

Manitoba Conservation Data Centre Surveys and Stewardship Activities, 2011



Manitoba Conservation Data Centre
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Cover image: view of the Rat River near Otterburne with the purple flowers of Western Ironweed (*Vernonia fasciculata*) visible on the left bank.

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Introduction to the Manitoba Conservation Data Centre

The MBCDC, established in 1994, is housed in the Wildlife and Ecosystem Protection Branch and is part of the NatureServe network. Acting as a warehouse of information on Manitoba's biodiversity, it has developed lists of species and plant communities found in Manitoba and assigned each a conservation status rank based on how rare it is in Manitoba (see below for more information on ranks). The MBCDC then collects detailed information on where the rare elements have been observed. Much of this information is collected in the field by staff biologists or partners of the MBCDC. These locations are mapped in a geographic information system (GIS) and the data entered into a database. The MBCDC uses a scientifically and empirically defined methodology and rigorous standards common to all CDC's throughout the NatureServe network.

The CDC has sought ways to go beyond these core tasks to maximize the use of its information for effective, proactive conservation activities such as habitat securement, protection, and management. Many of these activities are the result of partnerships the CDC has formed with conservation organizations, industry, and landowners.

In addition to assisting with government initiatives to protect rare species and communities (e.g. The Protected Areas Initiative), element location information is provided to conservation organizations such as Manitoba Habitat Heritage Corporation and Nature Conservancy of Canada, who then use this data to prioritize and target locations for habitat securement and protection. The MBCDC also provides data to industry partners who wish to incorporate rare species information into the early stages of planning and siting developments. In addition, rare species location and management information is made available to landowners and managers so these habitats can be appropriately managed. Information is also shared with federal partners such as Parks Canada and the Canadian Wildlife Service.

The work of the MBCDC was recognized this past spring when it was presented with the Conservation Impact Award by NatureServe, a network of 82 similar centres throughout Canada, the United States and Latin America.

Conservation Status Ranks

The rarity of each species (and plant community) is assessed and assigned a conservation status rank at three geographic scales. The MBCDC works at the provincial (or subnational) level to assign each species an S rank. Through the work of the NatureServe network, species have also been assigned N (national) and G (global) ranks. These ranks range from 1 through 5, or very rare through abundant, respectively. Additional information about conservation status ranks is available on the MBCDC website (www.manitoba.ca/conservation/cdc/consranks) or from NatureServe (www.natureserve.org/explorer/ranking).

2011 Surveys and Stewardship Activities

The focus of MBCDC field surveys and stewardship activities in 2011 was on species in the mixed-grass prairie and sandhill areas of southwestern Manitoba, though some work was also done in the south Interlake and riparian areas in southeastern Manitoba. The species of primary interest were:

- Small White Lady's-slipper (*Cypripedium candidum*)
- Western Ironweed (*Vernonia fasciculata*)
- Rare sandhill plants – Hairy Prairie Clover (*Dalea villosa*), Western Spiderwort (*Tradescantia occidentalis*), and Smooth Goosefoot (*Chenopodium subglabrum*)
- Prairie Skink (*Plestiodon septentrionalis*)
- Great Plains Toad (*Anaxyrus cognatus*)
- Rare prairie butterflies – Dakota Skipper (*Hesperia dacotae*), Ottoe Skipper (*Hesperia ottoe*) and Uncas Skipper (*Hesperia uncas*)
- Rare sandhill moths – White Flower Moth (*Schinia bimatrix*), Gold-edged Gem (*Schinia avemensis*), Pale Yellow Dune Moth (*Copablepharon grandis*), Dusky Dune Moth (*Copablepharon longipenne*)

Sites were selected based on habitat suitability and proximity to previously documented occurrences of the target species. Habitat suitability was assessed by examining geospatial data (e.g. soil type) and remote sensing data (e.g. satellite imagery and aerial photographs), and comparing these to the known requirements of the target species. Specific survey methods and results for each species or species group are described below in the relevant section(s).

In 2011, survey activities by the MBCDC were directed to a significant degree by the funding received through Environment Canada's Habitat Stewardship Program for Species at Risk (HSP). In 2011, this program targeted species listed under the federal Species At Risk Act (SARA) and/or assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), with particular interest in the mixed-grass and tall-grass prairie areas of southern Manitoba. Additional funding was received from Nature Conservancy of Canada (NCC), through an agreement with NatureServe Canada, to survey several prairie and sandhill sites in southwestern Manitoba. Species listed under Manitoba's Endangered Species Act (ESA) were also targeted.

Over 400 new occurrences of at-risk species were documented using data collected by and submitted to the MBCDC (Table 1).

Table 1. Summary of rare and uncommon species occurrences documented using data collected by or submitted to the MBCDC for 2011.

Scientific Name	Common Name	Conservation Status	New Occurrences Documented
Plants			
<i>Agrimonia gryposepala</i>	Common Agrimony	S1S2	7
<i>Alopecurus borealis</i>	Alpine Foxtail	S2	1
<i>Anemone richardsonii</i>	Yellow Anemone	S3	1
<i>Asclepias verticillata</i>	Whorled Milkweed	S3	1
<i>Botrychium campestre</i>	Prairie Moonwort	S1	1
<i>Botrychium lunaria</i>	Common Moonwort	S3S4	2
<i>Botrychium simplex</i>	Least Grapefern	S1	1
<i>Bouteloua curtipendula</i>	Side-oats Grama	S2S3	1
<i>Calopogon tuberosus</i>	Swamp-pink	S2	2
<i>Carex glareosa</i>	Weak-clustered Sedge	S1	1
<i>Carex maritima</i>	Seaside Sedge	S2	1
<i>Carex subspathacea</i>	Hoppner's Sedge	S2	1
<i>Cerastium alpinum</i>	Alpine Chickweed	S2	2
<i>Chelone glabra</i>	Turtlehead	S2S3	3
<i>Circaea lutetiana ssp. canadensis</i>	Large Enchanter's-nightshade	S2	2
<i>Corispermum americanum var. americanum</i>	American Bugseed	S2S3	19
<i>Corispermum hookeri var. hookeri</i>	Hooker's Bugseed	S1	1
<i>Corispermum pallasii</i>	Pallas' Bugseed	SU	2
<i>Corispermum villosum</i>	Hairy Bugseed	S1S2	9
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	S3	1
<i>Coryphantha vivipara</i>	Pincushion Cactus	S2	2
<i>Cypripedium candidum</i>	Small White Lady's-slipper	S2	1
<i>Dalea villosa var. villosa</i>	Silky Prairie-clover	S2S3	3
<i>Draba glabella</i>	Whitlow-grass	S3?	2
<i>Draba nivalis</i>	Yellow Arctic Whitlow-grass	S1	1
<i>Drosera anglica</i>	Oblong-leaved Sundew	S3	1
<i>Drosera linearis</i>	Slender-leaved Sundew	S2	1
<i>Dryas integrifolia</i>	White Mountain-avens	S3	2
<i>Festuca hallii</i>	Plains Rough Fescue	S3	8
<i>Hierochloa pauciflora</i>	Arctic Holy Grass	S2	1
<i>Hippuris tetraphylla</i>	Four-leaved Mare's-tail	S3S4	1
<i>Honckenya peploides</i>	Seabeach Sandwort	S2	1
<i>Lesquerella arctica</i>	Northern Bladderpod	S2	1
<i>Leymus mollis ssp. mollis</i>	Sea Lyme-grass	S2?	2

<i>Linum sulcatum</i>	Grooved Yellow Flax	S3	2
<i>Lomatium macrocarpum</i>	Long-fruited Parsley	S3	1
<i>Lysimachia quadriflora</i>	Whorled Loosestrife	S2	1
<i>Orobanche ludoviciana</i>	Louisiana Broom-rape	S2	2
<i>Osmorhiza claytonii</i>	Wooly or Hairy Sweet Cicely	S2	2
<i>Oxytropis arctica</i>	Arctic Locoweed	S1	1
<i>Pedicularis flammea</i>	Flame-coloured Lousewort	S2	2
<i>Pedicularis lapponica</i>	Lapland Lousewort	S2S3	2
<i>Pedicularis sudetica</i>	Purple Rattle	S3	2
<i>Phlox hoodii</i>	Moss Pink	S3	1
<i>Phryma leptostachya</i>	Lopseed	S3	2
<i>Platanthera lacera</i>	Fringed Orchid	S2	2
<i>Poa arctica</i>	Arctic Blue Grass	S2?	1
<i>Pogonia ophioglossoides</i>	Rose Pogonia	S1	2
<i>Polygala verticillata</i>	Whorled Milkwort	S2	1
<i>Potentilla nivea</i>	Snow Cinquefoil	S1	2
<i>Potentilla pulchella</i>	Pretty Cinquefoil	S2	1
<i>Primula stricta</i>	Erect Primrose	S3	1
<i>Ranunculus pallasii</i>	Pallas Buttercup	S2	1
<i>Ranunculus pedatifidus</i>	Northern Buttercup	S2	2
<i>Rhododendron lapponicum</i>	Lapland Rose-bay	S2	2
<i>Rhynchospora alba</i>	White Beakrush	S3?	1
<i>Sagittaria rigida</i>	Sessile-fruited Arrowhead	S2	1
<i>Salix arbusculoides</i>	Shrubby Willow	S3	1
<i>Salix brachycarpa</i>	Short-capsuled Willow	S3	2
<i>Salix calcicola</i>	Lime Willow	S3	2
<i>Salix reticulata</i>	Net-veined Willow	S3	2
<i>Sanguinaria canadensis</i>	Blood-root	S2	2
<i>Saxifraga hirculus</i>	Yellow Marsh Saxifrage	S2	1
<i>Selaginella densa</i>	Prairie Spike-moss	S3	1
<i>Shinnersoseris rostrata</i>	Annual Skeletonweed	S1S2	1
<i>Sisyrinchium mucronatum</i>	Michaux's Blue-eyed Grass	S1?	1
<i>Stellaria humifusa</i>	Stitchwort	S2S3	1
<i>Thermopsis rhombifolia</i>	Golden Bean	S2	1
<i>Veronicastrum virginicum</i>	Culver's-root	S1	1
<i>Woodsia alpina</i>	Northern Woodsia	S1	1
Total Plants			138
Animals			
<i>Aechmophorus occidentalis</i>	Western Grebe	S4B	7
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S2B	15
<i>Anthus spragueii</i>	Sprague's Pipit	S2B	5

<i>Ardea herodias</i>	Great Blue Heron	S4S5B	12
<i>Bufo cognatus</i>	Great Plains Toad	S2	1
<i>Calamospiza melanocorys</i>	Lark Bunting	S1B	5
<i>Calcarius lapponicus</i>	Lapland Longspur	S3B	4
<i>Calcarius ornatus</i>	Chestnut-collared Longspur	S1S2B	1
<i>Calcarius pictus</i>	Smith's Longspur	S3B	6
<i>Calidris pusilla</i>	Semipalmated Sandpiper	S3B	1
<i>Caprimulgus vociferus</i>	Whip-poor-will	S3B	8
<i>Cardinalis cardinalis</i>	Northern Cardinal	S1B	1
<i>Chaetura pelagica</i>	Chimney Swift	S2B	2
<i>Chelydra serpentina serpentina</i>	Common Snapping Turtle	S3	11
<i>Chordeiles minor</i>	Common Nighthawk	S3B	14
<i>Cicindela limbata hyperborea</i>	a tiger beetle	SNR	1
<i>Contopus cooperi</i>	Olive-sided Flycatcher	S3S4B	6
<i>Coturnicops noveboracensis</i>	Yellow Rail	S3S4B	18
<i>Cygnus buccinator</i>	Trumpeter Swan	S1S2B	1
<i>Dendroica pinus</i>	Pine Warbler	S2B	1
<i>Dolichonyx oryzivorus</i>	Bobolink	S4B	29
<i>Empidonax traillii</i>	Willow Flycatcher	S2S3B	3
<i>Eremophila alpestris</i>	Horned Lark	S3B	7
<i>Euphagus carolinus</i>	Rusty Blackbird	S3S4B	17
<i>Euphydryas phaeton</i>	Baltimore	S1	3
Gull Colony	Gull Colony	SNR	1
<i>Heterodon nasicus</i>	Western Hognose Snake	S1S2	14
<i>Hirundo rustica</i>	Barn Swallow	S4B	7
<i>Ixobrychus exilis</i>	Least Bittern	S2S3B	1
<i>Lanius ludovicianus excubitorides</i>	Loggerhead Shrike	S2B	10
<i>Lithobates pipiens</i>	Northern Leopard Frog	S4	5
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	S2B	9
<i>Melanitta nigra</i>	Black Scoter	S3S4B	1
<i>Mustela frenata</i>	Long-tailed Weasel	S3	1
<i>Parula americana</i>	Northern Parula	S3B	1
<i>Pelecanus erythrorhynchos</i>	American White Pelican	S3S4B	1
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	S5B	4
<i>Podiceps auritus</i>	Horned Grebe	S3B	3
<i>Podiceps nigricollis</i>	Eared Grebe	S4S5B	6
<i>Sayornis saya</i>	Say's Phoebe	S2S3B	2
<i>Sterna caspia</i>	Caspian Tern	S3S4B	1
<i>Strix varia</i>	Barred Owl	S4B	2
Tern Colony	Tern Colony	SNR	3
<i>Thamnophis radix haydenii</i>	Western Plains Garter Snake	S4	1

<i>Vermivora chrysoptera</i>	Golden-winged Warbler	S3B	4
<i>Wilsonia canadensis</i>	Canada Warbler	S4B	8
Total Animals			264
TOTAL			402

Small White Lady's-slipper (*Cypripedium candidum*)

NatureServe: G4 N2 S2

ESA: Endangered

SARA: Endangered

COSEWIC: Endangered



Status and Threats

The Canadian range of Small white lady's-slipper (SWLS; Figure 1) is confined to Manitoba and Ontario, with a historical occurrence in Saskatchewan. It is considered rare in Manitoba with only 19 extant occurrences known provincially. The three main regions in Manitoba that support this species are the south Interlake around Woodlands and St. Laurent, south of Winnipeg from Kleefeld to the United States border with a concentration near Tolstoi, and the area between Brandon and Wawanesa. Most occurrences have less than 200 stems, while the few larger occurrences each have several thousand.



Much of the habitat that was likely inhabited by this species has been converted to cropland or other land uses since European settlement. While some areas that currently support SWLS are threatened with conversion to other land uses, most occurrences are on land with marginal agricultural or other value. Many occurrences in Manitoba are threatened by shrub encroachment and thatch accumulation. These impede the growth and reproduction of this species which requires sparse vegetation. Road maintenance and weed management activities threaten those occurrences in roadside ditches.



Figure 1. Top: Photo of Small White Lady's-slipper. Middle: Provincial distribution. Bottom: International distribution.

2011 Activities

Nine sites were surveyed by MBCDC staff in 2011: four in the south Interlake, three between Brandon and Wawanesa, and single sites near Oak Lake and Lauder (Figure 2). SWLS were known to occur at five of these sites, and two of these (one at Oak Lake and one near

Brandon) had relatively high stem counts and/or increased areal extent compared to previous years. One new occurrence consisting of 60 stems was discovered in a roadside ditch near Rounthwaite, between Brandon and Wawanesa.

Stem counts at the Interlake trail site were higher than in 2010, but still lower than in other years. The entirety of this site was burned in spring of 2011 following shrub removal by MBCDC and other provincial staff in fall of 2010. Monitoring of this site will continue in order to assess the effectiveness of these management activities.

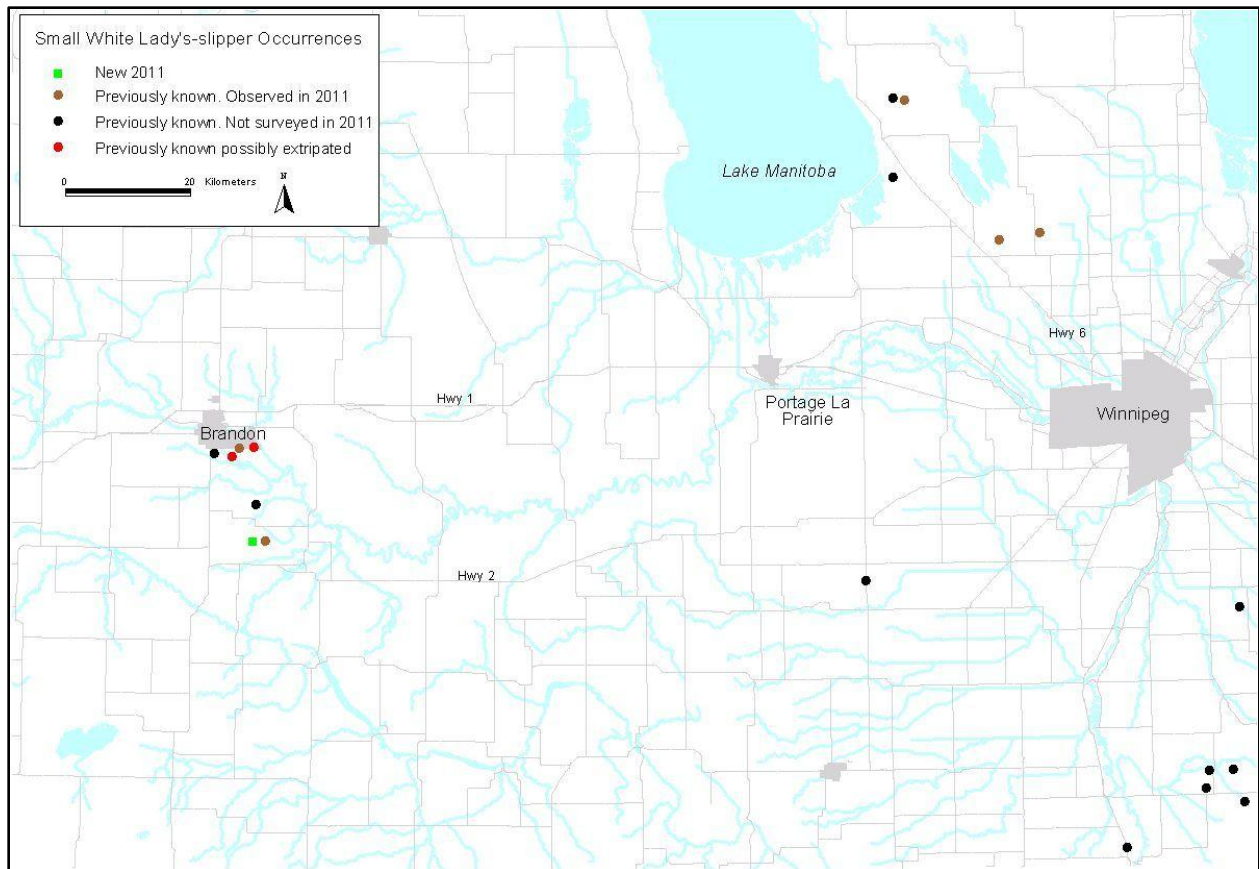


Figure 2. Map of Small White Lady's-slipper occurrences in Manitoba.

Western Ironweed (*Vernonia fasciculata*)

NatureServe: G5 N1 S1

ESA: no status

SARA: no status

COSEWIC: no status



Status and Threats

The known Canadian range of Western Ironweed (Figure 3) is presently confined to a small area in southeastern Manitoba; it is likely extirpated from Saskatchewan (Enns, 2012). As only two extant occurrences are known, one west of Morris and one along the Rat River, it is considered very rare in Manitoba. The Morris occurrence consists of approximately 60 stems in roadside ditches. The Rat River occurrence is large and consists of many thousands of stems along the river from St. Pierre Jolys to the Red River.



Given the limited range (both historical and present) of Western Ironweed in Manitoba, the distribution of this species has probably always been limited. However, much of the habitat that was likely inhabited by this species has been converted to cropland or other land uses since European settlement. Because this species occurs on field margins near the Rat River (see cover photo), cultivation and herbicide use threaten plants in some areas. It is unclear how water level regulation via water level control structures might affect Ironweed populations along the Rat River. Occurrences in roadside ditches are susceptible to road maintenance and weed management activities.



Figure 3. Top: Photo of Western Ironweed. Middle: Provincial distribution. Bottom: International distribution.

2011 Activities

A survey via canoe was conducted on the Rat River from near St-Pierre-Jolys to just south of Otterburne (Figure 4). Western Ironweed was regularly observed along most of this stretch of river. The plants tended to occur at or just above the edge of the muddy bank and

would sometimes be found in large populations growing out from the edge on the flat river terrace. In such places up to many thousands of plants could be found growing in meadows between the river bank and riparian forest or cropland. In one meadow, three white-flowered stems were observed growing in association with many purple-flowered plants.

Additional survey efforts yielded a significant areal expansion of the population where PR 305 crosses the Rat River, especially on the south side of the highway.

Future surveys should continue to focus on water ways in the Rat River watershed. The Red River watershed south of the Rat River should also be surveyed.

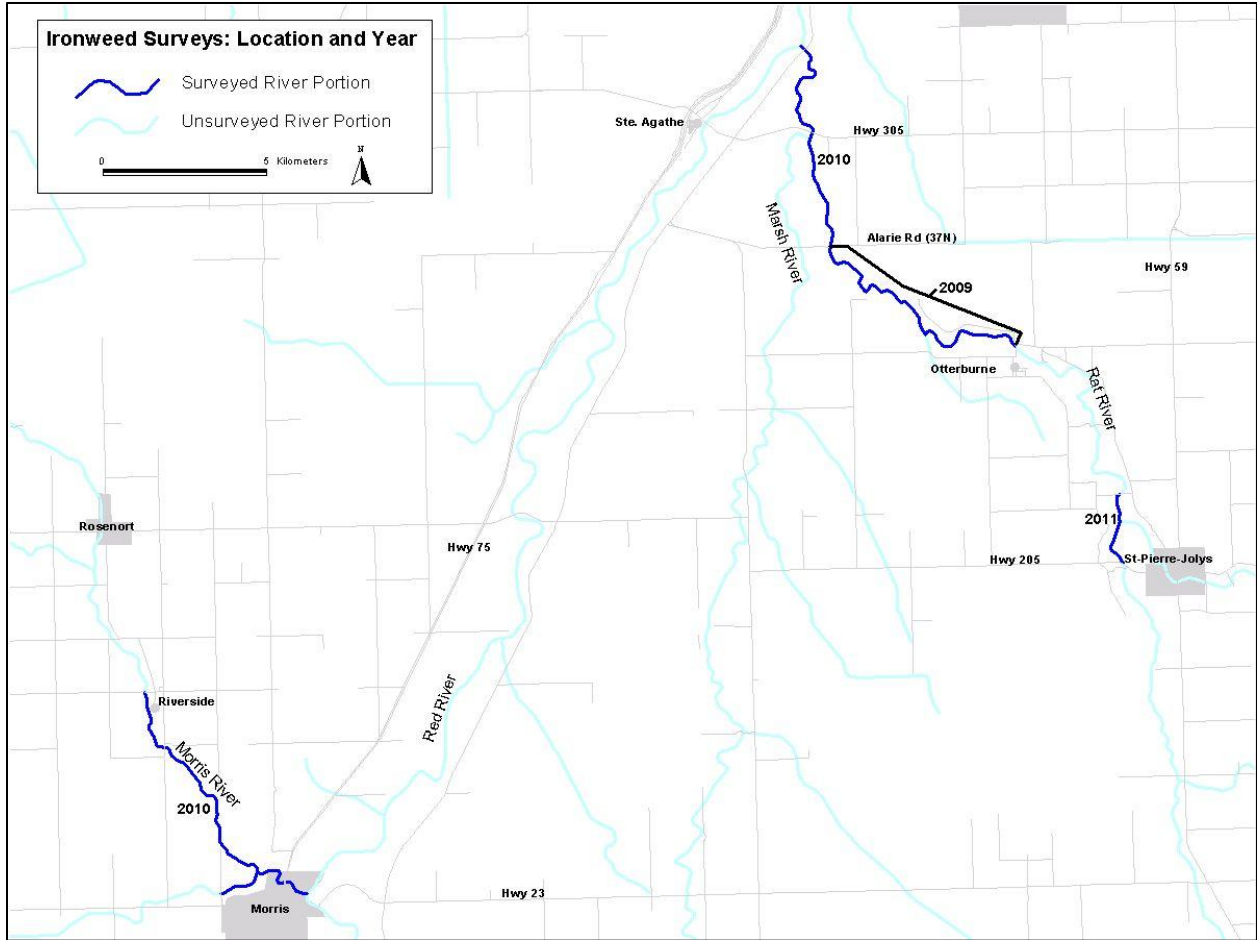


Figure 4. Map of MBCDC Ironweed surveys in Manitoba.

Sandhill Plants

Hairy Prairie Clover (*Dalea villosa*)

NatureServe: G5 N2N3 S2S3

ESA: Threatened

SARA: Threatened

COSEWIC: Special Concern



Figure 5. Photo of Hairy Prairie Clover.

The Canadian range of Hairy Prairie Clover (HPC; Figure 5) is confined to sandhill complexes in Saskatchewan and Manitoba (Smith 1998). Sandhills in Manitoba that support this species include those near Portage, Carberry, and Lauder.

In 2011, MBCDC staff surveyed 20 sites (Figure 6) for sandhill species, including HPC, with a focus on areas around Stockton, Treesbank, Spruce Woods Provincial Park, and Lauder. Two of these sites were known to support HPC, while seven new sites were found near Stockton, Treesbank, and the Lauder sandhills. The sites near Treesbank and Stockton represent newly discovered occurrences.

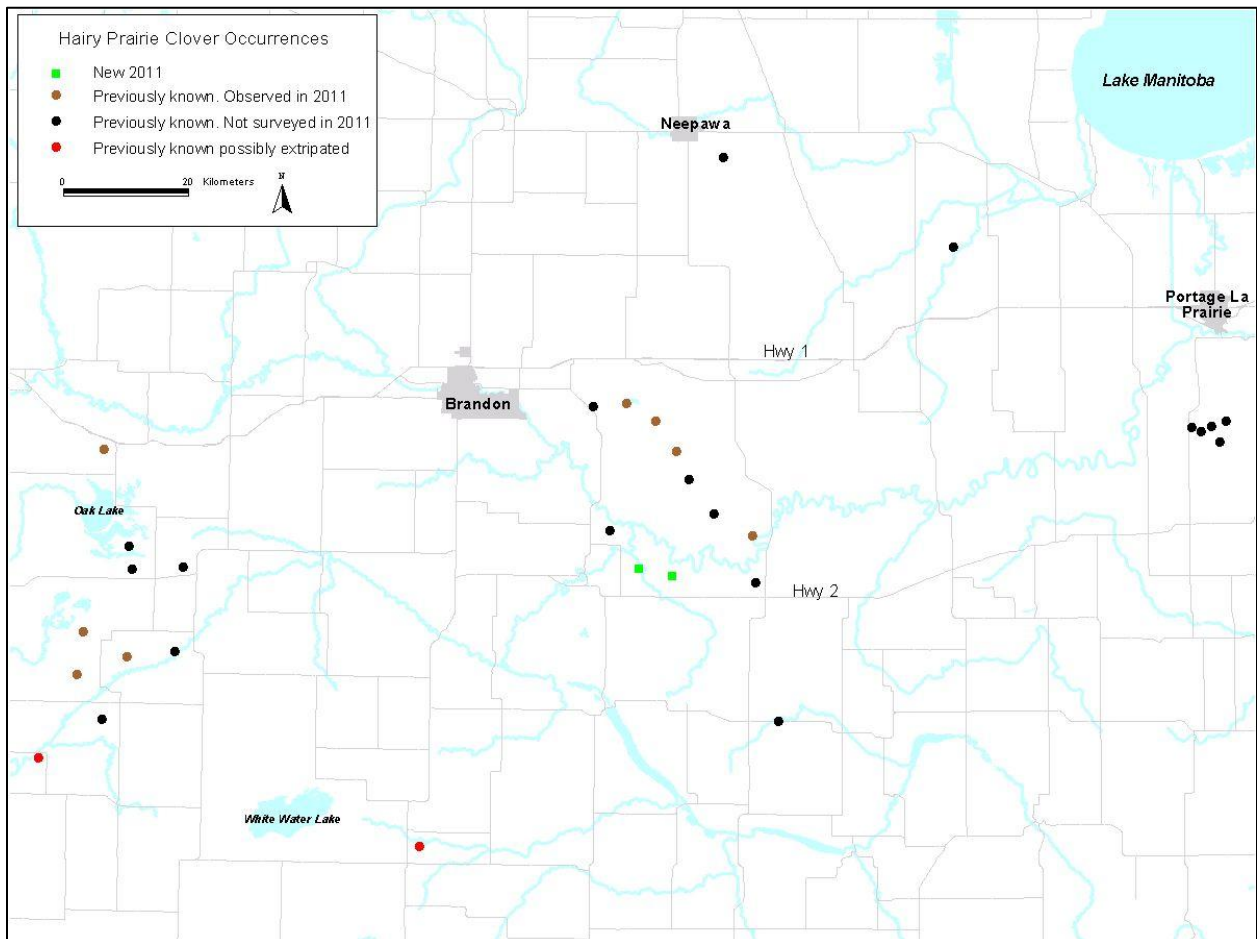


Figure 6. Map of Hairy Prairie Clover occurrences in Manitoba.

Western Spiderwort (*Tradescantia occidentalis*)

NatureServe: G5 N1 S1

ESA: Threatened

SARA: Threatened

COSEWIC: Threatened



Figure 7. Photo of Western Spiderwort.

In Canada, Western Spiderwort (Figure 7) occurs in sandhills in Alberta, Saskatchewan and Manitoba (Smith 2002). Only two occurrences of this species are known in Manitoba – one near Lauder and one near Routledge.

Sites in both occurrences were surveyed by the MBCDC in 2011 (Figure 8). The distribution of this species at a site near Lauder was mapped in detail to facilitate management for the various rare species present in the area.

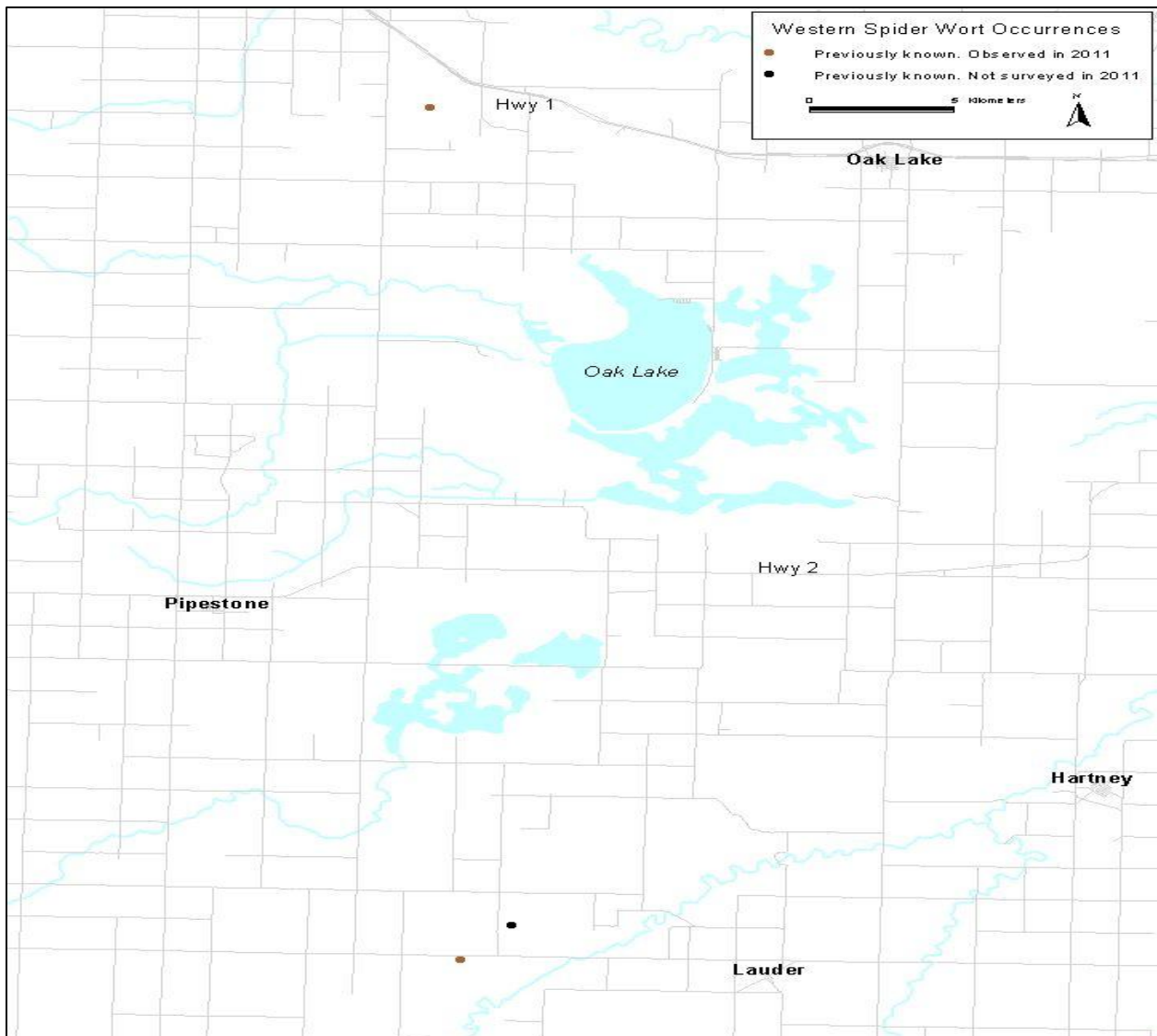


Figure 8. Map of Western Spiderwort occurrences in Manitoba.

Smooth Goosefoot (*Chenopodium subglabrum*)

NatureServe: G3G4 N2 S1

ESA: no status

SARA: Threatened

COSEWIC: Threatened



Figure 9. Photo of Smooth Goosefoot (© J. Rumancik, Nature Saskatchewan).

Smooth Goosefoot (Figure 9) is currently known from only three sites in Manitoba – Routledge, Oak Lake, and Spruce Woods Provincial Park (Figure 10). Additional sites can be found in Alberta and Saskatchewan (COSEWIC 2006).

The Oak Lake site, where MBCDC staff observed a single plant in 2010, was surveyed in 2011 but no plants were found. No plants were observed at the Routledge site, though the surveys may have been conducted too early in the season for optimal detection. Alternatively, lack of precipitation may have inhibited seed germination of this annual species. A site in the Lauder WMA was also surveyed but no plants were observed.

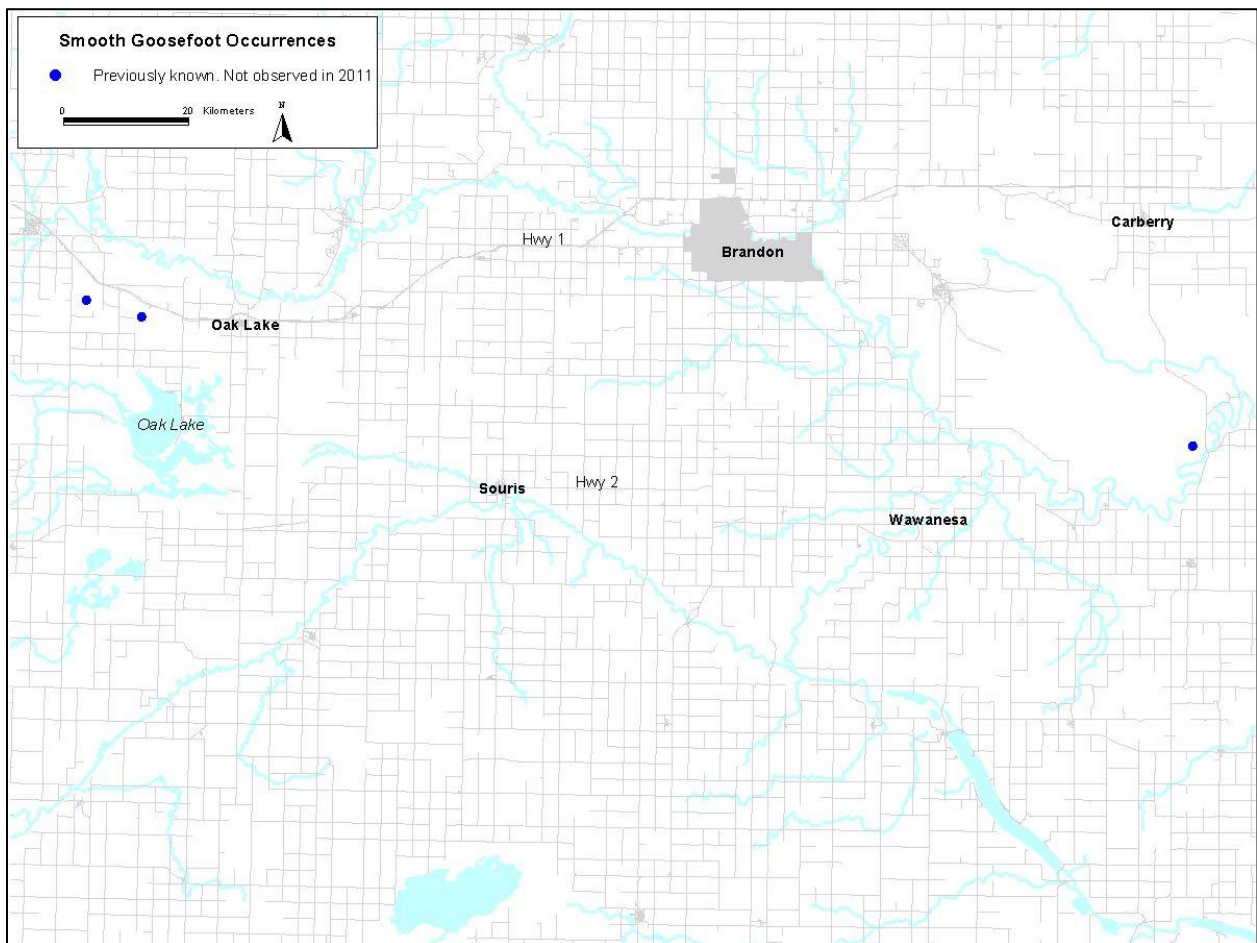


Figure 10. Map of Smooth Goosefoot occurrences in Manitoba.

Prairie Skink (*Plestiodon septentrionalis*)

NatureServe: G5 N2 S1 ESA: no status SARA: Endangered COSEWIC: Endangered



Figure 11. Top: Photo of Prairie Skink. Middle: Provincial distribution. Bottom: International distribution.

Status and Threats

The Canadian range of the Prairie Skink is confined to several parts of southwestern Manitoba (Figure 11). The largest population occurs in and around the Carberry Sandhills. A much smaller population occurs in the Lauder Sandhills. The Canadian population is somewhat disjunct from the rest of the species’ range – the nearest occurrence is over 100km away in the United States.

The primary threat to this species is habitat loss. The main factors contributing to this loss of habitat are: cultivation of mixed-grass prairie, aspen encroachment resulting from fire suppression, and invasion of mixed-grass prairie by exotic species like Leafy Spurge (*Euphorbia esula*). Habitat loss can result in the fragmentation and isolation of populations.

2011 Activities

Skinks are most easily found under cover in prairie areas (Rutherford 2011), so a total of 36 pieces of plywood (each 1 foot by 2 feet) were placed on the ground on five properties (Figure 12). Skinks were known to occur on one of these properties, and this was the only place skinks were found under boards in 2011 (Table 1). One uncommon species, Smooth Green Snake (*Liochlorophis vernalis*; S3S4), was occasionally found under the boards.

Table 2. 2011 MBCDC skink board locations.

Location	No. of Boards	Skinks Observed
Routledge	6	No
Stockton	6	No
Lauder WMA	12	Yes
Lauder 1	6	No
Lauder 2	6	No

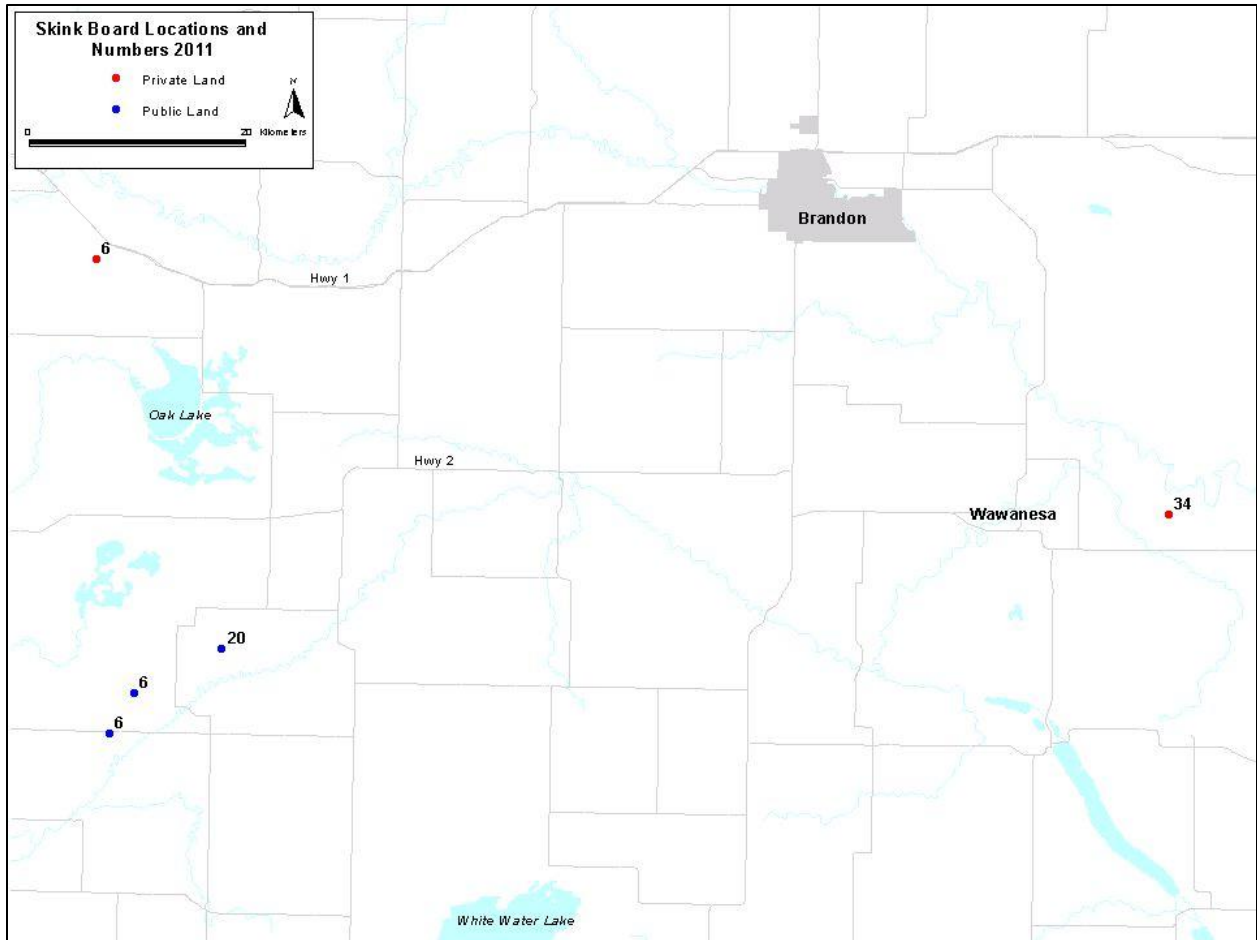


Figure 12. Map of Skink board locations in Manitoba for 2011. Pre-existing boards in the Lauder WMA (n=8) and at Stockton (n=28) were incorporated into CDC surveys.

Great Plains Toad (*Anaxyrus cognatus*)

NatureServe: G5 N3 S2

ESA: Threatened

SARA: Special Concern

COSEWIC: Special Concern



Figure 13. Top: Photo of Great Plains Toad. Middle: Provincial distribution. Bottom: International distribution.

Status and Threats

The North American range of Great Plains Toads (GPT; Figure 13) includes much of the prairie in central portion of the continent, extending into the southern regions of the prairie provinces where it is considered rare to uncommon (COSEWIC 2010; NatureServe 2011). In Manitoba, the range of this species is confined to the extreme southwest corner of the province.

Threats to this species include habitat loss and fragmentation, agricultural herbicide and pesticide use, and road mortality. Habitat loss and fragmentation are due primarily to cultivation, road construction, and oil and gas related developments.

2011 Activities

Toad surveys were conducted on nine nights between June 14 and July 13. Surveys typically commenced around 22:00h and ended between 24:00h and 2:00h, depending on weather conditions. Survey nights that were cool and/or windy typically ended sooner than those that were warm and/or calm as detection rates were low. Surveys were divided into two types - audio and visual - which can be done at the same time.

Audio surveys involved a systematic listening stop every two miles at a mile road intersection. The engine was turned off and the occupants got out of the vehicle and listened for two minutes. The quarter section(s) from which the calls originated was determined and noted. The distance between stops was shortened to one mile when calls were heard at a two mile stop or when toads were observed on the road. Sometimes stops were initiated at the location the toads were observed on the road. Notes were made regarding suitability of weather to surveying and any audio interference (dogs, wind). Both negative and positive data was recorded.

Visual surveys involved tallying the number of GPT observed every mile section road. Vehicle speed was reduced to about 60km/h when a GPT was first observed. Notes were made on the suitability of weather to surveying. Both negative and positive data was recorded.

Approximately 108 audio survey stops were performed at mile road intersections, thus 433 quarter sections were surveyed. GPT were detected on 61 of these quarter sections (Figure 14). No GPT were heard calling after June 30. For visual surveys a total of 229 mile road segments

were surveyed of which GPT were observed on 27 segments. A total of 245 GPT were counted. Total survey distance was 375 km (Figure 15).

Audio surveys detected GPT as far east as PR 254, and as far north as PR 345. No GPT were visually observed east of the Souris River, though MBCDC staff observed them as far east as Waskada in 2010. They were seen as far north as Road 29N. Despite past reports of GPT near Grand-Clariere, MBCDC staff did not hear or see any in this area in 2011.

Future audio surveys should be performed during the peak calling times - mid-May through June, depending on annual variation in weather conditions. Road surveys should be conducted concurrently with audio surveys as well as later in the summer (mid-August to early September) when there seems to be high rates of movement by GPT.

Future surveys should target intersections skipped in 2011. Areas north of PR 345, east of PR 254, and around Grand-Clariere require additional surveys to determine the range extent in Manitoba.

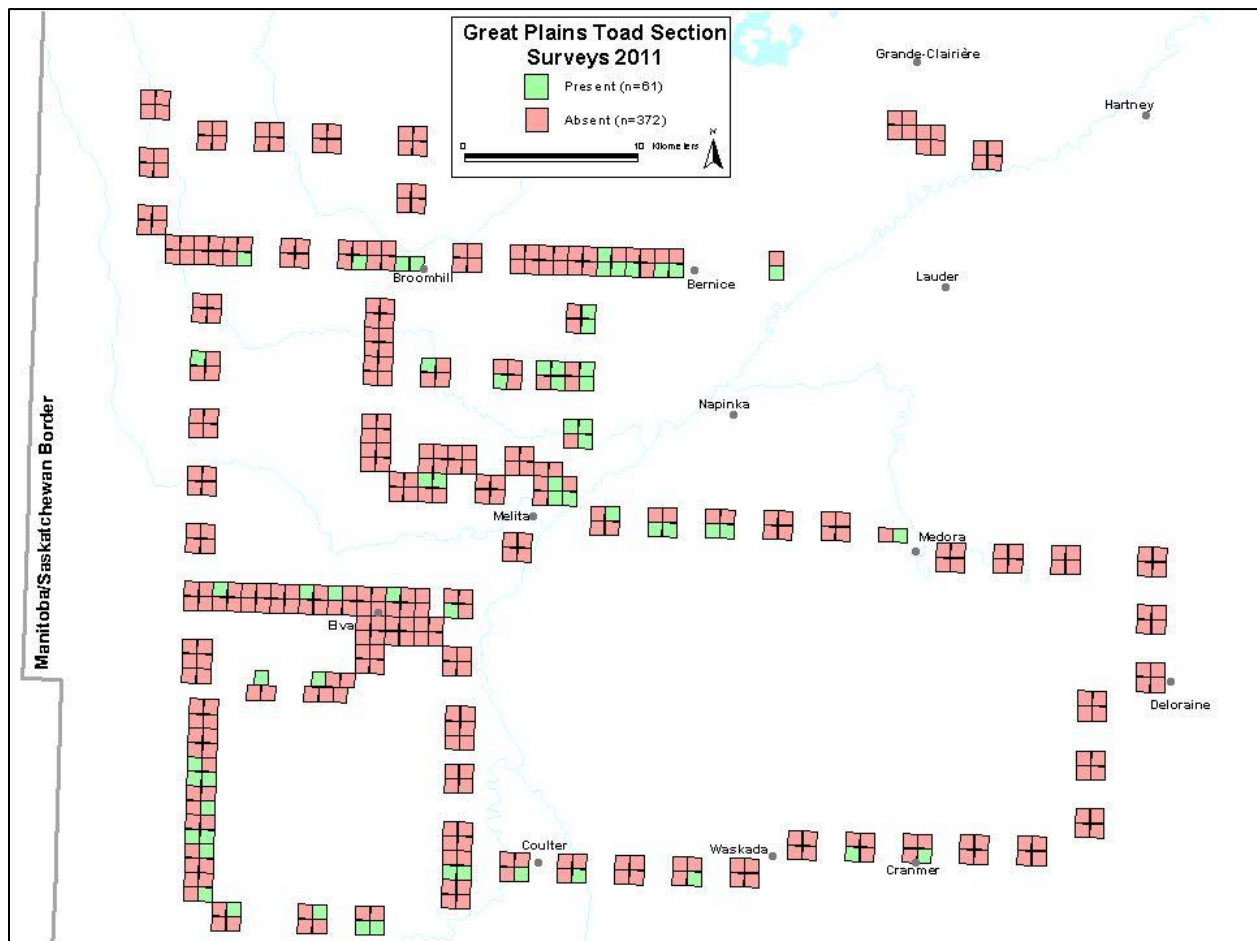


Figure 14. Map of Great Plains Toad quarter section surveys in Manitoba for 2011.

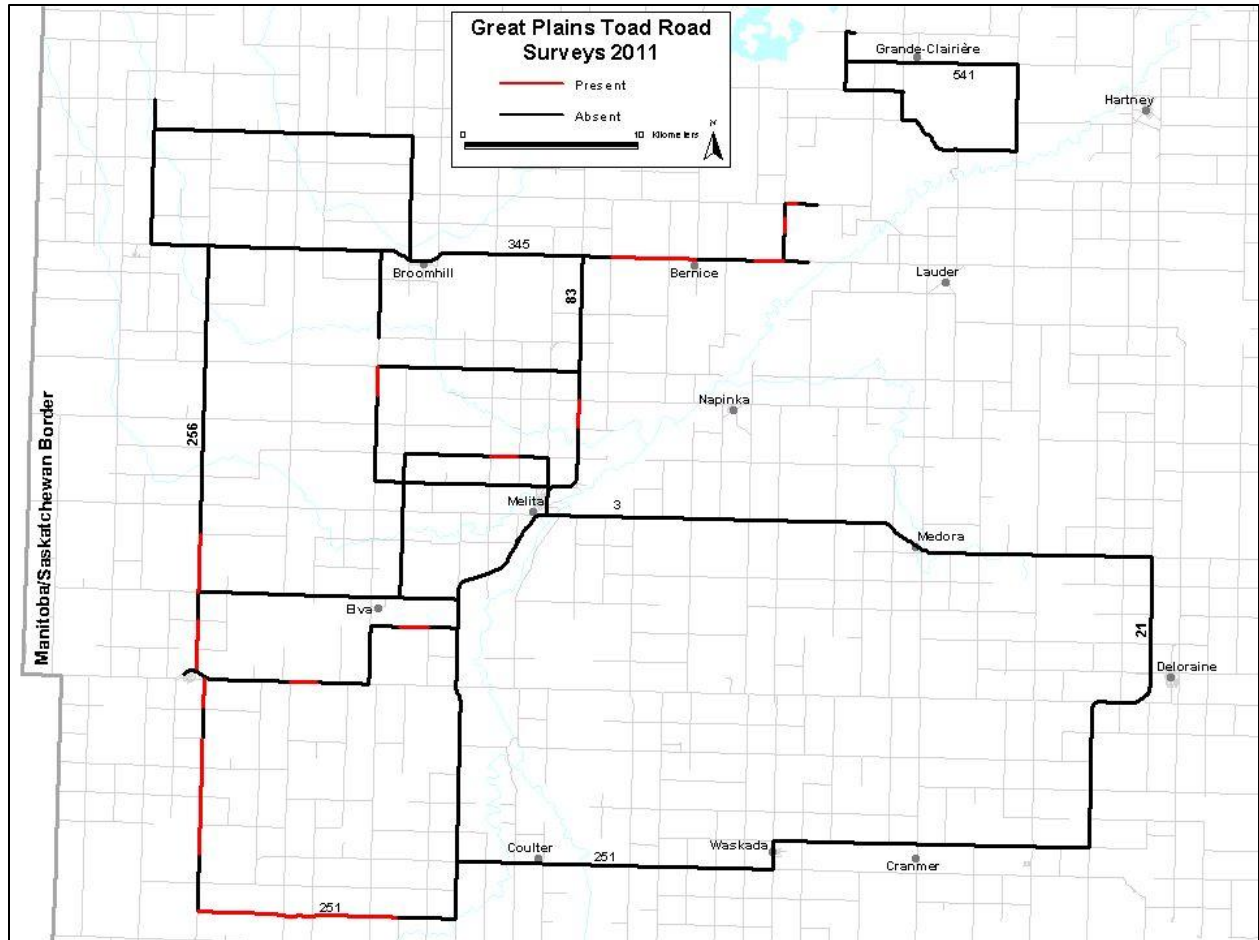


Figure 15. Map of Great Plains Toad road surveys in Manitoba for 2011.

Prairie Butterflies

Ottoe Skipper (*Hesperia ottoe*)

NatureServe: G3G4 N1 S1

ESA: Threatened

SARA: Endangered

COSEWIC: Endangered



Figure 16. Photo of male Ottoe Skipper specimen (©The Manitoba Museum, Winnipeg, MB, used with permission).

Ottoe skippers (Figure 16) are mixed-grass prairie butterflies and, in Canada, are known only from the area around Spruce Woods Provincial Park (SWPP) and CFB Shilo (Klassen *et al.* 1989). The species has not been observed in Manitoba since the late 1980's (COSEWIC 2005). Recent surveys for this species did not result in new records (Westwood & Friesen 2007; Friesen & Murray 2010; Friesen & Murray 2011).

In 2011, MBCDC staff surveyed 26 sites (Figure 23) in and around SWPP and CFB between June 21 and August 5. Most sites were surveyed at least twice. Skipper specimens have been submitted to a taxonomic expert to confirm their identification.

Uncas Skipper (*Hesperia uncas*)

NatureServe: G5 N3 S1S2

ESA: Endangered

SARA: no status

COSEWIC: no status



Figure 17. Photo of male Uncas Skipper specimen (©The Manitoba Museum, Winnipeg, MB, used with permission).

Uncas skippers (Figure 17) prefer dry prairie areas and most Manitoba records are from the SWPP and CFB Shilo area, and there are very few records since the late 1970's (Klassen *et al.* 1989).

MBCDC staff surveyed 32 sites (Figure 23) between June 15 and August 5, with most sites being surveyed more than once. Sites were located around SWPP, CFB Shilo, and the Lauder sandhills. Skipper specimens have been submitted to a taxonomic expert to confirm their identification.

Dakota Skipper (*Hesperia dacotae*)

NatureServe: G2 N2N3 S2

ESA: Threatened

SARA: Threatened

COSEWIC: Threatened



Figure18. Photo of male Dakota Skipper specimen (©The Manitoba Museum, Winnipeg, MB, used with permission).

Dakota skippers (Figure 18) tend to prefer mesic prairies and are found in the south Interlake, south of Oak Lake in the southwest, and in the vicinity of the Tall Grass Prairie Preserve in the southeast (although recent surveys have not found them at this location) (COSEWIC 2003).

Two sites were surveyed for Dakota skippers in 2011 (Figure 23), both south of Oak Lake near the Lauder sandhills. Skipper specimens have been submitted to a taxonomic expert to confirm their identification.

Sandhill Moths

Gold-edged Gem (*Schinia avemensis*)

NatureServe: G1G3 N1 S1

ESA: no status

SARA: Endangered

COSEWIC: Endangered



Figure19. Photo of Gold-edged Gem (©Paul Goossen).

Gold-edged Gems (Figure 19) are residents of sand dunes and sand blowouts; in Manitoba, they have only been found in the active dunes of Spruce Woods Provincial Park (part of the Carberry sandhills). Several sandhill areas other than these active dunes were surveyed for Gold-edged Gems (Figure 23). These included sites in the Lauder sandhills and other parts of the Carberry sandhills.

This species is associated with Prairie Sunflowers (*Helianthus petiolaris*) and adults can be found resting on the flowers of this species (Figure 19). Flowers were regularly, but not systematically, checked for Gold-edged Gems, but no moths were observed. No individuals were observed resting elsewhere or flying during surveys. Open sand tended to be very limited in these areas, so habitat suitability may have been low. Also, the survey period ended August 5 which may have been too early to detect this species, though Prairie Sunflowers were commonly found blooming by this time.

White Flower Moth (*Schinia bimatrix*)

NatureServe: G2G4 N1 S1

ESA: no status

SARA: Endangered

COSEWIC: Endangered



Figure 20. Photo of a White Flower Moth (© C. Friesen).

In Canada, White Flower Moths (Figure 20) have only been observed in the active sand dunes of the Carberry sandhills. Other portions of these sandhills, and other sandhill complexes, were surveyed by MBCDC staff in 2011 (Figure 23). In most of the surveyed areas, open sand was much more limited than at the active sand dunes.

White Flower Moths are active during both the day and night (Westwood & Friesen 2009). Surveys at both times were conducted. Night surveys were done with the use of light traps. No White Flower Moths were observed during daytime surveys or in initial assessments of specimens collected at light traps. All moth specimens collected at light traps have been submitted to a taxonomic expert to confirm their identification.

Pale Yellow Dune Moth (*Copablepharon grandis*)

NatureServe: G4G5 N3 S1

ESA: no status

SARA: Special Concern

COSEWIC: Special Concern



Figure 21. Photo of Pale Yellow Dune Moth (©G.G. Anweiler).

The Canadian range of this species (Figure 21) includes several sandy, sparsely vegetated areas in Alberta, Saskatchewan and Manitoba (COSEWIC 2007a). In Manitoba, the current known range is limited to the open dune area of the Carberry sandhills.

Nocturnal light-trap surveys were conducted from mid-June through early August at several sites in the Carberry sandhills (though not the open dunes), and other sites in the Lauder sandhills and near Stockton (Figure 23). All moth specimens collected at light traps have been submitted to a taxonomic expert to confirm their identification.

Dusky Dune Moth (*Copablepharon longipenne*)

NatureServe: G4 N1N2 S1

ESA: no status

SARA: Endangered

COSEWIC: Endangered



Figure 22. Photo of Dusky Dune Moth (©G.G. Anweiler).

The range of the Dusky Dune Moth (Figure 22) in Canada is similar to that of the Pale Yellow Dune Moth (COSEWIC 2007b). As with the Pale Yellow Dune Moth, the only known occurrence in Manitoba is in the open dune area of the Carberry sandhills.

This species is active at night, so light-trap surveys were conducted from mid-June through early August. Sites were in the Carberry sandhills (not including the open dunes), the Lauder sandhills, and smaller sandhill complexes (Figure 23). All moth specimens collected at light traps have been submitted to a taxonomic expert to confirm their identification.

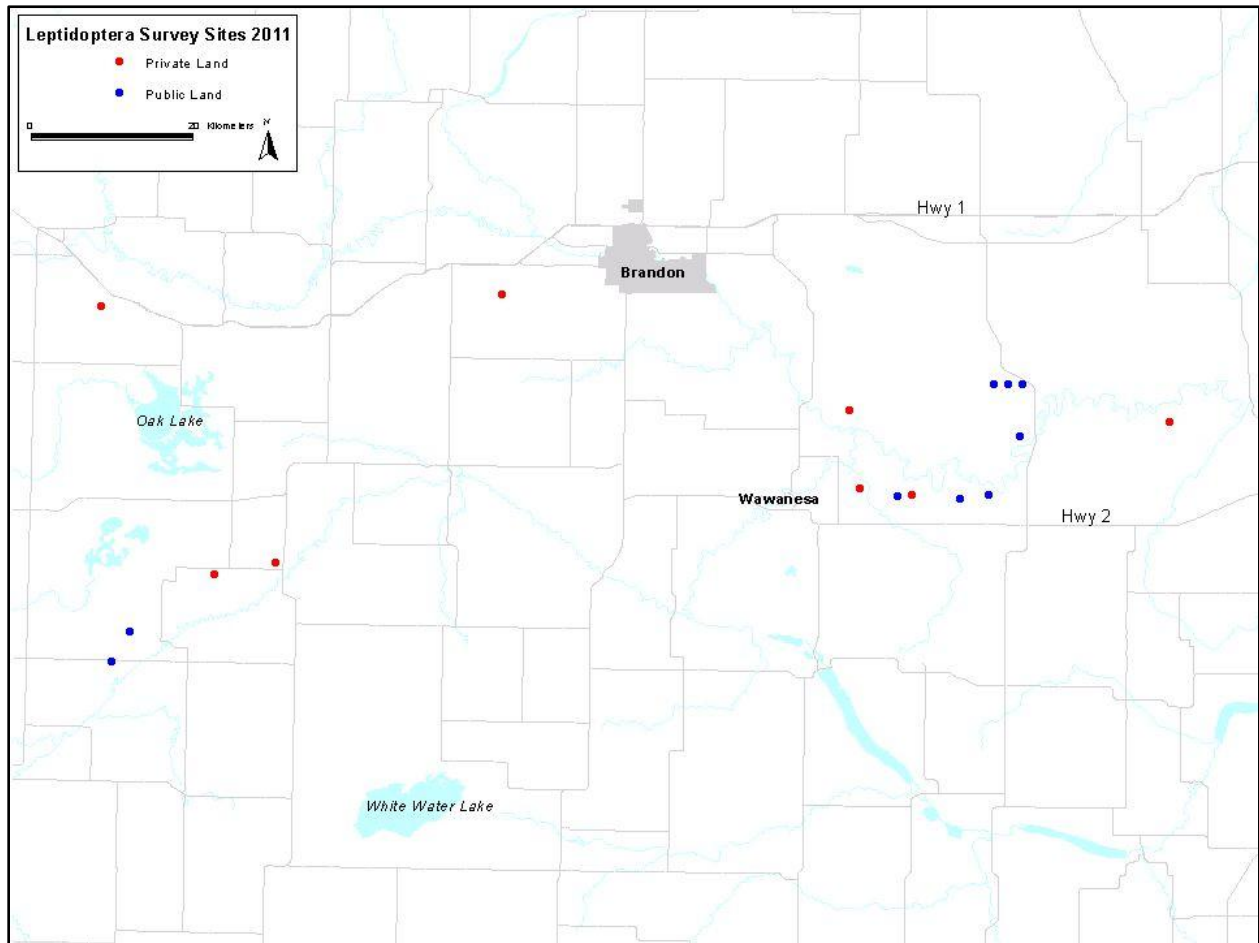


Figure 23. Map of Leptidoptera surveys in Manitoba for 2011. Due to map scale one dot may represent multiple survey sites where they are in close proximity. Most sites surveyed more than once.

Literature Cited

- COSEWIC. 2003. COSEWIC assessment and status report on the Dakota skipper *Hesperia dacotae* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 35 pp.
- COSEWIC. 2005. COSEWIC assessment and status report on the Ottoe skipper *Hesperia ottoe* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 35 pp.
- COSEWIC. 2006. COSEWIC assessment and update status report on the smooth goosefoot *Chenopodium subglabrum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 33 pp.
- COSEWIC. 2007a. COSEWIC assessment and status report on the Pale Yellow Dune Moth *Copablepharon grandis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 28 pp.
- COSEWIC. 2007b. COSEWIC assessment and status report on the Dusky Dune Moth *Copablepharon longipenne* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 33 pp.
- COSEWIC. 2010. COSEWIC assessment and status report on the Great Plains Toad *Anaxyrus cognatus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 54 pp.
- Enns, A. 2012. Personal communication. Saskatchewan 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. Manitoba Museum of Man and Nature. Winnipeg, MB.
- NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: February 1, 2012).
- Rutherford, P. 2011. Personal communication. Brandon University.

- Smith, B. 1998. COSEWIC status report on the hairy prairie-clover *Dalea villosa* var. *villosa* in Canada, in COSEWIC assessment and status report on the hairy prairie-clover *Dalea villosa* var. *villosa* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 1-22 pp.
- Smith, B. 2002. Update COSEWIC status report on the western spiderwort *Tradescantia occidentalis* in Canada in COSEWIC assessment and update status report on the Western spiderwort *Tradescantia occidentalis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. 1-25 pp.
- Westwood, A.R. and C. Friesen. 2007. Ottoe skipper (*Hesperia ottoe*) and White flower moth (*Schinia bimatrix*) surveys on CFB Shilo and Spruce Woods Provincial Park, Manitoba. Final report to the Canadian Wildlife Service. University of Winnipeg, Winnipeg, Manitoba.
- Westwood, A.R. and C.P. Friesen. 2009. Occurrence and habitat of the endangered white flower moth, *Schinia bimatrix* (Lepidoptera: Noctuidae), in Manitoba. Canadian Entomologist 141: 80-85.