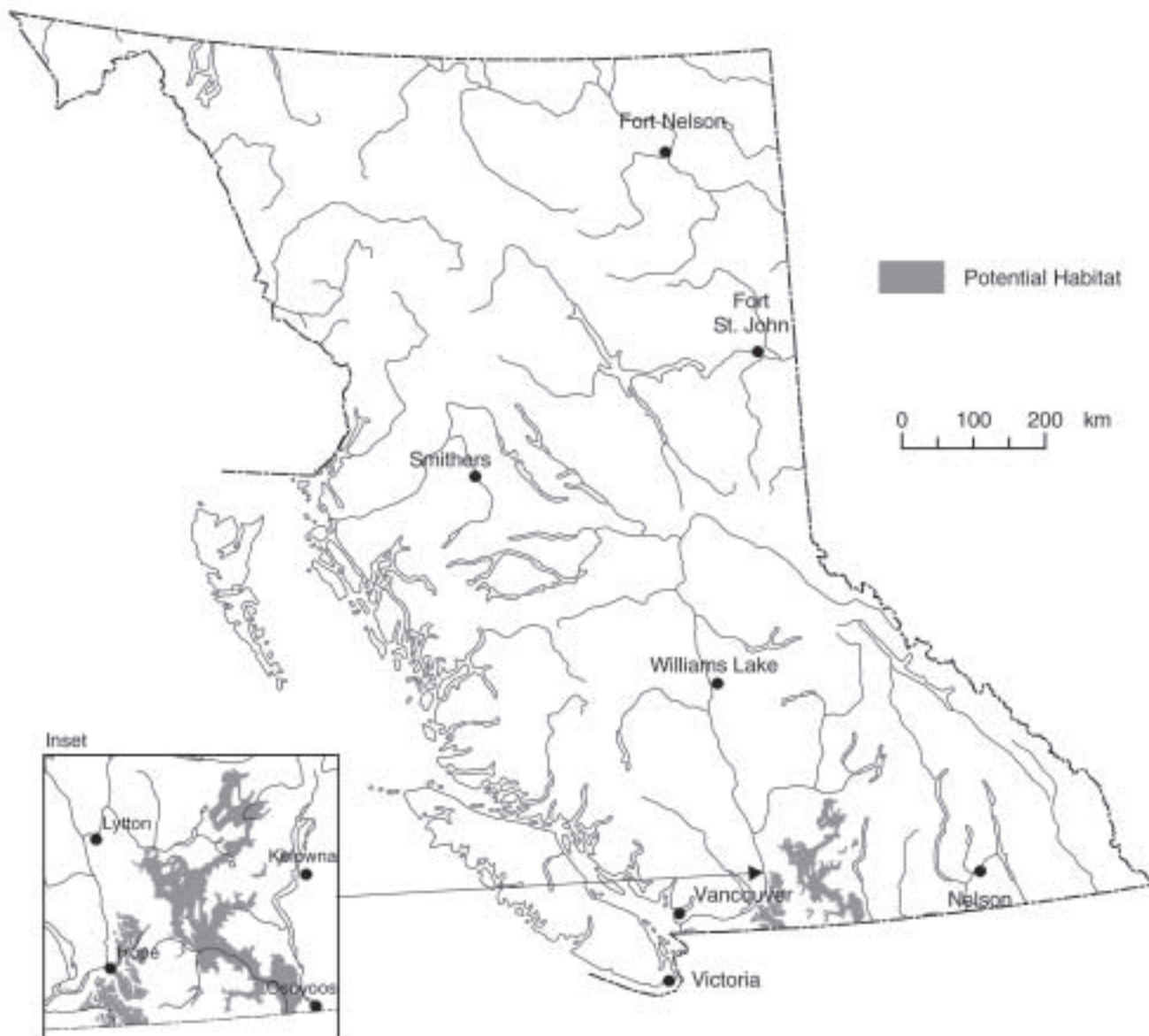
1160–1675 m

### Life History

#### Diet and foraging behaviour

Larvae feed on grasses. Newcomer (1967) successfully reared this species on Idaho fescue, *Festuca idahoensis*. Adults nectar on a variety of flowers, including thistles (Opler et al. 1995).

## Sonora Skipper (*Polites sonora*)



Note: This map represents a broad view of the distribution of potential habitat used by this species. The map is based on several ecosystem classifications (Ecoregion, Biogeoclimatic and Broad Ecosystem Inventory) as well as current knowledge of the species' habitat preferences. This species may or may not occur in all areas indicated.

## Reproduction

Eggs are laid in mid- to late June in central Washington and hatch about 8 days later. Larvae reach the third instar stage by the end of July (Newcomer 1967). Based on habits of closely related species and timing of larval development (Newcomer 1967), this species probably overwinters as pupae, at least at lower elevations. Populations at higher elevations (ca. 1500 m) may overwinter as third or fourth instar larvae, since adults do not fly at those altitudes until July (J.H. Shepard, pers. comm.).

## Site fidelity

Sonora Skippers are found repeatedly in the same meadows year after year (C.S. Guppy, pers. comm.).

## Home range

No data.

## Dispersal and movements

No data.

## Habitat

### Structural stage

2: herb

### Important habitats and habitat features

Small meadows and forest clearings (Dornfield 1980). Newcomer (1967) suspected that Idaho fescue was an important larval food plant.

## Conservation and Management

### Status

The Sonora Skipper is on the provincial *Red List* in British Columbia. Its status in Canada has not been determined (COSEWIC 2002).

Summary of ABI status in BC and adjacent jurisdictions (NatureServe Explorer 2002)

BC	ID	MT	OR	WA	Canada	Global
S1	SU	S5	S?	S4	N1	G4

## Trends

### Population trends

Trend is not known. Only two sites are accurately recorded; Guppy and Kondla (2000) estimate that the species may occur in a total of five sites in British Columbia with a provincial population of no more than 3000 individuals.

### Habitat trends

Grassland habitats in general are declining in quality and area due to urban and agricultural development, forest encroachment, and in-growth.

## Threats

### Population threats

This species has a very small range in British Columbia and is only confirmed from two locations. A restricted distribution and possible lack of genetic exchange increases the risk of extirpation.

### Habitat threats

This species depends on grassy meadows; thus, the primary threats in British Columbia may include heavy livestock grazing, invasion of grasslands by invasive species, and fire suppression and resulting forest encroachment. Forest harvesting also poses a threat if it involves degradation of grass meadow habitat (Guppy and Kondla 2000).

## Legal Protection and Habitat Conservation

Butterflies are not protected under the provincial *Wildlife Act*. They are protected from collection in national and provincial parks.

Manning Provincial Park provides some habitat protection for this species (Guppy and Kondla 2000). Cathedral Provincial Park and the newly announced Snowy Mountain Protected Area likely contain suitable habitat as well.

Under the results based code, range use plans may be used to address the habitat requirements of this species when mitigation measures are incorporated.

## Identified Wildlife Provisions

### Wildlife habitat area

#### Goal

Maintain breeding habitat and larval forage species (grasses) to prevent local extirpations.

#### Feature

Establish WHAs at known locations where species regularly occurs.

#### Size

Typically between 15–25 ha but will depend on area of suitable habitat.

#### Design

The WHA should include grassland and forest openings within the vicinity of the known site; adults are generally found near the oviposition sites (C.S. Guppy, pers. comm.). Where possible the WHA should encompass the meadow area or suitable habitat patch.

### General wildlife measures

#### Goals

1. Maintain grassland at late seral to climax condition with healthy grass plants.
2. Maintain abundance and health of larval food plant (bunchgrasses, Idaho fescue).
3. Prevent or minimize introduction and spread of invasive species.
4. Prevent soil disturbance.
5. Control forest encroachment and in-growth.

### Measures

#### Access

- Do not construct roads.

#### Harvesting and silviculture

- Minimize soil disturbance.

#### Pesticides

- Do not use pesticides.

#### Range

- Plan livestock grazing to maintain the desired plant community, desired stubble height and browse utilization. The desired plant community is that of the natural grassland at late seral to climax condition.
- Control livestock grazing (i.e., timing, distribution, and level of use) to minimize soil disturbance and the introduction of invasive species.
- Do not place livestock attractants within WHA.

## Additional Management Considerations

Controlled prescribed burns and/or silvicultural treatments may be necessary to maintain suitable grassland habitats for Sonora Skippers.

Good range management practices should be sufficient to maintain corridors for dispersal and prevent introduction and spread of invasive species.

## Information Needs

1. Inventory of appropriate habitat in the north Cascades of British Columbia.
2. Basic ecological information, such as flight period, larval food plants, and overwintering strategy
3. Assess effects of livestock grazing, invasive species and forest encroachment.

## Cross References

Bighorn Sheep, Flammulated Owl

## References Cited

- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2002. Canadian Species at Risk. [www.speciesatrisk.gc.ca](http://www.speciesatrisk.gc.ca)
- Dornfield, E.J. 1980. The butterflies of Oregon. Timber Press, Forest Grove, Oreg.
- Guppy, C.S. and N.G. Kondla. 2000. Status of butterflies and skippers of British Columbia for the National Accord for the Protection of Species at Risk. B.C. Min. Environ., Lands and Parks, Conserv. Data Cent., Victoria, B.C. Unpubl. rep.
- Guppy, C.S. and J.H. Shepard. 2001. Butterflies of British Columbia. Royal B.C. Mus. and UBC Press. 414 p.
- Layberry, R.A., P.W. Hall, and J.D. Lafontaine. 1998. The butterflies of Canada. Univ. Toronto Press, Toronto, Ont. 280 p.
- NatureServe Explorer. 2002. An online encyclopaedia of life. Version 1.6. NatureServe. Arlington, VA. Available at <http://www.natureserve.org/explorer/>
- Newcomer, E.J. 1967. Life histories of three western species of *Polites*. J. Res. Lepidoptera 5:243–247.
- Opler, P.A., H. Pavulaan, and R.E. Stanford. 1995. Butterflies of North America. Jamestown, N.D. Northern Prairie Wildl. Res. Centre Home Page. Available from: <http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/bflyusa.htm> (Version 17AUG2000).

## Personal Communications

- Guppy, C.S. 2001. Min. Water, Land and Air Protection, Quesnel, B.C.
- Shepard, J. 2001. Consultant, Pullman, Wash.

