COSEWIC
Status Appraisal Summary

on the

Ottoe Skipper
Hesperia ottoe

in Canada

ENDANGERED
2015

COSEWIC
Committee on the Status
of Endangered Wildlife
in Canada

COSEPAC
Comité sur la situation
des espèces en péril
au Canada

COSEWIC status appraisal summaries are working documents used in assigning the status of wildlife species suspected of being at risk in Canada. This document may be cited as follows:

COSEWIC. 2015. COSEWIC status appraisal summary on the Ottoe Skipper *Hesperia ottoe* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xix pp. (www.registrelep-sararegistry.gc.ca/default_e.cfm).

Production note:
COSEWIC would like to acknowledge Angèle Cyr for writing the status appraisal summary on the Ottoe Skipper (*Hesperia ottoe*), in Canada. This status appraisal summary was overseen and edited by Jennifer Heron, Co-chair of the COSEWIC Arthropods Specialist Subcommittee.

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Également disponible en français sous le titre Sommaire du statut de l'espèce du COSEPAC sur L'hespérie Ottoé (*Hesperia ottoe*) au Canada.

Catalogue No. CW69-14/2-54-2015E-PDF
ISBN 978-0-660-02535-3

COSEWIC
Assessment Summary

Assessment Summary – May 2015

Common name
Ottoe Skipper

Scientific name
Hesperia ottoe

Status
Endangered

Reason for designation
The species is a short grass and sand prairie specialist that occurs in small isolated populations within the fragmented and declining prairie habitats of southwestern Manitoba. Historically, this species has been found at only three sites in Canada. Any remaining populations in its historical range must be restricted to a very small area in southwestern Manitoba. Recent search effort has not recorded the species, but there is unsurveyed habitat within Canadian Forces Base Shilo that is not possible to survey. Threats include over-grazing, invasive plants that out-compete host plants, and loss of remnant habitats to agriculture.

Occurrence
Manitoba

Status history
Designated Endangered in May 2005. Status re-examined and confirmed in May 2015.

COSEWIC
Status Appraisal Summary

Hesperia ottoe

Ottoe Skipper — Hespérie ottoé

Range of occurrence in Canada: Manitoba

Status History:

Designated Endangered in May 2005. Status re-examined and confirmed in May 2015.

Evidence:

Wildlife species: *Hesperia ottoe* Edwards 1866	
Change in eligibility, taxonomy or designatable units:	yes ☐ no ☒
Explanation: Not applicable	

Range:	
Change in Extent of Occurrence (EO):	yes ☐ no ☒ unk ☐
Change in Index of Area of Occupancy (IAO) :	yes ☐ no ☒ unk ☐
Change in number of known or inferred current locations*:	yes ☐ no ☒ unk ☐
Significant new survey information	yes ☐ no ☒

Explanation:

Ottoe Skipper ranges within the central United States, reaching the northernmost extent of its range in southern Manitoba (Figure 1). The skipper is a mixed-grass and sand prairie specialist. The species and its habitat are patchily distributed throughout its global range (Coffin and Pfannmuller 1988, Klassen *et al*. 1989, Royer 1997).

There are three known sites in Canada: 1) Treesbank (collection dates unknown), 2) Aweme (1921 and 1926) and 3) Spruce Woods Provincial Park (SWPP) (1980s) (Klassen *et al*. 1989).

The most recent Ottoe Skipper record is from SWPP in the late 1980s (COSEWIC 2005; Westwood and Friesen 2007; Friesen and Murray 2010; Friesen and Murray 2011; Murray and Friesen 2012) (Table 1). The SWPP site is considered extant because records are within the past 50 years and there are large patches of short-grass and sand prairie habitat available and likely to support a population. The sites at Treesbank and Aweme are not considered extant.

In 2005 the extent of occurrence (EO) was estimated as small or 0. The parameters of EO calculation COSEWIC uses have since changed and the updated EO is 4 km^2 (minimum convex polygon around the SWPP) in 2014.

The index of area of occupancy (IAO) was not used by COSEWIC in 2005 but rather the area of occupancy (AO) was estimated at 0. The IAO is now 4 km^2.

* IUCN definition of “location”

Population Information:

Change in number of mature individuals:	yes ☐ no ☐ unk ☒
Change in population trend:	yes ☐ no ☐ unk ☒
Change in severity of population fragmentation:	yes ☐ no ☐ unk ☒
Change in trend in area and/or quality of habitat:	yes ☐ no ☒ unk ☐
Significant new survey information	yes ☐ no ☒

Explanation:

Population trends are unknown in Canada and little information is available in the United States (NatureServe 2014). Despite its wide distribution in the United States, it is uncommon to rare and is highly localized at most sites (Dana 1991; NatureServe 2014).

In 2002 and 2003, Ottoe Skipper surveys were conducted in Manitoba and Saskatchewan, but no specimens were recorded (Webster 2002; COSEWIC 2005; Environment Canada 2010).

Ottoe Skipper and Dakota Skipper (*Hesperia dacotae*) and have been known to occupy the same prairie sites (Dana 1991) and surveys can be done concurrently (Environment Canada 2010).

In 2004, Manitoba Conservation conducted Ottoe Skipper surveys simultaneously with Dakota Skipper (see Stangl and Cantin 2004) in the Interlake region of Manitoba. Ottoe Skipper was not recorded.

In 2005 and 2006, Dakota Skipper surveys were carried out as part of a study that compared the habitat of the Tall Grass Prairie Preserve (TGPP) and the Interlake region of Manitoba to assess the suitability of reintroducing Dakota Skipper to the TGPP. Although the habitats in these areas are predominantly tallgrass sites (Ottoe Skipper is not known to occupy tallgrass sites) there was the possibility Ottoe Skipper could be in small pockets of shortgrass habitats throughout this area. Ottoe Skipper was not recorded (R. Westwood unpublished data; Environment Canada 2010).

From July 1 and August 12 of 2007, weekly surveys for Ottoe Skipper were conducted in Spruce Woods Provincial Park and accessible areas of Canadian Forces Base (CFB) Shilo (CFB Shilo is an active military training facility and portions of the area are inaccessible due to unexploded ordinance). Ottoe Skipper was not recorded (Westwood and Friesen 2007; Environment Canada 2010).

In 2009, 2010 and 2011, rare butterfly surveys were conducted between June and August at 26 sites in southwest Manitoba, Birds Hill Provincial Park, southeastern Manitoba and the southern Interlake region. Ottoe Skipper was not recorded (Friesen and Murray 2010, 2011; Friesen 2012; Friesen pers. comm. 2014).

Threats:

Change in nature and/or severity of threats:	yes ☐ no ☒ unk ☐

Explanation:

Based on information from populations in the United States, Ottoe Skipper is known to be highly vulnerable to habitat disturbance, and requires undisturbed sand and mixed-grass prairie habitats (Selby 2005; Environment Canada 2010).

Because the species has not been recorded since the 1980s, threats are inferred from other butterfly species within the SWPP site. Threats to Ottoe Skipper are summarized from the species' recovery plan (Environment Canada 2010). Threats follow the International Union for Conservation of Nature-Conservation Measures Partnership (IUCN-CMP) threats classification.

2. Agriculture and aquaculture

2.1 Annual and perennial non-timber crops.

Since European settlement, much of the former native prairies has been converted to agricultural development, including more than 99% of the native mixed- and tall-grass prairie in Manitoba (Samson and Knopf 1994). One of the greatest threats to Ottoe Skipper is conversion of the remaining fragments of native prairie for agriculture. For example, immediately west of CFB Shilo, most mixed-grass prairie sites have been converted to potato fields (COSEWIC 2005).

In addition, the removal of critical nectar sources and ingrowth of exotic plants such as Kentucky Bluegrass (see Threat 8) are the direct result of mowing and/or haying activities before or during the adult flight period (McCabe 1981; Dana 1997).

2.3 Livestock farming and ranching

Specialist butterflies such as Ottoe Skipper are susceptible to overgrazing in mixed-grass and sand-prairie habitats (McCabe and Post 1977, Royer and Marrone 1992, Royer and Royer 1998, Swengel and Swengel 1999). Detrimental changes to the plant community from overgrazing may include the direct removal of nectar and larval sources as well as soil compaction, changes in soil moisture and condition, and trampling of larva (McCabe 1981, Dana 1997, Royer and Marrone 1992, Swengel and Swengel 1999).

5. Biological resource use

5.1 Hunting and collecting terrestrial animals

Skippers are not showy butterflies and not highly popular with most Lepidoptera collectors. However, because this species has not been recorded in the past 35 years, it has a higher chance of being sought after by a collector.

Ottoe Skipper is provincially listed as threatened under the Manitoba *Endangered Species Act,* and it is illegal to collect specimens without a scientific permit (Environment Canada 2010).

7. Natural system modifications

7.1 Fire and fire suppression

Fire was an important process in historically maintaining native prairie species composition and habitat. Historical wildfires were patchy and did not burn the entire habitat occupied by skippers, allowing adults to recolonize new sites (Swengel 1998a). Prescribed burns may be beneficial for maintaining the prairie flora and certain insect species, and some land managers continue to use prescribed fire to maintain native grassland structure. In some cases prescribed fire may be devastating to other species of insects (Swengel 2001).

Prairie habitat specialists such as Ottoe Skipper, Dakota Skipper and Poweshiek Skipperling (*Oarisma poweshiek*) can be susceptible to local extirpation due to prescribed burning of isolated prairies (McCabe 1981, Schlicht and Saunders 1994, Swengel 1996, 1998b, 2001, Orwig and Schlicht 1999). Controlled burns are not currently prescribed in Spruce Woods Provincial Park; however, wildfires periodically burn into the park from the military exercises within CFB Shilo and could negatively impact undetected Ottoe Skipper populations (COSEWIC 2005).

8. Invasive and other problematic species and genes

8.1 Invasive non-native/alien species

Prairie plants within Ottoe Skipper habitats are threatened by the invasion of exotic plants such as Leafy Spurge (*Euphorbia esula*), Kentucky Bluegrass, and Smooth Brome (*Bromus inermis*). The invading plant species often become dominant and replace native forbs and grasses used by adult and larval Ottoe Skippers. In Spruce Woods Provincial Park and particularly along roadsides on CFB Shilo, various densities of Leafy Spurge have been observed at or near certain sites (Westwood and Friesen 2007). Remaining Ottoe Skipper habitat is increasingly threatened by Leafy Spurge because it has been identified as a threat to mixed-grass prairie habitat quality in southern Manitoba (Environment Canada 2010).

9. Pollution

9.3 Agricultural and forestry effluents

Ottoe Skipper could be threatened by non-targeted spraying of insecticides to control agricultural pests, such as grasshoppers (Royer and Marrone 1992). The use of herbicides to control invasive plants such as Leafy Spurge can also eliminate native forbs and skipper nectar sources (Royer and Marrone 1992). The chemical control of Leafy Spurge in 2004 near the Aweme site resulted in the direct loss of Ottoe Skipper nectar sources that were abundant in the mixed-grass prairie (COSEWIC 2005).

11. Climate change and severe weather

Inclement weather has been shown to have a large effect on butterfly abundance (Pollard and Yates 1993). Ottoe Skipper is vulnerable to extreme weather conditions such as harsh winters, late frosts, unusually cool and wet growing seasons, drought or fire (Selby 2005). Ottoe Skipper reproduction could be affected by changes in weather and climate if resulting shifts in plant communities and phenology affect the availability of nectar sources during the adult flight period.

Protection:

Change in effective protection: yes ☐ no ☒

Explanation:

Ottoe Skipper is listed as Endangered under Schedule 1 of the federal *Species at Risk Act* (SARA) (Canada Gazette 2006). It was last assessed as Endangered by COSEWIC in May 2005.

Ottoe Skipper has been listed as Threatened under the Manitoba *Endangered Species Act* (CanLII 2009) since 1998. Under this act, it is illegal to: (a) kill, injure, possess, disturb or interfere with the species; (b) destroy, disturb or interfere with the habitat of a threatened species; or (c) damage, destroy, obstruct or remove a natural resource on which the species depends for its life and propagation (Environment Canada 2010).

Status ranks (Natureserve 2014):

Global rank: apparently secure to vulnerable (G3G4).
United States national rank: N3N4.
Subnational ranks:
Indiana, Missouri, Wisconsin: Critically Imperiled (S1)
Michigan: S1S2
Colorado, Illinois, Iowa, Minnesota, Nebraska, Oklahoma, South Dakota: Imperiled (S2)
Kansas and Montana: Imperiled to Vulnerable (S2S3)
Wyoming: Vulnerable (S3)

Ottoe Skipper is not listed under the United States (federal) *Endangered Species Act*.

Spruce Woods Provincial Park is managed by the Manitoba government for recreation and conservation purposes

Rescue Effect:

Change in evidence of rescue effect: yes ☐ no ☒

Explanation:

Ottoe Skipper populations in the United States are threatened or in decline and considered highly localized or generally uncommon to rare (NatureServe 2014). The quality of native mixed-grass and sand prairie habitat in Canada has also declined (Environment Canada 2010). The skipper is not known to disperse long distances and rescue effect is unlikely (Environment Canada 2010).

Quantitative Analysis:

Not undertaken because of lack of population data.

Change in estimated probability of extirpation: yes ☐ no ☒ unknown ☐

Details:

Not applicable

Summary and Additional Considerations: [e.g., recovery efforts]

The main recovery objectives are to inventory potential and previously occupied habitats to determine if the species is still present in Canada (Environment Canada 2010).

Acknowledgements:

Thank you to Environment Canada (Lisa Twolan and Carolina Caceres) for enabling time and resources to complete this report. Thank you to those who contributed information on the species: Chris Friesen (Manitoba CDC), Chris Schmidt (Canadian National Collection), Crispin Guppy (Ecofor Consulting Ltd), Cory Sheffield (Royal Saskatchewan Museum), and Claudia Copley (Royal BC Museum). Reginald Webster wrote the Ottoe Skipper COSEWIC (2005) status report. Thank you to COSEWIC Arthropod Specialist Subcommittee members Syd Cannings and Cory Sheffield for report review.

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Copley, C. October 2014. Senior Collections Manager, Entomology. Royal BC Museum. 675 Belleville Street, Victoria, BC, V8W 9W2.

Guppy, C. October 2014. Senior Biologist. Ecofor Consulting Ltd., Whitehorse, Yukon.

Howes, B. November 2014. Science Support. Species at Risk Program. Natural Resource Conservation Branch. Protected Areas Establishment and Conservation Directorate. Parks Canada. 30 Victoria Street, Gatineau, Quebec, J8X 0B3.

Nantel, P. November 2014. Office of the Chief Ecosystem Scientist. Protected Areas Establishment and Conservation Directorate. Parks Canada. 30 Victoria Street, Gatineau, Quebec, J8X 0B3.

Schmidt, C. October 2014. Entomologist. National Collections of Insects, Arachnids and Nematodes. Canadian Food Inspection Agency. 960 Carling Avenue, K. W. Neatby Building, Ottawa, Ontario, K1A 0C6.

Sheffield, C. October 2014. Research Scientist and Curator of Invertebrate Zoology. Royal Saskatchewan Museum. 2340 Albert Street, Regina, Saskatchewan, S4P 2V7.

Snable, V. 2015. Canadian Wildlife Service, Prairie and Northern Region.

Snaith, T. November 2014. Special Advisor. Ecological Integrity Branch, Parks Canada Agency, 25 Eddy Street, 4th Floor, 25-4-S, Gatineau, Quebec, K1A 0M5.

Watkins, W. November 2014. Wildlife and Ecosystem Protection Branch. Manitoba Department of Conservation, Box 24, 200 Saulteaux Crescent, Winnipeg, Manitoba, R3J 3W3.

Friesen, C. July 2013. Biodiversity Information Manager. Manitoba Conservation Data Centre. Box 24, 200 Saulteaux Crescent, Winnipeg, Manitoba, R3J 3W3.

Information sources:

Canada Gazette Part 3. 2009. Order Amending Schedule 1 to 3 of the Species at Risk Act. Vol. 140, No. 18 – August 15, 2006.

Canadian Legal Information Institute (CanLII). 2009. Threatened, endangered and extirpated species regulation, Man. Reg. 25/98 (Last update on CanLII: 2006-11-07). Enabling Statute: *Endangered Species Act*, C.C.S.M. c. E111. Online. Available at: (Accessed: 05 January 2009).

Coffin, B. and L. Pfannmuller, eds. 1988. Minnesota's endangered flora and fauna. University of Minnesota Press, Minneapolis. Minnesota.

COSEWIC. 2005. COSEWIC assessment and status report on OttoeOttoe Skipper *Hesperia ottoe* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 26 pp.

Dana, R.P. 1991. Conservation management of the Prairie skippers *Hesperia dacotae* and *Hesperia ottoe*: basic biology and threat of mortality during prescribed burning in spring. Minnesota Agricultural Experiment Station Bulletin 594-1991 (AD-SB-5511-S). University of Minnesota, St. Paul. 63 pp.

Dana, R.P. 1997. Characterization of three Dakota skipper sites in Minnesota. Unpublished report, Minnesota Department of Natural Resources, Natural Heritage and Nongame Research Program, St. Paul, MN. December 22, 1997. 17+ pp.

Environment Canada. 2010. Recovery Strategy for OttoeOttoe Skipper (*Hesperia ottoe*) in Canada. *Species at Risk Act* Recovery Strategy Series. Environment Canada, Ottawa. V + 24 pp.

Friesen, C. 2014 Personal communication. Manitoba Conservation Data Centre.

Friesen, C. and C. Murray. 2010. Rare species surveys and stewardship activities by the Manitoba Conservation Data Centre, 2009. Report No. 2009-04. Manitoba Conservation Data Centre, Winnipeg, Manitoba. 20 pp.

Friesen, C. and C. Murray. 2011. Rare species surveys and stewardship activities by the Manitoba Conservation Data Centre, 2010. Report No. 2010-01. Manitoba Conservation Data Centre, Winnipeg, Manitoba. 24 pp.

Klassen, P., A.R. Westwood, W.B. Preston and W.B. McKillop. 1989. The Butterflies of Manitoba. Winnipeg: Manitoba Museum of Man and Nature. 300 pp.

McCabe, T.L. 1981. The Dakota skipper, *Hesperia dacotae* (Skinner): Range and biology, with special reference to North Dakota. Journal of the Lepidopterists' Society 35: 179-193.

McCabe, T.L. and R.L. Post. 1977. Skippers (Hesperoidea) of North Dakota. North Dakota Insects Pub. No. 11, North Dakota State University, Agricultural Experimental Station, Fargo, North Dakota.

Murray, C. and Friesen, C. 2012. Manitoba Conservation Data Centre Surveys and Stewardship Activities, 2011. Report No. 2012-01. Manitoba Conservation Data Centre, Winnipeg, Manitoba. 24 pp.

NatureServe. 2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1 (2 February 2009). NatureServe, Arlington, Virginia. (Accessed: November 6, 2014).

Orwig, T. and D. Schlicht. 1999. The last of the Iowa skippers. American Butterflies. 7(1): 4-12.

Pollard, E. and T.J. Yates. 1993. Monitoring Butterflies for Ecology and Conservation. Chapman and Hall, London.

Royer, R.A. and G.M. Marrone. 1992. Conservation status of the Dakota skipper (*Hesperia dacotae*) in North and South Dakota. Unpublished report, U.S. Fish and Wildlife Service, Denver, CO. 44 pp.

Royer, R.A. 1997. Atlas of North Dakota butterflies. Jamestown ND: Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.org/resource/distr/lepid/bflynd.html (Version 18SEP97)

Royer, R.A. and M.R. Royer. 1998. Report on an inventory of habitat and occurrence of Dakota skipper [*Hesperia dacotae* (Skinner 1911)] in the Towner-Karlsruhe Habitat Complex (McHenry County, North Dakota) during 1998. Unpublished report, Division of Science, Minot State University, and U.S. Fish and Wildlfie Service, St. Paul, MN, December 1, 1998. 25+ pp.

Samson, F. and F. Knopf. 1994. Prairie conservation in North America. Bioscience 44(6): 418-421.

Schlicht, D. and M. Saunders. 1994. Completion of status surveys for the Dakota skipper (*Hesperia dacotae*) and the Poweshiek skipper (*Oarisma poweshiek*) in Minnesota (with additional data on the regal fritillary (*Speyeria idalia*). Unpublished report, Minnesota Department of Natural Resources, Natural Heritage and Nonegame Research Program, St. Paul, MN. July 29, 1994. 22 + pp.

Schultz, C. 2001. Restoring resources for an endangered butterfly. Journal of Applied Ecology 38: 1007-1019.

Selby, G. 2005. Ottoe Skipper (*Hesperia ottoe* W.H. Edwards): a technical conservation assessment (PDF Version, 2.21 MB). [Online]. USDA Forest Service, Rocky Mountain Region. [Accessed November 26, 2006].

Stangl, G. and K. Cantin. 2004. 2004 Survey of localities and habitats of the Dakota skipper, *Hesperia dacotae* in reference to sites previously examined by Reginald Webster. Unpublished report. Manitoba Conservation, Wildlife and Ecosystems Protection Branch, Winnipeg, MB.

Swengel, A.B. 1996. Effects of fire and hay management on abundance of prairie butterflies. Biological Conservation 76: 73-85.

Swengel, A.B. 1998a. Effects of management on butterfly abundance in tallgrass prairie and pine barrens. Biological Conservation 83: 77-89.

Swengel, A. 1998b. Managing for Butterflies in Prairie: what do I do now that I want to manage for butterflies. North American Butterfly Association, Morristown, NJ. 7 pp.

Swengel, A.B. and S.R. Swengel. 1999. Observations of prairie skippers (*Oarisma poweshiek, Hesperia dacotae, H. ottoe, H. leonardus pawnee*, and *Atrytone arogos iowa*) (Lepidoptera: Hesperiidae) in Iowa, Minnesota, and North Dakota during 1988-1997. The Great Lakes Entomologist 32 (4): 267-292.

Swengel, A.B. 2001. A literature review of insect responses to fire, compared to other conservation managements of open habitat. Biodiversity and Conservation 10:1141-1169.

Webster, R. 2002. 2002 Survey of the Dakota skipper, *Hesperia dacotae* (Skinner). Unpublished report. Canadian Wildlife Service, Environment Canada. 14 pp.

Westwood, A.R. and C. Friesen. 2007. Ottoe Skipper (*Hesperia ottoe*) and White Flower Moth (*Schinia bimatris*) surveys on CFB Shilo and Spruce Woods Provincial Park, Manitoba. Final report to the Canadian Wildlife Service. University of Winnipeg, Winnipeg, Manitoba. 42 pp.

Westwood, A.R. and C. Friesen. 2009. Occurrence and habitat of the endangered white flower moth, *Schinia bimatris* (Lepidoptera: Noctuidae), in Manitoba. Canadian Entomologist. 141: 80-85.

TECHNICAL SUMMARY

Hesperia ottoe

Ottoe Skipper — Hespérie ottoé

Range of occurrence in Canada: Manitoba

Demographic Information

Generation time	1 year
Is there an [observed, inferred, or projected] continuing decline in number of mature individuals?	Unknown, species possibly extirpated from Canada
Estimated percent of continuing decline in total number of mature individuals within [5 years or 2 generations]	Unknown
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over the last [10 years, or 3 generations].	Unknown
[Projected or suspected] percent [reduction or increase] in total number of mature individuals over the next [10 years, or 3 generations].	Unknown
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over any [10 years, or 3 generations] period, over a time period including both the past and the future.	Unknown
Are the causes of the decline a) clearly reversible and b) understood and c) ceased?	a. Unknown b. No c. Unknown
Are there extreme fluctuations in number of mature individuals?	Not likely

Extent and Occupancy Information

Estimated extent of occurrence	4 km²
Index of area of occupancy (IAO)	4 km²
Is the population severely fragmented? • in the 2005 status report, severe fragmentation was interpreted differently than in the current COSEWIC guidelines.	No
Number of locations∗	1
Is there an [observed, inferred, or projected] continuing decline in extent of occurrence?	Likely decline in habitat.
Is there an [observed, inferred, or projected] continuing decline in index of area of occupancy?	Likely decline in habitat.
Is there an [observed, inferred, or projected] continuing decline in number of populations?	No
Is there an [observed, inferred, or projected] continuing decline in number of locations*?	Unknown
Is there an [observed, inferred, or projected] continuing decline in [area, extent and/or quality] of habitat?	Yes, decline in quality of habitat

∗ See Definitions and Abbreviations on COSEWIC website and IUCN 2010 for more information on this term.

Are there extreme fluctuations in number of populations?	No
Are there extreme fluctuations in number of locations?	No
Are there extreme fluctuations in extent of occurrence?	No
Are there extreme fluctuations in index of area of occupancy?	No

Number of Mature Individuals (in each population)

Population	N Mature Individuals
Total	Unknown

Quantitative Analysis

Probability of extinction in the wild is at least [20% within 20 years or 5 generations, or 10% within 100 years].	None performed. No data available.

Threats (actual or imminent, to populations or habitats)

The highest threats to Ottoe Skipper are the loss of native short-grass and sand prairie habitat and the continued degradation from land conversion, overgrazing and invasion by exotic plant species such as Leafy Spurge.

Rescue Effect (immigration from outside Canada)

Status of outside population(s)?	Threatened or in decline
Is immigration known or possible?	Unknown
Would immigrants be adapted to survive in Canada?	Likely
Is there sufficient habitat for immigrants in Canada?	Unknown
Is rescue from outside populations likely?	Unlikely

Data Sensitive Species

Is this a data sensitive species? No

Status History

COSEWIC: Designated Endangered in May 2005. Status re-examined and confirmed in May 2015.

Status and Reasons for Designation

Status:	**Alpha-numeric Code:**
Endangered	B1ab(iii)+2ab(iii)

Reasons for Designation:
The species is a short grass and sand prairie specialist that occurs in small isolated populations within the fragmented and declining prairie habitats of southwestern Manitoba. Historically, this species has been found at only three sites in Canada. Any remaining populations in its historical range must be restricted to a very small area in southwestern Manitoba. Recent search effort has not recorded the species, but there is unsurveyed habitat within Canadian Forces Base Shilo that is not possible to survey. Threats include overgrazing, invasive plants that out-compete host plants, and loss of remnant habitats to agriculture.

Applicability of Criteria

Criterion A (Decline in Total Number of Mature Individuals): Not applicable. Population trends unknown.
Criterion B (Small Distribution Range and Decline or Fluctuation): Meets Endangered B1ab(iii)+2ab(iii) because the IAO and the EOO are below the thresholds, there are 1-3 locations, and there is an observed continuing decline in (iii) area, extent and quality of habitat.
Criterion C (Small and Declining Number of Mature Individuals): Not applicable. Number of mature individuals unknown.
Criterion D (Very Small or Restricted Population): Meets Threatened D2 since the IAO and the number of locations (1-3) are below the thresholds.
Criterion E (Quantitative Analysis): None performed. Insufficient data available.

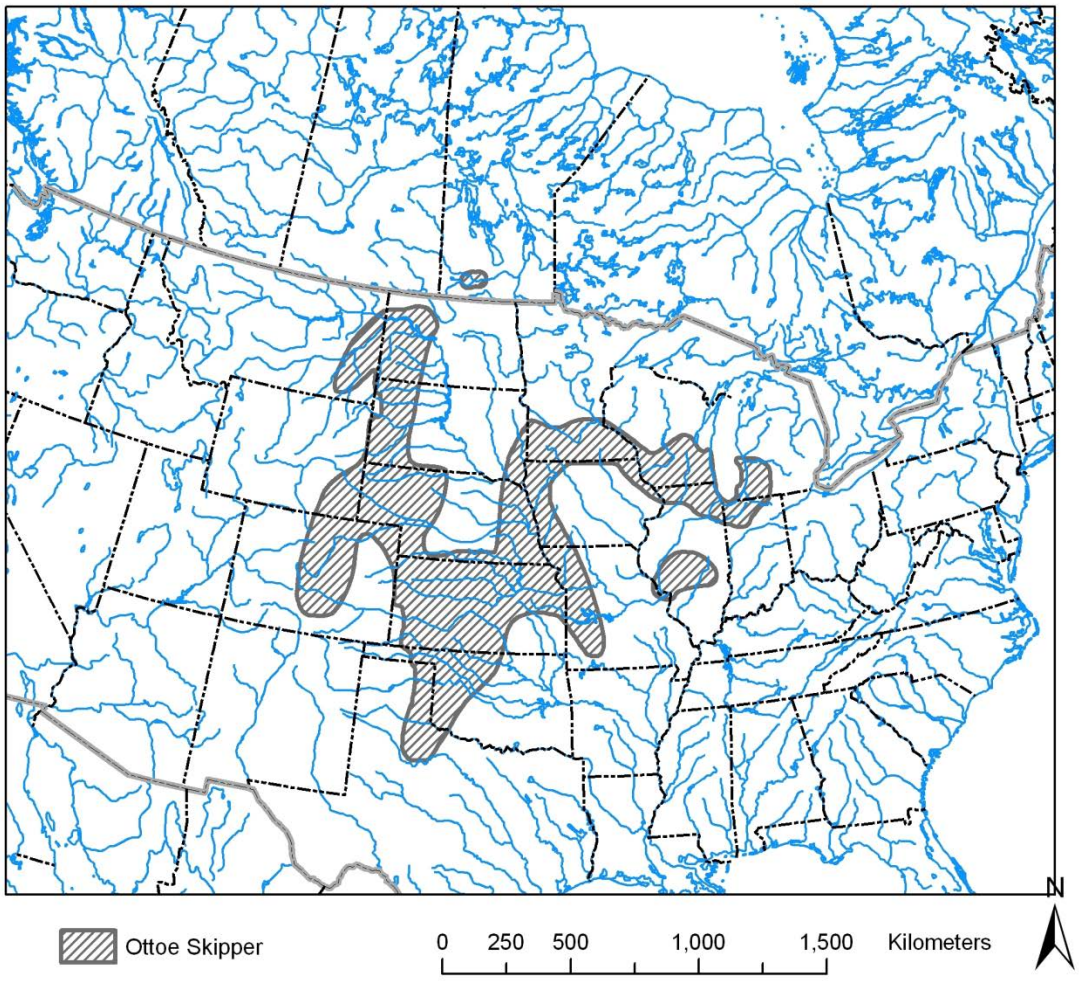

Figure 1. Global range of Ottoe Skipper (*Hesperia ottoe*) (COSEWIC 2005).

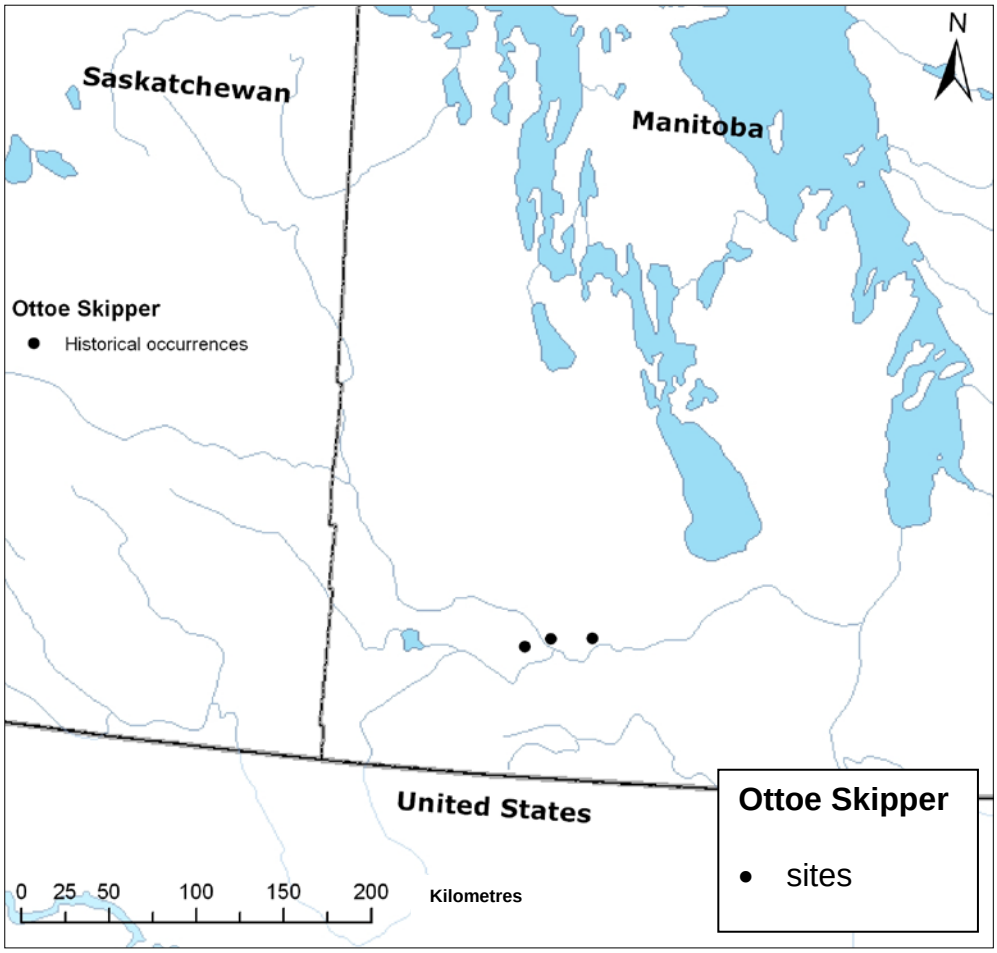

Figure 2. Canadian range of Ottoe Skipper (*Hesperia ottoe*) (COSEWIC 2005). All Canadian sites are in Manitoba: from east to west sites (black dots) are Aweme, Treesbank (Rounthwaithe) and Spruce Woods Provincial Park.

Table 1. Ottoe Skipper search effort, including search effort concurrent with Dakota Skipper surveys. Ottoe Skipper was not recorded during these surveys.

Year	Reference	Prov.	# Sites Visited	(T)arget / (O)ther	Time Spent Surveying	Distance	Date Range
2001	Hooper 2003	SK	N/A	O	N/A	N/A	June - July, 2001 - 2003
2002	Webster, 2003	MB, SK	N/A	O	N/A	N/A	June - July, 2002
2002	Rigney pers. comm. 2012	MB	N/A	O	N/A	N/A	N/A
2005	Morden 2006	MB	6	O	N/A	36 ha	July 12 - July 22, 2006
2006	Environment Canada 2007	MB	N/A	O	N/A	N/A	June - July 2006
2007	Webster 2007; Rigney pers. comm. 2012	MB, SK	N/A	O	N/A	N/A	June - July 2007
2011	Murray and Friesen 2012	MB	N/A	O	N/A	N/A	June - July, 2011
2010 - 2012	Rigney pers. comm. 2012	MB	N/A	O	N/A	N/A	June - July, 2010 - 2012

Year	Reference	Prov.	# Sites Visited	(T)arget / (O)ther	Time Spent Surveying	Distance	Date Range
2002	Westwood 2010	MB, SK	61	O	N/A		
2012	Westwood pers. comm. 2012	MB	N/A	O	N/A	N/A	N/A

COSEWIC HISTORY

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was created in 1977 as a result of a recommendation at the Federal-Provincial Wildlife Conference held in 1976. It arose from the need for a single, official, scientifically sound, national listing of wildlife species at risk. In 1978, COSEWIC designated its first species and produced its first list of Canadian species at risk. Species designated at meetings of the full committee are added to the list. On June 5, 2003, the *Species at Risk Act* (SARA) was proclaimed. SARA establishes COSEWIC as an advisory body ensuring that species will continue to be assessed under a rigorous and independent scientific process.

COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species, subspecies, varieties, or other designatable units that are considered to be at risk in Canada. Designations are made on native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fishes, arthropods, molluscs, vascular plants, mosses, and lichens.

COSEWIC MEMBERSHIP

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government science members and the co-chairs of the species specialist subcommittees and the Aboriginal Traditional Knowledge subcommittee. The Committee meets to consider status reports on candidate species.

DEFINITIONS
(2015)

Wildlife Species	A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)**	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)***	A category that applies when the available information is insufficient (a) to resolve a species' eligibility for assessment or (b) to permit an assessment of the species' risk of extinction.

* Formerly described as "Vulnerable" from 1990 to 1999, or "Rare" prior to 1990.

** Formerly described as "Not In Any Category", or "No Designation Required."

*** Formerly described as "Indeterminate" from 1994 to 1999 or "ISIBD" (insufficient scientific information on which to base a designation) prior to 1994. Definition of the (DD) category revised in 2006.

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The Canadian Wildlife Service, Environment Canada, provides full administrative and financial support to the COSEWIC Secretariat.